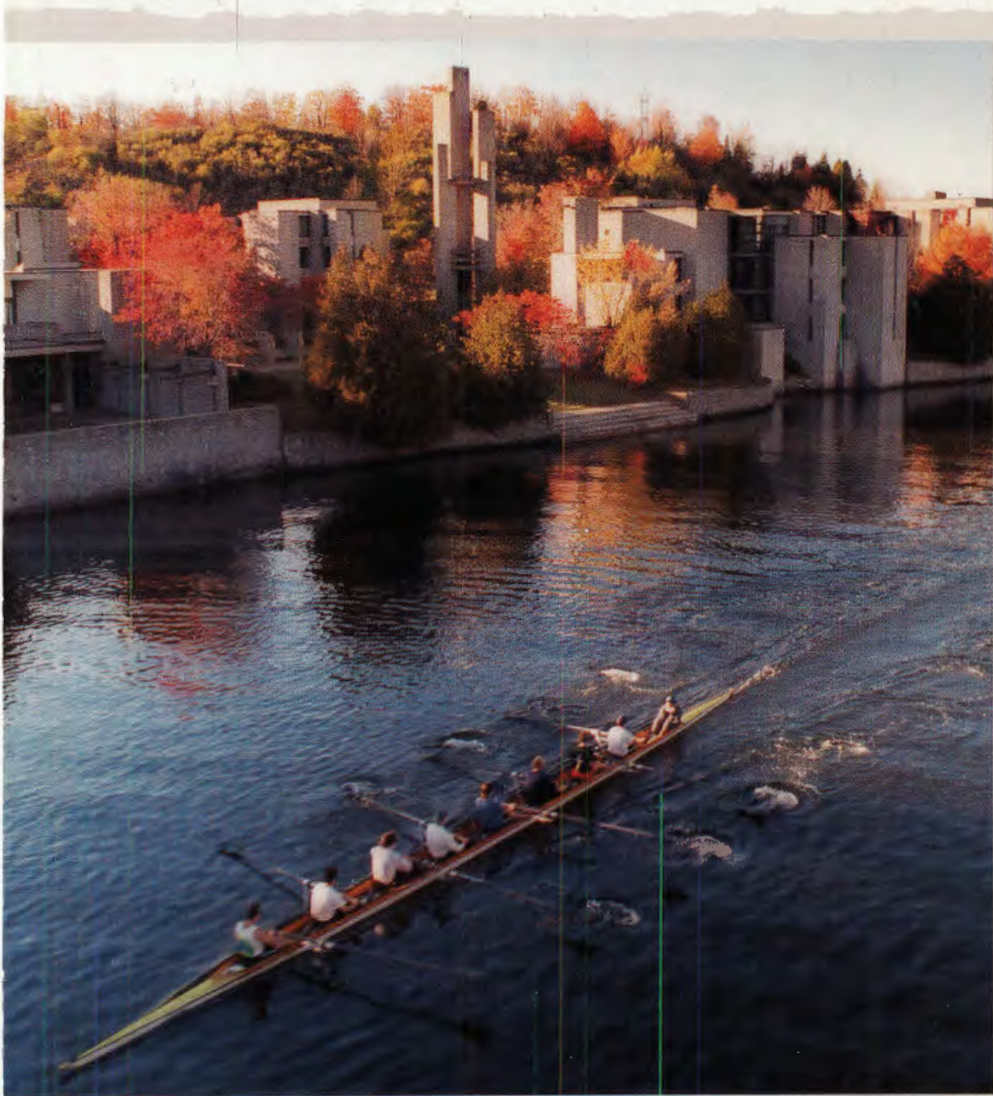


DISTRIBUTED AT MEETING

TRENT UNIVERSITY



1996 - 1997

The Thirty-Third Academic Year
1996-97

TRENT UNIVERSITY CALENDAR



Nunc cognosco ex parte

Mission statement

Trent University aspires to be Canada's outstanding small university known for its commitment to liberal undergraduate education in the humanities, social sciences, and natural sciences and to the centrality of the individual student. Within a collegial setting the university offers undergraduate and graduate programs, both traditional and inter-disciplinary, which seek to advance learning through the creative interaction of teaching and research of the highest quality.

Peterborough, Ontario, Canada
K9J 7B8
Telephone: (705) 748-1011
Fax: (705) 748-1246

Statement of Goals

1. To create a teaching, learning, research and living environment fundamentally committed to the promotion of free inquiry and expression.
2. To offer a distinctive, excellent and continually evolving teaching program that responds to the needs of an increasingly diverse full and part-time student body.
3. To provide educational programs which encourage students to think critically, creatively, constructively and to communicate their ideas effectively, as well as instilling a curiosity that engenders lifelong learning.
4. To sustain and enhance opportunities for research and scholarly activity of the highest standard.
5. To recognize and take advantage of our relatively small size, flexibility and experience to foster continually opportunities for creative interaction between academic departments and programs, teaching and research, colleges and academic activities and among our faculty, staff and students.
6. To develop, in the pursuit of the advancement of learning, mutually beneficial partnerships and linkages with universities, colleges, schools and other public and private sector institutions and organizations, including our alumni.
7. To encourage intellectual and cultural sensibility, adaptability, leadership, mutual respect, an ethical conscience, global (or international) perspectives and environmental sensitivity among all members of the Trent community.

Institutional Goals

1. Recruit and retain students from within and beyond Canada who will benefit from Trent's programs and who will contribute to university life.
2. Provide an appropriate range and sequence of undergraduate courses and programs in the Humanities, Social Sciences, Natural Sciences and interdisciplinary fields to ensure a truly liberal education rooted in a strong institutional commitment to undergraduate teaching.
3. Develop new opportunities for small group teaching and individualized learning.
4. Create and sustain a range of interdisciplinary graduate programs that will reinforce the goal of liberal education, have linkages with our undergraduate departments and programs and provide all faculty with graduate teaching and research opportunities.
5. Employ and retain excellent faculty who contribute actively to the advancement of learning through teaching, research, service and professional development.
6. Employ and retain excellent academic and administrative support staff and ensure adequate opportunities for their professional development.
7. Create and sustain an environment (intellectual, physical, fiscal and social) that advances learning through quality teaching and research while encouraging respect, tolerance and sensitivity.

Important Notice

The contents of this Calendar are not necessarily final and complete. Changes may occur in a number of areas including:

1. new faculty appointments or departures;
2. courses, including withdrawal of courses listed as being offered;
3. policies and procedures related to applications, admissions, and registration for new and returning students;
4. regulations;
5. fee structure;
6. the University Diary.

The University reserves the right to make and implement changes subsequent to the publication of this Calendar, as it deems appropriate.

It is the responsibility of all students to familiarize themselves with the specific requirements for the degree or diploma which they seek. While advice and counselling is readily available, it is the students' responsibility to ensure that the courses in which they register are appropriate and sufficient to the program requirements. Students are bound by the regulations and policies of the University.

No liability shall be incurred by Trent University for loss or damage suffered or incurred by any student or third party as a result of delays, suspension or termination of services, courses or classes, or other academic activities by reason of natural disasters, civil unrest or disobedience, labour disputes, work stoppages, strikes, lockouts, financial exigency, restrictive laws or governmental regulations, inability to procure materials or trades, weather, utility interruptions, damage to University property, or other happenings or occurrences beyond the reasonable control of Trent University.

Notes

Every member of Trent University – faculty, staff or student – has a right to freedom from discrimination in the University by another faculty, staff or student member because of race, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, age, record of offences, marital status, family status, or handicap.

Trent University recognizes its responsibility to those of its students, faculty and staff with special needs. It undertakes to ensure access to its academic programs and physical facilities, short of undue hardship, while protecting the academic integrity of the University.

Trent University is working towards becoming a smoke-free institution. Smoking is prohibited in most public areas including classrooms, but it is permitted in certain designated areas and in student study-bedrooms.

The Trent University Calendar is produced for the Office of the Provost and Dean of Arts and Science by the Communications Office.

Tours or visits to the University can be arranged by contacting the Registrar's Office, Trent University, Peterborough, Ontario K9J 7B8. (705) 748-1332.

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Readers are advised that changes may occur to the dates contained in the University Diary. Students will be notified if significant changes occur, and alterations in dates will be published in the Supplement to the Calendar in August. Where a deadline falls on a weekend, the following Monday will apply.

Summer Session 1996

(For Summer Session Deadline Dates See Chart)

May	10	Friday	Final date for receipt of grades for incompletes and Letter of Permission courses for those planning to convocate in the Spring
	14	Tuesday	Meeting of the Senate
	20	Monday	Statutory Holiday: "Victoria Day"
	31	Friday	Convocation
June	1	Saturday	Final date for payment of deposit against residence fees by returning students
	15	Saturday	Final date to request Summer Session Letters of Permission Final date for receipt of applications and supporting documentation for full-time admission to Trent University
	26	Wednesday	Meeting of the Board of Governors
	28	Friday	Final date for receipt of grades for incompletes from the Fall/Winter Session
July	1	Monday	Statutory Holiday: "Canada Day"
	15	Monday	Final date for appeals of full and b half courses Final date for receipt of appeals against academic penalties
	31	Wednesday	First instalment of fees due for continuing students Deadline for Official Registration for continuing students
			Statutory Holiday: "Civic Holiday"
August	5	Monday	Statutory Holiday: "Civic Holiday"
	15	Thursday	Final date to request Fall/Winter Session Letters of Permission Final date for receipt of applications and supporting documentation from new and re-admit part-time applicants for admission to the University First instalment of fees is due for new and re-admit students

Fall/Winter Session 1996-97

Fall Term 1996

September	2	Monday	Statutory Holiday: "Labour Day" Arrival of new students
	3	Tuesday	Introductory Seminar Week begins
	6	Friday	Registration for new full-time students Final date for new student registration, without late fee Final date for receipt of Application for Degree/Diploma Assessment for Fall eligibility
	8	Sunday	Arrival of returning students
	9	Monday	Classes begin Beginning of formal course change period using Official Change Form
	13	Friday	Final date for full-time re-admit and transfer students to register, without late fee Faculty Board Meeting
	17	Tuesday	Meeting of the Senate
	23	Monday	Final date for rebate on college fees for transfers from full- to part-time status

	27	Friday	Final date for registration, with late fee Final date to change or add <i>a</i> half courses Final date to change or add full courses, without late fee Final date for students to notify the Registrar's Office of their wish to observe their cultural or religious holidays during scheduled examination periods Meeting of the Board of Governors
	30	Monday	Final date for Summer Session appeals Final date for receipt of grades for incompletes and Letter of Permission courses from Summer Session
October	11	Friday	Faculty Board meeting
	14	Monday	Statutory Holiday: "Thanksgiving Day"
	15	Tuesday	Meeting of the Senate
	19	Saturday	Classes end
	21	Monday	Residential Reading and Laboratory Week begins
	25	Friday	Meeting of the Board of Governors
	28	Monday	Classes resume
November	8	Friday	Final date to change or add full courses, with late fee Final date for withdrawal from <i>a</i> half courses without academic penalty Faculty Board meeting
	12	Tuesday	Meeting of the Senate
	22	Friday	Final date to request Letters of Permission for courses beginning January, 1997
	29	Friday	Meeting of the Board of Governors
December	6	Friday	Faculty Board meeting
	7	Saturday	Last day of classes
	9	Monday	Scheduled mid-term test and a half course final examination period begins
	10	Tuesday	Meeting of the Senate
	14	Saturday	Mid-term test and a half course final examination period ends, 10:30 p.m.
	15	Sunday	Winter Vacation and Reading Period begins College residences close
			Final date for receipt of applications and supporting documentation from new and re-admit part-time applicants for admission to the University for <i>b</i> half courses
	25	Wednesday	Statutory Holiday: "Christmas Day"
	26	Thursday	Statutory Holiday: "Boxing Day"

Winter Term 1997

January	1	Wednesday	Statutory Holiday: "New Year's Day"
	5	Sunday	College residences open
	6	Monday	Classes resume
	15	Wednesday	Second instalment of fees is due Final date for payment of outstanding bookstore and other accounts
	17	Friday	Faculty Board meeting
	21	Tuesday	Meeting of the Senate
	24	Friday	Final date to change or add <i>b</i> half courses Final date to register in <i>b</i> half courses
	31	Friday	Final date for receipt of Application for Degree/Diploma Assessment for Spring Convocation Meeting of the Board of Governors
February	7	Friday	Faculty Board meeting
	11	Tuesday	Meeting of the Senate Final date for withdrawal from full Fall/Winter Session courses without academic penalty

	15	Saturday	Classes end
	17	Monday	Residential Reading and Laboratory Week begins
	24	Monday	Classes resume
March	7	Friday	Final date for withdrawal from b half courses without academic penalty Faculty Board meeting
	11	Tuesday	Meeting of the Senate
	15	Saturday	Final date for appeals for a half courses Final date for application for transfer between colleges for students seeking residence
	21	Friday	Meeting of the Board of Governors
	28	Friday	Statutory Holiday: "Good Friday"
April	3	Thursday	Final date for full-time and part-time continuing students to early register, without late fee Application deadline to transfer from part-time to full-time studies
	4	Friday	Faculty Board meeting
	5	Saturday	Classes end
	8	Tuesday	Meeting of the Senate
	10	Thursday	Examinations begin for b half and full courses
	25	Friday	Meeting of the Board of Governors
	26	Saturday	Examinations end for b half and full courses, 10:30 p.m. Final date for non-resident students to apply for residence Final date for application for transfer between colleges for students not seeking residence

Summer Session 1997

(For Summer Session Deadline Dates See Chart)

May	9	Friday	Final date for receipt of grades for incompletes and Letter of Permission courses for those planning to convocate in the Spring
	13	Tuesday	Meeting of the Senate
	19	Monday	Statutory Holiday: "Victoria Day"
	30	Friday	Convocation
June	1	Sunday	Final date for payment of deposit against residence fees by returning students
	15	Sunday	Final date to request Summer Session Letters of Permission Final date for receipt of applications and supporting documentation for full-time admission to Trent University
	27	Friday	Meeting of the Board of Governors
	30	Monday	Final date for receipt of grades for incompletes from the Fall/Winter Session
July	1	Tuesday	Statutory Holiday: "Canada Day"
	15	Tuesday	Final date for appeals of full and b half courses Final date for receipt of appeals against academic penalties
	31	Thursday	First instalment of fees is due for continuing students Deadline for Official Registration for continuing students
August	4	Monday	Statutory Holiday: "Civic Holiday"
	15	Friday	Final date to request Fall/Winter Session Letters of Permission Final date for receipt of applications, registration forms and supporting documentation from new and re-admit part-time applicants for admission to the University First instalment of fees is due for new and re-admit students

Summer Session Dates 1996

	8 week term	12 week term	6 week term
Final date for receipt of applications for admission or re-admission with supporting documentation	April 15	April 15	June 15
Final date for all students to register without late fee	April 22	April 22	June 24
Classes begin	April 29	April 29	July 2
Final date for all students to register with late fee. Final date to add courses	May 13	May 13	July 8
Final date for withdrawal	May 29	June 13	July 25
Classes end	June 24	July 24	August 13
Examination period begins*	June 25	July 29	August 14

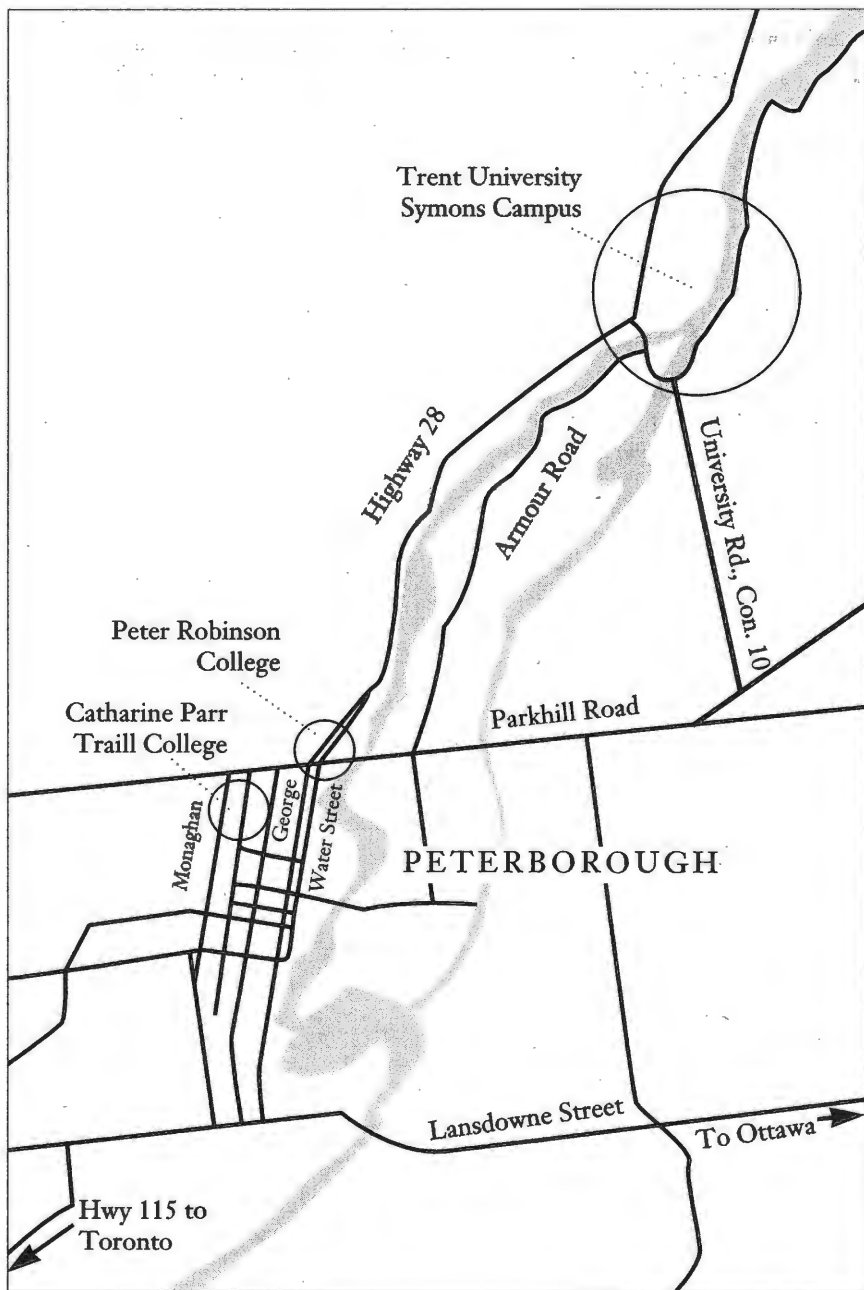
* Students are advised to consult the course description for the exact date of their final examination.

Summer Session Dates 1997

	8 week term	12 week term	6 week term
Final date for receipt of applications for admission or re-admission with supporting documentation	April 15	April 15	June 15
Final date for all students to register without late fee	April 21	April 21	June 23
Classes begin	April 28	April 28	June 30
Final date for all students to register with late fee. Final date to add courses	May 12	May 12	July 7
Final date for withdrawal	May 28	June 11	July 24
Classes end	June 23	July 22	August 13
Examination period begins*	June 25	July 23	August 14

* Students are advised to consult the course description for the exact date of their final examination.

Note: Where a deadline falls on a weekend, the following Monday will apply. Please consult the Summer Session brochure, available through Julian Blackburn College, for specific dates for half courses offered in the above terms.



General Information

History

Trent University stresses the importance of a liberal undergraduate education, which it looks upon as an education for the intelligent and informed use of freedom in society. In line with this belief, students at Trent are encouraged to make their own decisions about courses, fields of concentration, extracurricular activities and the organization of their time. The University seeks to ensure, through a general emphasis on small-group teaching, that each student has the opportunity to pursue fields of interest intensively in close association with academic seniors.

Trent is one of the smallest and youngest universities of Ontario and it has no ambition to compete in size, but rather in excellence. Formally created as an independent university with full degree-granting powers by the Ontario Legislature in April 1963, the University has chosen to expand gradually in both its undergraduate and graduate programs.

Now in its thirty-third teaching year, the University has about 3,870 undergraduates in the full-time program, and about 1,580 part-time students. In addition, there are 150 Master's degree candidates in the five fields in which graduate studies are offered. A doctoral program in Watershed Ecosystems was introduced in 1994.

The University is the result of several years of planning by public-spirited citizens of Peterborough and, after the appointment of T.H.B. Symons as president-designate in 1961, by an Academic Planning Committee and Campus Planning Committee. A nucleus of faculty members and senior administrative staff assumed full-time duties more than a year before the University opened its doors to its first students in September 1964. In 1967, the late Leslie M. Frost, former Prime Minister of Ontario, was elected first Chancellor of the University. The University was elected to full membership in the Association of Universities and Colleges of Canada in 1968.

Trent opened with two residential colleges and a teaching and administrative complex in the heart of Peterborough. GE Canada donated the core of what is now the 580-hectare Nassau Campus on a rol-

ling, wooded property located on both sides of the Otonabee River at the northern edge of the city. With the guidance of master planning architect, the late Ronald J. Thom, a long-range plan was developed and a program of construction undertaken which, while retaining facilities developed in the city, provides for the main development of the University on the Nassau Campus. There are now three residential colleges, the main library, two science buildings, a child care facility and central administrative offices, along with recreational facilities including an athletic and recreation building, playing fields, an all-weather track and tennis courts on the Nassau Campus. The University's first two colleges remain in their original downtown locations, linked to the Nassau Campus by the city bus system. In addition to the five coeducational colleges, part-time study is offered through the Julian Blackburn College for continuing education.

Trent's master plan was devised on the twin foundations of the residential college and small-group teaching. The college system enhances the opportunity for both resident and non-resident students to benefit from a liberal education by taking advantage of the corporate life of the colleges. Quite apart from its social amenities, the college system is designed to offer genuine and continuing opportunities to cross those boundaries between different subjects and fields of study which so often hinder discussion in a university. Intellectual isolation can be avoided by bringing together, within each college, students and faculty from all disciplines.

Further opportunities are offered to each student to engage in the exploration of ideas with members of faculty and with other students through emphasis given to a variety of small teaching groups according to the requirements of the given discipline. Directed reading, the preparation of essays and other assignments and laboratory work in the sciences, form the basis for regular academic discussions in small groups in most courses.

In the section on Programs of Study in this Calendar may be found the teaching method employed in each course. Each student will be provided with a course outline in September which may be a detailed week-by-week summary or only a more general outline of aims and teaching methods. It should state the frequency of class meetings, attendance requirements

(if any) and the principles of the grading system which will be used. Generally speaking, lectures are less central in the teaching program at Trent than in many universities. In most courses lectures are offered but, in the senior years particularly, these are to guide, to clarify and to emphasize rather than cover prescribed material. Lectures are normally open to anyone.

At registration each student is assigned to an academic adviser or counsellor who is responsible for assisting with course selection and reviewing the student's progress at regular intervals. Ultimate responsibility for course selection must rest with the student. The tutorial and seminar system demands that a student distribute the work evenly throughout the academic year. The academic year is divided in two terms with a long recess in December, and one-week reading and laboratory recesses in late October and late February.

Peter Robinson College

Master
(To be named)

Senior Tutor
John Topic, PH.D.

Senior Don
Manuela Lefranc

College Administrator
Jan Fialkowski, B.F.A.

Honorary Director of Music
P. MacKinnon

Peter Robinson College, named after one of the founders of Peterborough, was the first college to open in 1964 and the first to become co-educational in 1967. One of the two city colleges, it is located in converted heritage houses and new buildings which incorporate residence and academic areas. Sadleir House, the focus of college life, is a unique Peterborough historic home which has been redesigned to integrate the features of the original architecture with the newer additions. The college's location in Peterborough's north end, and its size (Trent's smallest college), make Peter

Robinson particularly appealing to those students who are interested in an intimate university milieu which is not isolated from the city community.

Besides providing a strong base for traditional academic disciplines such as History, the college encourages interdisciplinary co-operation and is the home base for the Cultural Studies Program on the undergraduate level and two M.A. programs: the Frost Centre for Canadian Heritage and Development Studies and the Methodologies Program for the Study of Western History and Culture. The college strongly supports the arts in all its forms, and has an active program of visiting scholars, artists, broadcasters, musicians and cultural theorists. (Trent Radio is at the nearest corner.) The dining hall in Sadleir House, originally the hayloft for the stables, is the scene of a variety of theatre and music events.

Peter Robinson has always emphasized the need for student involvement in wider social issues in the community and abroad. The college provides a supportive environment for activities concerned with human rights, international, aboriginal and environmental issues. The offices of the Ontario Public Interest Research Group, the Trent Institute for the Study of Popular Culture and the Vanier Professor Emeritus are located at the college.

Peter Robinson is the only college that has both conventional residential accommodation and single rooms in townhouses where each student has a study-bedroom and shares kitchen and living and dining room facilities with three or five others. College facilities include an 11,000-volume library, five pianos, a computer room, a recreation area with squash court and sauna, and a croquet lawn.



Catharine Parr Traill College

Principal
(To be named)

Senior Tutor
C.M. Greene, A.M., PH.D.

Senior Don
(To be named)

College Administrator
Lynn Neufeld, B.Sc.

Named in honour of the noted author, botanist and pioneer settler of the Peterborough area, Catharine Parr Traill College is one of the founding colleges of Trent University. An integral part of the academic and social life of Trent University as a whole, Traill College is also a self-contained and active community, beautifully situated on a drumlin overlooking central Peterborough.

For those who wish to be involved both with the University and the local community, Traill College is an attractive home. Regular and frequent bus service connects the college with the Symons Campus, while its central location gives easy access to the University Bookstore, the Peterborough Public Library, art galleries, movie theatres, live concerts, churches, restaurants and pubs.

The college consists of a number of old houses of architectural and historic significance, and one relatively modern building, Wallis Hall. These buildings together provide residence accommodation for 212 students, several apartments for faculty and staff who live in the college as residential dons, and a lodge for the College Principal. Teaching offices, seminar rooms, a lecture hall and the Academic Skills Centre are also housed in the various college buildings. Only Kerr House, however, is devoted solely to academic space. It houses the college library, several study rooms including the Alan Wilson Reading Room for Canadian Studies, and a well-equipped microcomputer lab. The excellent facilities and quiet atmosphere make Kerr House a comfortable working environment for many resident and non-resident students.

In addition to being the base for the academic Departments of English, Classical Studies, Canadian Studies and Philosophy, Traill has faculty members from most disciplines in the arts and sciences. It is thus an active centre for teaching and learning, not only for resident students, but also for Trent's large number of non-resident students, many of whom live in the neighbourhoods surrounding the College.

All Traill students are invited to participate in the Traill Ideas Forums, weekly writing and discussion groups that allow students to explore ideas and issues of concern to them. The intellectual life of the college is supplemented as well by an active visitors program organized by students and faculty, which gives members of the college the opportunity to meet informally with writers, artists, professionals, politicians, musicians and scholars. Past guests have included criminal lawyer Clayton Ruby and Canadian novelist W.O. Mitchell.

The college's proximity to downtown Peterborough has also permitted Traill students to be actively involved in community cultural organizations such as the Peterborough Symphony Orchestra and the Union Theatre, and in organizations working for social change, such as the Kawartha World Issues Centre and Amnesty International. Traill College is also the home of a very active Peer AIDS Education Program.

Active, responsible student involvement has always been a feature of the college's life. Traill students have assumed leadership roles in the University Senate and the Trent Central Student Association, and true to the college's character, have even campaigned in local politics. The College Cabinet plays an important part in organizing academic and social activities for residents and non-residents alike. Facilities at their disposal include the college dining room (which is also used for movies, dances or concerts), The Trend (the student-run snack bar and pub) and various common rooms and lounges. The college also has a music room, crafts room, darkroom, exercise room, sauna, and outdoor tennis court, frequently used for ball hockey. Ice hockey is popular as well, and each year the college alumni return to Traill for its alumni hockey tournament.

Champlain College

Master

Stephen W. Brown, M.A., Ph.D., F.S.A.

Distinguished Teaching Fellow

Iswar C. Chakravartty, B.Sc., M.Sc., Ph.D.

Senior Tutor

Thomas F. Phillips, B.Sc., M.A.

Senior Don

Cathy J. Smith

College Administrator

Marian O'Brien

Champlain College, whose name honours the great explorer and founder of New France, lies on the banks of the Otonabee River near the heart of the Symons Campus. The college is widely acclaimed for its beauty and provides an appropriate setting for the casual and formal activities of college life.

The centre of the college is the impressive Great Hall and its adjacent common rooms. The two residential quads are divided into staircases with five single study-bedrooms clustered on each floor. Although the residence is co-educational, one section is reserved as women's residence. Tutorial offices for faculty fellows, dons' residences and seminar rooms are interspersed throughout the college. Non-residents share with residents the use of the common rooms, the squash court, music practice room, the Ceilie (a licensed pub and games room run by students that operates daily and hosts regular evening special functions) and Junior Common Room, Reading Carrels and the Morton Reading Room.

To the north, beyond the Master's Lodge, the playing field is suitable for a pick-up game of soccer, football, hockey, softball or frisbee.

The academic life of the college includes Champlain's Society (for guest speakers), the Scholars' Dinners and special lecture series. The student Cabinet, elected annually by the Champlain student body, organizes many social and cultural activities to supplement the regular curriculum, in particular, Harvest Weekend in the fall term and Bon Temps in the winter term. In co-operation with the faculty College Council, the Cabinet also shares

in decisions affecting the administration of the college. Members of Champlain College have enjoyed a long tradition of active participation in University activities: athletic, social and communal. Champlain College is home to the departments of Economics, Comparative Development Studies, and Political Studies. The college also offers annually a series of College Courses, short intensive non-credit explorations of cultural and intellectual topics. Past courses have included East Indian Culture and Heritage, Children's Literature, Celtic Studies, the Culture of the Child, and a series on Gandhi and Pacifism.

Lady Eaton College

Principal

(To be named)

Senior Tutor

Patricia Morton, M.A., Ph.D. (Toronto)

Senior Dons

Cindy and Jaime Awe

College Administrator

Judy Grasmuck

Lady Eaton College is the fourth college within the University and the second college on the Symons Campus. Named in honour of Flora McCrear Eaton, a native of Omeme and one of the original sponsors of the University, the college provides facilities designed to encourage academic and social interchange for a community of students and fellows in an international atmosphere.

Situated against a drumlin, the residential wings and Commons Block enclose a pleasant quadrangle. One-third of the south wing of the college building is reserved as a women's residence while the remainder of the south wing and the entire north wing house both men and women. In total there are 214 single study-bedrooms, one apartment reserved for upper-year students and 12 double study-bedrooms. On the first floor of the residence wings are the Principal's Lodge and six apartments for faculty and staff of the University who live in the college as residential dons. There are also offices for many of the fellows of Lady Eaton

College as well as the departmental offices of Women's Studies, Mathematics, and Modern Languages (French, Spanish, German), the offices of the Trent International Program, and those of the Provost and Dean of Arts and Science. Teaching takes place in these offices as well as in the college's seminar rooms and lecture hall.

Non-resident members of the college living at home or in lodgings in Peterborough are full members of the college and are encouraged to participate in college activities and to use the T.V. room, the music practice room, the Junior Common Room, the student-run coffee shop (The Magpie), Crawpadies Pub, and other facilities. The dining hall, a spacious and colourful room with small tables, has a warm and friendly atmosphere. It is also used for dances, concerts, and other special events. Extensive grass fields, ideal for a variety of pick-up sports, surround the college. The Athletic Complex and University Library are close by across the main driveway.

Art exhibitions are occasionally held in the college. They complement the permanent collection of the college, which includes Inuit sculptures, a gift from Lady Eaton.

A very active student government organizes and sponsors many college events in which students and faculty participate. These include intramural sports, in which most students take part, a varied social program including regular events sponsored by Cabinet; Academic Teas; The Drumline, a student publication, and the Lady Eaton College section in the Trent Annual (yearbook).

Language tables organized by the Department of Modern Languages and Literatures hold informal weekly meetings in the college during meal times. Each year the College Visitors Program brings scholars, writers, performers, and public servants to the college to meet students and fellows and to present seminars and lectures. There are, in addition, regular open college symposia given by fellows of the college and guests on topics of special interest. The college has annually hosted a writer-in-residence program through which an eminent Canadian writer is available for one week of discussions, consultations and readings.

Otonabee College

Head of College

Robert (Bob) Annett, B.S.C., Ph.D.

Senior Tutor

(To be named)

Senior Dons

Bina Mehta and Kevin Spooner

College Administrator

Pat Gage

The college's distinctive red-roofed buildings range along a cedar ridge overlooking the river from which the college derives its name. To the east, an uninterrupted vista of rolling rural landscapes; to the west, the Faryon pedestrian bridge, providing easy access to the Bata Library, the Athletic Complex and the other Symons Campus colleges.

Eight "houses" plus four resident dons' apartments and the residence of the Head of College, all of them connected by an interior walkway called "the Street", make up Otonabee's residence. Except for one women-only house, the residence is co-educational. Each house contains single and double study-bedrooms, laundry facilities, a kitchenette and a commons area. Adjacent to the residence is the College Office where the College Head, College Secretary, College Assistant and Senior Tutor have their offices. Past "the Link", a set of faculty offices, are located the Junior Common Room, the Senior Common Room, the Private Dining Room for smaller gatherings, and the main Dining Hall.

The academic wing of the college, directly connected to the Science Complex and the Environmental Sciences Centre, houses laboratories for Anthropology and Psychology; a Sociology resource area; the Native Studies lounge; several seminar rooms; teaching offices representing many of the disciplines in arts and sciences; and the Wenjack Theatre, which provides for multimedia presentations for lectures as well as theatrical productions by amateur and professional companies. Nearby are the Archaeology Centre, Mackenzie House and a wildlife sanctuary with walks and ski trails.

Students at Otonabee play a major role in organizing and conducting cultural, social and athletic activities. The Otonabee College Council, comprising student,

staff and faculty representatives, has a student President; the Head of College chairs its Executive Committee. The Council, through its committees, sponsors a variety of events for its non-resident and resident members: visiting authors, artists, musicians, scientists; annual interhouse debating for the George Bernard Shaw award; college dinners and dances, a College Winter Weekend; a Science Lecture series; talks on topics of interest by the Resident Dons; the inter-house Olympics, and intramural co-educational competition in such sports as soccer, softball, volleyball and hockey. Members of the college also participate in the wider social, cultural and athletic activities of the University and the city of Peterborough, including various forms of community service.

Julian Blackburn College for Continuing Education

Associate Dean and Principal
John Syrett, PH.D.

Academic Counsellor and Assistant to the Principal
Jacqueline Tinson, M.A.

Administrative Assistant
Tui Menzies, M.A.

Administrative Secretary
Carol Tomlin

Oshawa Information Office Co-ordinator
Joan Milovick, B.A.

Trent University's continuing education program was established in the early days of the University. Julian Blackburn College is named in honour of the late Professor Julian Blackburn, a key adviser in the founding of Trent with a deep commitment to continuing education.

The continuing education program at Trent offers the University's academic program to those students who wish to take university credit courses either through part-time studies in Peterborough or part-time or full-time studies in Oshawa. In support of this aim, Trent maintains a flexible admissions policy, putting a high value on the applicant's maturity and

motivation, an advantage to prospective students with varying educational backgrounds. Once admitted to the University, part-time students are free to enrol in any Trent course, day or evening, on- or off-campus, provided they have the prerequisites for the course.

The Julian Blackburn College office is located in Blackburn Hall, the first building on the main campus. For the convenience of part-time students, especially those who prefer evening classes or the Oshawa location, Julian Blackburn College produces brochures for each academic session detailing on- and off-campus courses. These may be obtained directly from the college by calling (705) 748-1229.

Trent in Oshawa

The University's permanent off-campus centre is in Oshawa, through which it also serves neighbouring communities including Newcastle, Bowmanville, Whitby, Ajax and Pickering. Ontario's smallest university serves the largest population centre in the province without a university. Trent offers credit courses in Oshawa each year in the Fall/Winter and Summer sessions, which lead to General B.A. or B.Sc. degrees in Anthropology, Cultural Studies, Economics, English Literature, Environmental and Resource Studies, History, Politics, Psychology and Sociology. General and Honours B.A. and B.Sc. degrees in a number of other disciplines can be obtained by students who can supplement their Oshawa courses with Fall/Winter day or evening, or Summer courses taken on the main Trent campus. All Trent courses in Oshawa are taught at Durham College and all are outlined in the Part-time Studies Spring, Summer and Fall/Winter Session Brochures.

Fall/Winter On-Campus Late Afternoon and Evening Session

In every Fall/Winter session a number of the University's regular courses are scheduled either in the 4:30 to 6:30 p.m. late afternoon or in the 7 to 10 p.m. evening periods. The courses offered in late afternoon or evening hours in the coming Fall/Winter session are described in the Part-time Studies Fall/Winter Session Brochure which is published annually in June. JBC students may also take courses scheduled during the day on campus.

Fall/Winter Off-Campus Evening Session

Every Fall/Winter session the University offers evening courses in Oshawa. Details of these courses are given in the Part-time Studies Fall/Winter Session Brochure mentioned above.

Spring Session

A Spring session of courses is offered in evenings over a twelve-week period from late January to late April. Courses are offered in both Peterborough and Oshawa. The Spring Session Brochure is available annually in November.

Summer On-Campus Session

The Summer session is divided into three parts: a twelve-week term in which courses are taught twice a week from early May to late July, an eight-week term in which courses are taught three times a week from early May to late June, and a six-week term in which courses are taught four times a week from early July to mid-August. Details of the courses to be offered in the coming Summer session are available in the Part-time Studies Summer Session Brochure which is published annually in February.

Summer Off-Campus Session

Trent's off-campus summer courses are offered in Oshawa and are in the same twelve-week, eight-week or six-week terms as on-campus summer courses. In addition, the University offers a number of field courses: archaeology field schools, Geography and Biology field courses. Details of these courses are available from the departments concerned.

Julian Blackburn College Students' Association

Part-time students have a Students' Association which represents them on Senate and a variety of other University committees. All part-time students are automatically members of this association. Further information may be obtained by contacting the Association at 748-1380.

Further information is available from Julian Blackburn College at (705) 748-1229. JBC provides a year-round counseling and information service for Oshawa area students at (905) 723-9747. During registration periods, the Oshawa Information Office accepts applications as a further service to Durham Region students. Written enquiries should be

addressed to Julian Blackburn College, Trent University, Peterborough, Ontario K9J 7B8.

Library

University Librarian

M.W. Genoe, M.A., M.L.S., M.PHIL., M.P.A.

Access Services Librarian, TBA; *University Archivist*, B. Dodge, M.A., ED.D. (on leave Term 2-1997); *Collections Development Librarian*, A. McCalla, B.A., M.L.S.; *Government Publications and Maps Librarian*, B. Znamirowski, B.A., M.L.S.; *Information Services Librarian*, TBA; *Monographs (Acquisitions and Catalogue) Librarian*, M. Scigliano, M.L.S., M.A.; *Catalogue Librarian*, J. Millard, B.A., M.L.S.; *Serials, Microforms, and Photo-reproduction Services Librarian*, K. Field, B.MUS.ED., M.L.S.; *Systems Librarian*, M. Scigliano, M.L.S., M.A.

The University's Thomas J. Bata Library is adjacent to the University Court and is the focal point of the Symons Campus. Bright, spacious and air-conditioned, it provides ideal study and research facilities for all student and staff requirements. The building also houses a number of administrative offices.

An automated library system, the Trent University Online Public Access Catalogue (TOPCAT), is a valuable resource serving the growing needs of all those using the library facilities available at Trent University. The town colleges, Durham College in Oshawa, Sir Sandford Fleming College and Peterborough Public Library are all connected to and/or accessible from Bata Library.

The library contains a collection of more than 480,081 volumes, 270,530 microforms, 2,408 serials subscriptions, 102,893 maps and air photos, and 199,270 government publications. Nearly all the material is available on open shelves and all members of the University are free to browse through the entire collection. The library also subscribes to a number of indexing and abstracting services in CD-ROM format. The following are currently available: Canadian Business and Current Affairs, Life Sciences, ERIC, Aquatic Science and Fisheries, Chemistry Citation Index, MLA Bibliography, Bibliography of

Native North Americans, and OCAAT College Libraries. Student use of the library has been extensive, with one of the highest per capita circulation rates in Canada.

A number of special collections have been formed and, to support the University's interest in Canadian studies, the library has concentrated on the acquisition of Canadiana. This development has been augmented by such additions as the G.M. Douglas Arctic Collection, the Shell Canada Fund for Canadian literature, the Floyd Chalmers Collection of Canadian Explorations and the A.J.M. Smith Collection of Canadian poetry and literature. Other specialized collections include the Holm Collection of Children's Literature, the Ernest Thompson Seton Collection, the Robert L. Hunter Canadiana Collection, the Trevor Lloyd Collection, and the Walter A. Kenyon Collection. Transcripts of the Royal Commission on the Economic Union and Development Prospects for Canada (MacDonald Commission) and the transcripts of the Mackenzie Valley Pipeline Inquiry are also valuable resources. The Feinberg Collection of Whitman and Twain material is on permanent loan from the Peterborough Public Library.

The Trent University Archives preserves non-current records of Trent University and historical records of the Trent Valley area. There are over 2,500 cubic feet of textual records – private, family, business and institutional papers – as well as 15,000 photographs, maps and other graphic items. Holdings are particularly strong in literary records, native studies records, World War I materials and business papers. There are several collections which provide primary research materials relating to women's studies. Most of the collection is unrestricted to researchers and provides excellent support for many academic programs at Trent University.

The Trent University Library of Religion, incorporating the Bishop Webster Collection, provides source material for scholars in religion, philosophy, history and related subjects. Extensive support from the Robert Markon Foundation has been used to establish an art book collection. The Donner Foundation has provided substantial assistance in building up library resources in support of native studies while the Messecar Foundation has provided direct support for Canadian studies. Additional support has been provided to build the Japan Foundation Collection.

The Government Publications and Map Department is a major resource for all students. The Department serves as a regional depository for several governments including the federal government of Canada, provincial government of Ontario and the United States Geological Survey. The department offers a growing collection of electronic information including numeric databases, textual databases, digital maps and atlases, map and mapping software. Other important collections include parliamentary and legislative papers; statutes and regulations and other Canadian legal tools; first ministers conference papers; royal commission reports and transcripts; an extensive collection of Statistics Canada products including paper products, census disks and the CANSIM database; as well as regional publications. Some important cartographic resources include Canadian and international atlases and gazeteers; topographic maps; thematic maps; Ontario base maps; a travel map collection; as well as maps and aerial photography of the Peterborough/Kawartha region.

The University library is augmented by an extensive inter-library loans network through which materials are borrowed from all parts of North America. The Inter-University Transit System, combining electronic mail communications and a daily courier service, expedites the delivery of materials between university libraries of Ontario and Quebec.

Alumni Association

Studying at Trent University is an exciting and important time for the student. But it is just one phase in the lifelong relationship that the Alumni Association fosters and encourages.

Trent's alumni/ae remain informed, interested and involved, long after graduation day. The Alumni Association strives to serve Trent and to serve its alumni. There are many ways to remain involved.

Recent graduates help represent the university to high school students; regional alumni honour alumni achievements in their community; university committees and boards benefit from alumni participation; Trent's story is told regularly in the alumni magazine, and Reunion Weekend warmly welcomes our former students back to campus once a year.

Trent's alumni number 18,500 and their success as liberal arts and science graduates is impressive and diverse. They include a nationally recognized executive search consultant, an award-winning physicist, a leading Canadian church-woman, an influential policymaker in Native education, two long-serving provincial politicians, a pioneering specialist in Canadian environmental law, an innovative leader in information technology, a leading-edge marketing entrepreneur, a doctor committed to international humanitarian causes and several award-winning writers.

The alumni regard for Trent is borne out in many ways. *Maclean's* magazine recently recognized Trent's relatively young alumni body as the second most financially supportive in Canada. And everywhere you turn at Trent, the evidence of alumni philanthropy is visible.

This strong and lasting bond that alumni form for Trent is a telling indicator of the richness of their experiences as students.

Athletic Program

The University offers a comprehensive and diversified athletic and recreational program. The programs range from the more organized inter-university competition to completely informal recreational activities.

Located on the campus are rowing facilities, a full-size floodlit playing field, tennis courts, a gymnasium, a 25-metre pool, squash courts, a weight room and fitness centre, saunas and locker facilities.

Trent University is a full member of the Ontario Women's Intercollegiate Athletic Association, the Ontario Universities' Athletic Association, and the Canadian Interuniversity Athletic Union.

Interuniversity and intramural competition is organized in a wide range of activities which include badminton, basketball, cross-country running, fencing, hockey, rowing, rugby, skiing (nordic), soccer, softball, squash, tennis, touch football, field-hockey, volleyball, swimming, curling, golf and synchronized swimming. In addition, a complete schedule of aquatic programs are offered.

A significant number of student employment opportunities are available which are essential to the running of the facilities and programs.

University Services

Undergraduate Activities

The University has fostered the development of a rich and varied program of social and cultural activities. The early years of the University saw the establishment and lively growth of literary magazines, a radio service, musical activities,* community action programs, and of drama, art, debating and film societies, plus a student newspaper and a full range of other activities. Each of the college governments encourages a wide variety of formal and informal events.

Among the facilities offered by the City of Peterborough to members of the University are a fine public library, an art gallery, a museum, a symphony orchestra, a varied theatrical program, and regular visits by musical and theatrical companies, and outstanding speakers.

*Further information on musical activities is available from the Trent University Music Society, c/o Peter Robinson College.

Student Services

Student Services provide a broad range of programs and services that are designed to support the educational experience of Trent University students. Depending on their needs, students may be assisted by any of the following offices: Counselling Services, Careers and Placement, Student Health Services, Financial Aid, Special Needs Services, Off-Campus Housing. Student Services representatives as well as students themselves sit on a variety of university-wide committees dealing with programs that serve all students at Trent University. These committees include: Committee on Colleges, Health Services Committee, Special Needs Committee, Transportation Committee, Introductory Seminar Committee, Dining Hall Services Committee.

Bookstore

The University operates a bookstore in the City of Peterborough which is easily reached from the University buses. The bookstore meets the wide range of needs and interests of the students, faculty, staff, and the Peterborough community.

Most books in print can be obtained on individual order. A collection of biblio-

graphical tools is maintained which students and staff are encouraged to use.

The bookstore aims to be more than a mere outlet for textbooks and stationery supplies. To this end, academic supporting stock, a wide range of periodicals, computer software and supplies, and books of general interest are made available. The bookstore seeks to create an atmosphere that will encourage the enjoyment of books and building of a private library. There are three "buy backs" held throughout the year.

Textbook returns: New textbooks are returnable when a student drops a course but only with a signed copy of the course drop form and your sales receipt. Books must be unmarked and in mint condition.

Used textbooks and course packs (reprints) are not returnable.

Return deadlines are October 11 for full refund and November 9 with a deduction for restocking. See the textbook buyer for complete details for textbook returns.

Bus Service

A bus service operated by the City of Peterborough connects the Symons Campus with the two town colleges and the bookstore. The compulsory transportation fee paid by full-time students entitles the student to a bus pass which is honoured on all city buses from the Labour Day holiday in September to the Victoria Day holiday in May each year. Please see section on Ancillary Fees, page 21, for information on compulsory transportation fee.

Campus Store

The Trent University Campus Store is situated in Bata Library opposite the staff parking lot. The store meets the needs of the students living on or off residence, offering them a wide variety of items.

In addition to regular variety store items, the Campus Store has a wide selection of magazines, greeting cards, stationery and school supplies and toiletries. The store also has an extended line of crested ware, including glassware, sweatshirts, hats, t-shirts and the official Trent University jackets. The store is owned and operated by Trent University.

Careers and Placement

Coordinator

Susan Welch

Telephone: 748-1385

The student Careers and Placement Centre, located in Blackburn Hall, provides information on a wide variety of specific careers and employers, colleges or education and graduate and professional schools. It maintains a library containing up-to-date calendars from other Canadian universities and community colleges as well as books describing work and study abroad programs and government employment programs. Materials concerning resumé writing, job-search techniques and interview skills are also available at the centre.

Full-time, part-time and summer employment opportunities are available through the centre, as is information about companies which plan recruitment activities both on and off the campus.

Office hours are Monday to Friday, 9 a.m. - 12:15 p.m. and 1:15 - 4:00 p.m.

Child Care Centre

Telephone: 743-2811

The Trent Child Care Centre, Incorporated, is a separately incorporated child care facility which provides services in a building on the Symons Campus owned by Trent University. Trent Child Care is open to the community as well as the University, but priority on the waiting list goes to Trent students and persons associated with the University. Early registration is urged.

Computing and Telecommunications Services

A wide variety of computing and communications resources are available to members of the Trent academic community in support of their research, learning, teaching and scholarship. These include various computer languages, applications and computer-based services available through VMS and UNIX time-sharing facilities, clusters of MS-DOS and Macintosh microcomputers, and a network of UNIX workstations.

Some of these resources are accessible only through personalized computer accounts. Computer accounts which include full Internet access are available upon request from Computing & Telecommunications Services.

The use of Trent's computer facilities is available to all students and faculty free of charge. Use of the facilities is a privilege, and users must comply with the "Trent University Computer-User Code of Ethics".

Counselling Services

Coordinator

Ada Meecham, M.A.

Telephone: 748-1384

The student Counselling Centre, located in Blackburn Hall, is a resource provided by the University to promote the personal, academic and career development of Trent students.

Many students seek help with specific concerns related to family and peer relationships, self confidence, stress, loneliness, sexuality or academic difficulties. Others bring less clearly defined problems such as low motivation or generalized anxiety, all of which can interfere with concentration and feelings of well-being and belonging. Students also request aid in defining their interests and abilities in order to make decisions about academic choices and career goals.

All counselling sessions are free, voluntary and confidential.

Off-Campus Housing Service

From May - September, the University operates a housing office (748-1769) providing a listing service of accommodation available in the community for students requiring off-campus housing. The listings of accommodation can also be accessed year round through the gopher space by selecting Administration and Service Departments, then University & Student Services.

For further information, contact Jan Fialkowski, the College Administrator, Peter Robinson College, at 748-1745.

Student Health Service

Director

Ann Walters, Reg.N.

Telephone: 748-1481

The Student Health Service is located in Blackburn Hall and provides physician, nursing and counselling services for full-time and part-time students. Clinic hours are 9 a.m. to noon and 1:30 to 4:30 p.m. Monday to Friday from September to April. An evening clinic is offered weekly during peak periods. All clinics are by appointment.

The University requires all students to carry medical insurance. Any student without insurance is held personally responsible for his/her health care costs.

Students from Canada must submit valid provincial Health Card numbers to the Student Health Service. Students from Quebec who seek medical treatment will be charged a fee for service which is usually recoverable through their health plan. The Province of Quebec does not participate in a reciprocal billing arrangement. International students must arrange for UHIP coverage prior to registration.

The Student Health Service is closed from May to September.

Students with Special Needs

Coordinator Special Needs

Eunice Lund-Lucas

Telephone: (705) 748-1281;

TDD (705) 748-1482

Within its resources, Trent University endeavours to ensure the accessibility of its campus and programs to all students, including those with special needs. The University has a Special Needs Office, located on the ground floor of the Bata Library building, and a Coordinator for Special Needs, who provides support and advocacy on behalf of students with physical, sensory or learning disabilities. Some of the services provided by this office include transcription services for those who are visually impaired or learning disabled, assistance with obtaining note-takers for hearing-impaired students, exam invigilation services for students with a variety of special needs, and liaison with faculty members and with support agencies in the community. In addition, the Special Needs Office has available some adaptive technological aids such as a computer equipped with voice synthesizer, optical scanning equipment, computers, reading lamps, portable FM systems, four-track tape recorders and hand-held tape recorders.

Special needs students considering attending Trent are strongly encouraged to contact the Coordinator at the time of application since some action may be necessary in advance to accommodate the student's needs. Where appropriate, for example in the case of a learning disability, formal diagnosis and assessment of the condition will be required, normally this would include a report prepared by a registered psychologist within the past three years. In all cases early identification of needs is extremely important.

Students with mobility impairments are strongly urged to visit the campus to determine its suitability to their needs and interests. Most buildings are equipped with ramps and/or elevators to provide access for persons with mobility difficulties.

Students with special needs are also encouraged to become aware of assistance that is available through various private and public agencies. For example, hearing-impaired students from Ontario may be able to get financial assistance for notetakers or tutors from the Vocational Rehabilitation Service of the Ministry of Community and Social Services or Educational Support Services of the Canadian Hearing Society. Students from other jurisdictions who have special needs should investigate the availability of assistance through such agencies in their home province or country.

Academic Skills Centre

Director

Karen Taylor

Coordinator Publications Program

Paul Gamache

The Academic Skills Centre offers both individual and group assistance in writing, critical and efficient reading, mathematics, and study skills. Any Trent student may use the services of the Centre; the length of the contact varies from a single session to regular, long-term assistance.

During Introductory Seminar Week the Centre administers a diagnostic writing exercise. On the basis of the results of this exercise, some students are advised to seek help either by taking workshops or by working one-to-one with an instructor.

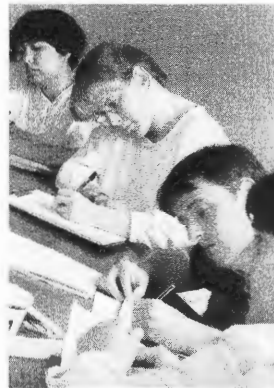
Many students begin work at the Centre in the early weeks of their first year; however, students may come for help at any time throughout their years at Trent. While the Centre's main office is located at Trill College, some students may find it more convenient to meet with an instructor at one of the Champlain College offices. At Trill, there is a lending library of books on composition and other academic skills.

Students who would like the response of an instructor at any point during the essay-writing process – on reading, research, drafting, or revision – or those who seek a review of grammar, seminar

presentation, study skills, or high school mathematics, may phone the Centre's secretary to enrol in a workshop or to arrange an appointment. Many students – even those who complete the diagnostic writing exercise with ease – find that taking the non-credit workshops early in the first year helps them get a good start in their course work.

Two groups of students who might be particularly interested in working with the Centre are students for whom English is a second language and special needs students. These students should make a special effort to visit the Centre early in the year or even before term begins.

The Centre's Publications Program writes, publishes, and distributes handbooks that assist students in achieving academic success. The Centre currently distributes four titles: *Notes on the Preparation of Essays in the Arts and Sciences*, a guide to correct documentation and style; *Thinking It Through: A Practical Guide to Academic Essay Writing*, which covers the writing process and the requirements of an academic essay; *Clear, Correct, Creative: A Handbook for Writers of Academic Prose*, a process-based approach to style, revision, and word usage; and the *Trent Time Manager*, a text/planner which shows students how to organize their work and manage their time. Centre staff have also written *Making Your Mark: Learning to Do Well on Exams*, which helps students study throughout the academic year and prepare for exams. This book is published by Harcourt Brace. All these texts may be obtained by contacting the Academic Skills Centre by telephone (705) 748-1720, by facsimile (705) 748-1830, by e-mail acdskills@trentu.ca, or by mail.



Financial Information

Fees

All quoted fees are for 1995-96. Fees for 1996-97 should be available in March or April 1996.

Payment of Undergraduate Fees

Due dates for all fees, including fees for registered courses starting in the second term: continuing students who have completed early registration, fees are due July 31; all other students who have not completed early registration, fees are due August 15. Payment may be made in the following ways:

- payment in full by the due date or submission of documented evidence that fees will be paid from external support.

OR

- a payment of approximately 65% by the due date (or proof of external support), and a payment of the balance of all fees by no later than January 15, 1997 (or proof of external support).

Continuing students who have unpaid fees or library fines from a previous academic session are required to include full payment of these items with their fee payment in order to be officially registered.

In addition, all outstanding accounts such as departmental charges for laboratory fees, field trips, etc. are also to be included in the January 15, 1997, payment.

Cheques or other remittances (please do not mail cash) should be made payable to Trent University and together with a completed Fee Payment Commitment Form mailed to Student Financial Services Office, Financial Services, Blackburn Hall, Trent University, Peterborough, Ontario, K9J 7B8. Registration will not be considered complete if the completed Fee Payment Commitment form is not included with the payment.

There is a \$20 fee for cheques which are returned by the bank for NSF or other reasons. If a cheque, which accompanies the first instalment of fees is returned by the bank, the student's official registration is automatically cancelled. In order to be eligible to re-register, the invalid cheque must be replaced with a certified cheque or money order immediately.

The University reserves the right to require a student to pay by certified cheque.

Students who receive financial assistance from OSAP, scholarships, bursaries or any other source which is not available

by the date fees are due may receive a payment deferment. Students must still submit a completed Fee Payment Commitment Form. Students are required to make arrangements for a fee payment deferment with the Financial Aid Office in Financial Services in Blackburn Hall prior to the date fees are due. Deferments will normally only be granted to students who can show proof of financial assistance which can be confirmed by the University. There is a \$25 fee for a deferment.

The University will not consider registration to be complete until all financial requirements have been met by the student.

Tuition Fees

Students admitted to full-time studies (a course load of 3.5 courses or more) are required to pay full tuition fees. In 1995-96 this fee was \$2,451.

Students admitted to part-time studies pay one-fifth of the full-time tuition fee for each full course registered. In 1995-96 this fee was \$490.20 per full course, \$245.10 per half course.

A tax certificate for tuition fees assessed during the calendar year will be provided in February.

Ancillary Fees - Full-Time Students

Full-time students admitted to full-time studies will normally be affiliated with one of the five residential colleges for full-time students, and will be required to pay the ancillary fees for full-time students. These include fees for athletics, health services, transportation (bus pass and some parking), college activities and a convocation fee. New students also pay an Introductory Seminar Week fee.

In 1995-96 these fees were:

Athletics	\$110.50
Health Services	\$ 30.00
Transportation	\$127.00
College Activities	\$180.00
Convocation	\$ 11.25
Introductory Seminar Week	\$ 10.00

Part time students who are admitted to full-time studies normally pay the ancillary fees for full time students, even if they remain affiliated with Julian Blackburn College, the University's college for part time students.

Students taking a full-time course load (i.e. 3.5 courses or more) in Oshawa pay part-time ancillary fees. However, if more than one full course of the total course load is taken in Peterborough, the student

is required to pay full-time student ancillary fees. For further information contact the Student Financial Services Office in Financial Services.

Ancillary Fees - Part-Time Students

All students admitted to part-time studies will normally be affiliated with Julian Blackburn College, the University's college for part-time students. This includes continuing full time students who decide to register in part time studies.

Part-time students registered in courses offered in Peterborough pay ancillary fees for part-time students. These include fees for athletics, health services, college activities and a convocation fee. Part-time students registered in courses offered outside Peterborough, Oshawa for example, are not required to pay the ancillary fees for athletics and health services. In 1995-96 these fees were:

Athletics	\$31.50 per full course
Health Services	\$ 2.70 per full course
College Activities	\$27.80 per full course
Convocation	\$ 2.25 per full course

If a part-time student wishes to be affiliated with one of the residential colleges for full-time students, **the student will be required to pay all the ancillary fees paid by full-time students.** Part-time students have until September 30 to make this request through the full time college office. Part-time students who are required to visit the University's main campus three or more times per week on a regular basis are eligible to purchase a bus pass. Student bus passes are issued by the Student Financial Services Office in Financial Services in Blackburn Hall.

Residence Fees

Full room and board is provided in single and double accommodation in each of the five University's residential colleges for full-time students. In addition, limited townhouse accommodation is available without meals. In 1995-96 residence fees were \$5,381 for single, \$5,094 for double and \$2,957 for townhouse.

Continuing full-time students interested in residence are required to submit a residence application form to their college office by the end of March. A \$300 deposit mailed directly to the college office is due June 1 to confirm acceptance. If the deposit is not received by June 1, the room will be re-assigned.

Full-time applicants to the University must indicate their interest in residence on their college application form which they submit directly to the Registrar's Office by June 1. Students who are offered a space in residence are required to submit a \$300 residence deposit by the date indicated in the University's offer of residence to confirm acceptance. If the deposit is not received by the due date the room will be reassigned.

Trent University offers accommodation in residence from early May to late August. For further information about rates please contact the Conference Office or one of the college offices.

Meals

The University's residence fees include the cost of a full meal plan (21 meals per week) for the academic year commencing immediately after introductory seminar week in September.

The colleges also encourage non-resident students to eat their meals in the college dining rooms. The University offers special (non-refundable) meal plans to non-resident students at various levels of discounts. These meal plans may be purchased (they cannot be charged to a student's account) at the Student Financial Services Office, Financial Services in the Blackburn Hall. In 1995-96 the following special meal plans were available to students not in residence.

	<i>First term</i>	<i>Second term</i>
5 meals/week		
(20% discount)	\$ 340.77	\$ 389.45
10 meals/week		
(30% discount)	\$ 659.26	\$ 753.44
21 meals/week		
(35% discount)	\$1,137.87	\$1,300.42

Students wishing to purchase a 21-meal per week meal plan for the two terms combined pay \$2,424.00 (40% discount). Alternatively, non-resident students may purchase a package of 50 meal tickets (25 lunches and 25 dinners) for \$270.77 (15% discount) or a package of 25 meals at 10% discount (25 lunches for \$133.77 or 25 dinners \$152.92). Prices for 1996-97 should be available in March or April 1996.

Student Government and Organization Fees

Student government and organization fees are determined by student referenda which are held under the supervision of the Trent Central Student Association for full-time

students and the Julian Blackburn College Students' Association for part-time students. All full-time and part-time students are required to pay student government and organization fees. These fees are not refundable unless specifically noted. For full-time students these fees in 1995-96 totalled \$212.91 and included the following: Trent Central Student Association \$20.05, Trent Central Student Association Club Fund \$4, College Cabinet/ Council \$12.75, Canadian Federation of Students - Ontario \$5, Arthur \$9, Trent Film Society \$3, Trent Radio \$15, Trent Music Society \$2.50, Theatre Trent \$3, Trent International Students Association \$1.50, Sexual Violence Support \$3, Women's Centre \$1.75, Trent Annual \$18, WUSC \$2, Trent Student Health Plan \$80.36, The Commoner \$3, OPIRG \$9, OXFAM \$3, Kawartha World Issues Centre \$4, College Student Pubs \$2, Canadian Federation of Students \$6, and International Scholarship Fund \$5. (The Commoner, OPIRG, OXFAM, Trent Central Student Association [for Student Health Plan] and Kawartha World Issues Centre will provide refunds **directly** to students when requested by certain deadlines set by the student organizations).

Part-time students pay a Student Association Fee. In 1995-96, this fee was \$5.50 per full course.

Health Insurance for International Students

Effective July 1, 1994 the Ontario Government ruled that international students and their dependents who are temporary residents of Ontario will no longer be eligible for coverage under the Ontario Health Insurance Plan (OHIP). Therefore, international students are required to purchase basic health insurance coverage to register for their courses at Trent University. Private coverage with Blue Cross has been arranged through a joint initiative of the Council of Ontario Universities and the universities. A compulsory health insurance fee, **payable in full with the fee payment**, must be paid to Trent University by all international students to provide this health insurance coverage. In 1995-96 the health insurance fee was \$535.68 for single coverage. Coverage is also available for dependents. Students will not be officially registered without this full payment of health insurance. Students are required to complete a health insurance application form. The insurance will not be valid until the student has completed the form, and, the form has been processed

by the Trent International Program (TIP) Office in September. Blank forms are available at the TIP Office in Lady Eaton College.

Senior Citizens

The University's Board of Governors has revised the tuition fee waiver for senior citizens. Persons 65 years of age and older who successfully completed a course for credit during the three years immediately prior to 1994-95 will be able to continue to receive a waiver of all compulsory tuition and ancillary fees until August 31, 1997, the end of the 1997 summer session. There will be no further fee waiver for senior citizens starting with 1997-98 academic session. All other persons of 65 years and older will pay full fees. However, these persons will be able to apply for a student bursary in case of financial need.

Persons of 65 years and older who wish to audit courses only pay an administrative fee \$100 per full course and pay no compulsory ancillary fees.

Auditing Courses

Persons under the age of 65 who wish to audit courses will pay 50% of the regular tuition fee for regular credit courses. Auditing students do not pay compulsory ancillary fees.

Other Fees

Additional fees at 1995-96 levels (subject to change in 1996-97):

Transcripts - per copy	
nominal service	\$ 5.00
hour response	\$ 20.00
Academic appeals	\$ 25.00
Letter of Permission for courses	
at other Universities	\$ 30.00
Degree replacements	\$ 40.00
Document lamination	\$ 2.00
Replacement of tax tuition form:	
current session	\$ 5.00
previous session	\$ 15.00
Late registration fee:	
Full-time students:	
prior to July 31	\$100.00
after July 31	\$200.00
after August 15	\$100.00
Part-time students:	
prior to July 31	\$ 50.00
after July 31	\$100.00
after August 15	\$ 50.00
Application to Trent by	
part-time students	\$ 25.00
Application to Trent by	
graduate students	\$ 35.00

Application for re-admission	\$ 25.00
Verification of registration	\$ 5.00
Assessment letter	\$ 10.00
Processing withdrawal from the University prior to start of classes	\$ 50.00
Late course additions - per course	\$ 25.00
Late convocation application fee	\$ 25.00
Trent International Program:	
Exchange application	\$100.00
Foreign university placement	\$ 85.00
Fee payment instalment fee	\$ 30.00
Late second instalment payment	\$ 50.00
Replace bus pass:	
First term	\$106.00
Second term	\$ 56.50
Replace student I.D. card	\$ 10.00
Returned cheque fee	\$ 20.00
Copy of OSAP application	\$ 3.00
Incorrect/incomplete OSAP application	\$ 5.00
Fee deferment application	\$ 25.00
Short-term loan application	\$ 10.00
Replacement of meal card	\$ 25.00
Replacement of residence key	\$ 60.00
Replacement of mail box key	\$ 20.00
Replacement of library card	\$ 5.00
Residence appliance fee	\$ 20.00
Termination of residence contract	\$370.00
Late college transfer application	\$100.00
Thesis binding fee	\$ 11.60
Microfilming fee	\$ 35.50
Rental of library study carrels	\$ 8.00
Library fines for overdue books and lost material	various

Special additional fees may be assessed directly by some departments for courses involving laboratory or field work, or for course material. Some of these fees may be refundable. Additional fees are also charged to students who participate in one of the University's Year Abroad Programs. Academic Departments will provide detail information on request.

Trent University/

Sir Sandford Fleming College

Trent University and Sir Sandford Fleming College offer a number of programs on a joint basis. The fee structure for the courses taken under these joint programs at Trent University may differ slightly from the regular fee structure. The University's Student Financial Services Office will be able to provide more information about the fees charged by the University.

Textbooks

The cost of books and materials varies according to individual course requirements, with those for science courses tending to be more expensive than those for arts courses. Students should be prepared to spend approximately \$130 per course. Both new and used textbooks are available from the Trent University Bookstore. The Bookstore accepts personal cheques, MasterCard and Visa. The Bookstore provides limited refunds of textbook purchases. Students are expected to familiarize themselves with the Bookstore's text book refund policies.

Withdrawal From the University and Refund of Fees

Refunds are provided for all tuition and compulsory ancillary fees except those listed under Student Government and Organization Fees. Most of the other fees listed are not refundable unless specifically indicated otherwise.

Full-time students who wish to withdraw from Trent University must visit their college office to complete an official Withdrawal Form, obtain the signature of the college head and return the student identification card (bus pass) and meal card (in case of a resident student). The student is then responsible for delivering the completed Withdrawal Form to the Registrar's Office for the official recording and dating of the withdrawal for academic and refund purposes. The date the form is received by the Registrar's Office serves as the effective date for the Finance Office for the calculation of the proportionate refund of fees. The Finance Office will not process a refund until it has received the student's bus pass (and meal card where applicable) from the college office. Full-time students who withdraw from courses but retain a course load of at least 3.5 courses, are still considered full time and do not receive a refund for the withdrawn courses.

Part-time students who wish to withdraw are required to notify Registrar's Office in writing. The date the student's letter is received by the Registrar's Office becomes the effective date of course withdrawal and the date used by the Finance Office to calculate the fee refund.

Fee refunds for withdrawals prior to the start of classes are subject to a \$50 processing charge.

A table has been provided (pg. 28) which outlines the percentages at certain dates during the academic year at which

the fee refunds are calculated for full withdrawal from the University or for a course withdrawal by a part-time student. The actual amount of refund will of course depend on the amount of fees actually paid. The table assumes that all fees are paid. Student Government and Organization Fees are not refundable.

Students Changing From Full-Time to Part-Time and Refund of Fees

Students changing from full-time to part-time (i.e. less than 3.5 courses) will be provided a pro-rated refund in tuition fees based on the date a completed Change of Course Registration Form is received by the Registrar's Office. There will be no proportionate refund of any of the compulsory ancillary fees.

Unpaid Student Accounts

Students who wish to pay their fees in two instalments will be assessed a \$30 instalment fee when the first instalment is due. Students who fail to pay the second instalment including all other accounts by January 15, 1997 will be assessed a \$50 late payment fee.

Unpaid accounts of students who are no longer registered with the University will be placed with a collection agency.

Ineligibility to Return to the University for Financial Reasons

For all students who have not paid their University account in full by February 28, the Registrar's Office will change their academic status to Financially Ineligible

to Early Register. These students will be excluded from Early Registration in April and will be required to apply for re-admission to the University. **Students in this status are still required to complete the academic year, including the writing of any final examination;** however, neither transcripts nor grade reports will be released for students having financial obligations to the University.

Confidentiality of Student Fee Information

All information regarding student fees is treated as confidential and will normally only be released to individual students. In cases where sponsoring government and private agencies and organizations or individuals are paying fees on the student's behalf, the student may wish to waive the right of privacy and allow the University to release information about the status of his/her fees to avoid any interruption in the payment of fees. To ensure that the necessary fee information is available to sponsoring agencies, etc., students must sign the release waiver on the Fee Payment Commitment Form which is to accompany the payment of fees.

Schedule of Undergraduate Fees

To assist students in their financial planning, a fee schedule, based on 1995-96 rates, is included. The actual fees for the 1996-97 academic year will not be available until March or April 1996 after they have been approved by the University's Board of Governors.

1995-96 Fees for Full-Time Undergraduate Students

(Fees for 1996-97 will be available in March or April 1996)

	Tuition	Residence	Ancillary	Student Government	Total Fees	If paid in two instalments	
						First Instalment (Includes \$30.00 Instalment Fee)	Second Instalment Due Jan. 15
Non-resident rate	\$2,451.00		\$458.75	\$212.91	\$3,122.66	\$1,904.00	\$1,248.66
Single room rate	\$2,451.00	\$5,381.00	\$458.75	\$212.91	\$8,503.66	\$5,132.50	\$3,401.16
Double room rate	\$2,451.00	\$5,094.00	\$458.75	\$212.91	\$8,216.66	\$4,960.00	\$3,286.66
Townhouse rate	\$2,451.00	\$2,957.00	\$458.75	\$212.91	\$6,079.66	\$3,678.00	\$2,431.66

International students pay an additional \$6,792.00 (95-96 rate) in tuition fees.

International students also pay \$335.68 (95-96 rate) for health insurance with their fee payment. Health insurance coverage is compulsory. Without this additional payment, registration will not be complete.

New full-time students pay an additional \$10.00 Introductory Seminar Fee with their fee payment (not included in the above).

The first instalment includes a \$30 instalment fee.

Students who do not meet the January 15 second instalment deadline will be charged a \$50.00 late payment fee.

Part time students may find information about fees in the calendar for Part-Time Studies issued by Julian Blackburn College.

Percentage Refunds Table

		<i>Tuition & Ancillary</i>		<i>Residence & Meals</i>		
		<i>Full-time</i>		<i>Residence</i>	<i>Meal plan</i>	<i>Student government fees</i>
		<i>One full course</i>	<i>Half course</i>			
09 Sep 1996	15 Sep	90%	90%	82%	91%	0%
16 Sep	22 Sep	90%	80%	79%	88%	0%
23 Sep	29 Sep	90%	70%	76%	85%	0%
30 Sep	06 Oct	80%	60%	73%	82%	0%
07 Oct	13 Oct	80%	50%	70%	79%	0%
14 Oct	20 Oct	80%	40%	67%	76%	0%
21 Oct	27 Oct	70%	30%	64%	73%	0%
28 Oct	03 Nov	70%	20%	61%	70%	0%
04 Nov	10 Nov	70%	10%	58%	67%	0%
11 Nov	17 Nov	60%	0%	55%	64%	0%
18 Nov	24 Nov	60%	0%	52%	61%	0%
25 Nov	01 Dec	50%	0%	49%	58%	0%
02 Dec	08 Dec	40%	0%	46%	55%	0%
09 Dec	15 Dec			43%	52%	0%
16 Dec	22 Dec					
23 Dec	29 Dec					
30 Dec	05 Jan					
06 Jan 1997	12 Jan	40%	90%	40%	49%	0%
13 Jan	19 Jan	40%	80%	37%	46%	0%
20 Jan	26 Jan	30%	70%	34%	43%	0%
27 Jan	02 Feb	30%	60%	31%	40%	0%
03 Feb	09 Feb	20%	50%	28%	37%	0%
10 Feb	16 Feb	10%	40%	25%	34%	0%
17 Feb	23 Feb	0%	30%	0%	31%	0%
24 Feb	01 Mar	0%	20%	0%	28%	0%
02 Mar	08 Mar	0%	10%	0%	25%	0%
09 Mar	15 Mar	0%	0%	0%	22%	0%
16 Mar	22 Mar	0%	0%	0%	19%	0%
23 Mar	29 Mar	0%	0%	0%	16%	0%
30 Mar	05 Apr	0%	0%	0%	13%	0%
06 Apr	12 Apr	0%	0%	0%	0%	0%
13 Apr	19 Apr	0%	0%	0%	0%	0%
20 Apr	26 Apr	0%	0%	0%	0%	0%

Student Aid

Ontario Student Assistance Program

The Province of Ontario and the Government of Canada provide loan assistance to university students through the Ontario Student Assistance Program. To qualify for Canada Student Loans the student and/or parents, guardians or sponsors must be Canadian Citizens or Permanent Residents. To qualify for Ontario Student Loans the student must also meet certain residency criteria.

The purpose of OSAP is to assist both full-time and part-time students when the financial resources available to them from parents, spouses, summer work or other sources are insufficient to meet estimated educational costs.

The following programs are funded by the Province of Ontario under the OSAP program.

The Ontario Special Bursary Plan

(OSBP) provides a limited number of bursaries to sole-support parents and students

with disabilities who study on a part-time basis (maximum 60% course load).

Tuition, books, travel costs and babysitting to a maximum of \$2,500 per year is available.

The Child Care Bursary is available to married students and sole-support parents who apply and qualify for OSAP assistance. Applications will be mailed directly by the Ministry of Education and Training to all students indicating child care costs on their OSAP application.

The Bursary For Students with Disabilities is available to students who incur disability related educational expenses. Students are encouraged to contact the Special Needs Office to obtain an application and discuss their needs.

The Ontario Work Study Program

(OWSP) is funded by the Province of Ontario and provides part-time jobs on campus during the study period for full-time students (minimum 60% course load) whose financial needs are not met through

the loan programs. Applications for these positions will be available at the Financial Aid Office in September.

Students can obtain applications and information on the OSAP program through their high school guidance office or from the Financial Aid Office Trent University.

Financial Assistance for Students from Outside Ontario

Students from outside Ontario who require financial assistance in university are strongly urged to consult with officials in their schools regarding available provincial loan and bursary assistance.

Students from foreign countries are urged to consult with educational authorities in their own country.

The University has limited bursary funds to assist needy students not eligible for government assistance.

Emergency Short-term Loan Funds

Loan funds are available on a short-term basis to help needy students meet emergency situations. Among these funds is the Henry and Mary Nokes Fund established by the Cobourg and District Labour Council to honour Mr. and Mrs. Nokes, and augmented by private donors. Funds have also been made available through a joint undertaking of the Trent University Alumni Association, the Trent Student Union (Development Projects Fund) and the College Cabinets/Councils. A fund has also been established by the Major Bennett Chapter, IODE, Peterborough, Ontario.

Bursaries

Bursary funds are intended to assist primarily in emergency situations. Bursaries are usually awarded in second term based on financial need and satisfactory academic achievement. Applications are available from the Financial Aid Office or the College Heads early in January. The deadline date for submission is Jan. 31.

William Aitken Memorial Bursary

This bursary was established by the family of William Aitken, the oldest student to graduate in 1986. It will be awarded to a deserving student in an undergraduate year.

Eileen Allemang Bursary Fund

This bursary is to be awarded to a student of Peter Robinson College based on academic achievement, financial need and contribution to college activities.

The Atkinson Charitable Foundation Bursaries

These bursaries are awarded to deserving Ontario undergraduates based on academic achievement and financial need.

Barkley's of Avonmore Bursary

Established by Fred Barkley of Avonmore this bursary will be awarded annually to a deserving student in any undergraduate year, who is a resident of a province other than Ontario.

Barkley's of Avonmore Visa Bursary

Established by Fred Barkley of Avonmore this bursary will be awarded annually to a deserving Visa student based on satisfactory academic achievement and financial need.

Beta Sigma Phi Bursary Fund

Established through the local chapter of the Beta Sigma Phi with funds from the international division to be awarded to deserving students in any undergraduate year.

The Birks Family Foundation Bursary Fund

This bursary will be awarded to a deserving student in any undergraduate year based on academic achievement and financial need.

The Bourinot Bursary Fund

This bursary will be awarded annually to a full-time student from Peterborough County. Preference will be given to an employee of the Canadian Tire Store in Peterborough or a member of their immediate family.

Philip and Annie C. Black Award

These awards are the gift of Isadore and the late Morris Black of Peterborough in memory of their father, Philip Black, the first Rabbi in Peterborough, and their mother, Annie.

Julian Blackburn College Student Association Bursary

A number of bursaries are available to part-time students undertaking study at Trent on a continuing basis. Students must

have been registered in JBC college for two previous sessions.

Jacob F. Burnham Memorial Bursary

The gift of Daisy McCarrell, a former employee of Trent University, bursaries will be awarded annually based on financial need and satisfactory academic achievement. Preference will be given to students majoring in Economics, Administrative Studies, and related fields.

Jim Dolan - Ron Reid Trent Alumni Rugby Bursary

This bursary is to be awarded to a Trent Rugby men's or women's 1st or 2nd team player who can demonstrate financial need.

Dr. Leslie Calvert Award

Named after one of Trent's first students of German, this award is for deserving students who require financial help to participate in the Year Abroad Program in Freiburg.

The Ron Campbell Bursary

Established by Ron Campbell Enterprises, which operates McDonald's Restaurants in Peterborough and Lindsay, for students from Victoria and Peterborough Counties enrolled in Trent's Environmental and Resource Studies Program. This bursary will be awarded annually based on satisfactory academic achievement and financial need.

Champlain College Cabinet Bursary

This bursary will be awarded annually to a Champlain College student with a minimum C- average and financial need. The recipient will be chosen by a committee of the Master, Assistant to the Master and the College Cabinet President.

Harry Cherney Memorial Bursary

Established in memory of the late Harry Cherney by wife, Erica, his sons, Brian and Lawrence, family and friends, these bursaries will be awarded annually to students studying Administrative Studies, Economics or Computer Studies, based on financial need and satisfactory academic achievement.

Morris Christie Memorial Bursary

Established in memory of Morris Christie by Karen and Mark Christie and family, to be awarded annually to deserving students based on satisfactory academic achieve-

ment and financial need with preference given to a student from the Third World.

The City of Peterborough Employees' Awards

The City of Peterborough Employees' Awards have been established by the employees of the City of Peterborough. These awards are available to any child or spouse of a City of Peterborough employee who requires financial assistance with tuition, or related costs, while attending Trent University.

The Commoner Bursary Fund

This bursary established by The Commoner Limited will be awarded annually to a full-time student based on financial need and a minimum C average.

Community Service Bursary Program

Established by the Quaker Oats Employees' Independent Union (Cereals), this bursary will be awarded annually to a full-time student from Peterborough County based on financial need and satisfactory academic achievement.

County of Peterborough Bursary Fund

Established by the County of Peterborough to be awarded to deserving students in any undergraduate year who have established a minimum two years residency in the County of Peterborough (which includes the fourteen townships and four villages), has satisfactory academic standing and a demonstrated financial need.

The John S. Cunningham Memorial Bursary

Established in memory of the late John Scott Cunningham by associates of Bell & Howell, friends, and fellow members of the Stoney Lake Cottagers Association, to be awarded to deserving students in any undergraduate year.

The Dainard Foundation Bursary

Established by Mr. Garnet Dainard, Peterborough, to be awarded to deserving students in any undergraduate year.

The Ewing Memorial Honours Awards

A number of awards are available annually to students of high academic standing entering the fourth year of their honours program. These awards are the gift of the late C.W. Ewing, a native of Warkworth.

Reginald R. Faryon Bursary

The award is the gift of the Peterborough Branch of B'nai B'rith in memory of Reginald R. Faryon.

The Michael Frisch Memorial Bursary

Established in memory of the late Michael Frisch, to be awarded to an undergraduate student who is actively involved in extra-curricular activities within or beyond the university.

The Eileen Gallagher Memorial Bursary

The gift of alumni, family and friends, this bursary will be awarded to deserving Otonabee College students demonstrating financial need, chosen by the Head of College in consultation with the Director of Alumni Affairs.

German Studies Bursary

These bursaries will be awarded annually to students majoring in German Studies in second year or higher, who have achieved a minimum B average in the preceding year and have demonstrated financial need.

Jon K. Grant Bursary Fund

This fund has been established in honour of Jon K. Grant in recognition of his distinguished contribution to Trent University as Chairman of The Fund for Excellence campaign, April 1, 1982 to March 30, 1987. The bursaries will be awarded to deserving students based on academic achievement and financial need. Distinction in cultural, athletic or other community activities may also be considered.

The Hamilton Foundation—Chaney-Ensign Bursary Fund

Bursaries are available to assist financially needy undergraduate and postgraduate students. Applicants must be graduates of Hamilton secondary schools, public or separate.

Naomi Harder Memorial Bursary Fund

Established by family and friends in memory of Naomi S. Harder, a second year Comparative Development major at Trent University at the time of her death on December 19, 1988. In the spirit of Naomi's concern for others and her deep commitment to international understanding, this bursary will be awarded annually to a student based on his/her dedication to international and national development,

peace and justice issues, financial need and satisfactory academic standing.

The Brian Heeney Memorial Award

Established in memory of the late Brian Heeney, Vice-President (Academic) and Provost of Trent University at the time of his death on September 17, 1983. This award will be given annually to a graduate from Lakefield College School or Lakefield District Secondary School who enrolls at Trent in the undergraduate program. The award will be based on academic standing, financial need and distinction in cultural, athletic or other community activities.

Victor E. Henderson Bursary Fund

These bursaries are named in honour of Victor E. Henderson, local campaign chairman of the Trent University Second Decade Fund. The Henderson Bursaries will be awarded to deserving first year students from Peterborough County based on academic achievement, financial need, and distinction in cultural, athletic or other community activities.

Henniger/Pilkington Bursary Fund

To honour Perry and Ella Henniger and Lawrence and Norah Pilkington, the parents of Jim and Isabel Henniger, this bursary is awarded annually to a well rounded student(s), actively involved in the life of the university, be it student government, sports or music programs or university clubs, while maintaining satisfactory academic achievement. This renewable bursary is available to second, third or fourth year students in financial need.

Agneta Holt Award

The award is the gift of the University Women's Club of Peterborough as a memorial to the late Mrs. Agneta Holt.

The Interprovincial Pipe Line Company Bursary Fund

Established by the Interprovincial Pipe Line Company, these bursaries may be awarded to deserving undergraduates in second or higher years, majoring in sciences or business related programs.

The David Irwin Memorial Bursary

This bursary, established in memory of David Sutherland Irwin, a member of Trent's first graduating class and a former Professor of Biochemistry, is awarded on

the basis of academic standing and financial need to a student entering the third or fourth year of an Honours Program in Chemistry or Biochemistry.

Jean Ann Johnston-Gauld Bursary

These bursaries, the gift of the family in memory of Jean Ann Johnston-Gauld a part-time student at Trent University from 1982-85, will be awarded annually to part-time students based on satisfactory academic achievement and financial need.

Rhoda Johnston Memorial Bursary

These bursaries, the gift of Robert Johnston in memory of his wife Rhoda, a long term past employee of Trent University, will be awarded annually to deserving undergraduate students in a Canadian Studies program. Bursaries will be awarded on the basis of academic achievement and financial need.

James S. Keating Memorial Bursary

This bursary is awarded annually to a deserving student. Husband of Jean, a former Trent employee, and father of Craig ('81), this bursary was established at Trent as a permanent remembrance of James S. Keating by his family.

Principal H.R.H. Kenner and PCVS Faculty Award

This award was established by the PCVS Form 5 graduating class of 1937 in honour of Principal Kenner and their teachers. Support has also come from the class of 1939. Bursaries will be awarded to graduates of secondary schools in Peterborough County based on academic achievement and financial need.

The Keppler Bursaries of German Studies

Established by Hans and Christine Keppler, to be awarded annually to upper-year students studying German, based on financial need and satisfactory academic achievement.

Kiwanis Club of Peterborough Bursary

A bursary will be awarded annually to a student in second year or higher majoring in Administrative Studies, Computer Studies or Economics. Applicants must be residents of the City or County of Peterborough.

Lady Eaton College Students' Bursary Fund

This bursary is to be awarded to a student of Lady Eaton College who can demonstrate financial need.

The Leonard Foundation Bursaries

Bursaries averaging \$1,250 are available to financially needy students. Preference will be given to sons and daughters of clergy, teachers, military personnel, graduates of Royal Military College members of the Engineering Institute of Canada and the Mining and Metallurgical Institute of Canada. Application deadline date is March 15th.

Louis and Bess Loftus Fellowship Bursary

Established by Barnett David Loftus in memory of his parents. These bursaries will be awarded annually to deserving students in any year showing satisfactory academic achievement and financial need.

Malcolm Montgomery Bursary Fund

These bursaries, a bequest from the estate of the late Malcolm Montgomery, will be awarded to needy students in the fourth year of the Native Studies Honours program.

Marriott Corporation Bursary

Established by Marriott Corporation to be awarded to deserving students in any undergraduate year based on satisfactory academic standing and financial need.

The Masonic Foundation of Ontario

The Foundation aims to provide assistance for students near graduation who cannot complete their year owing to a sudden personal emergency.

John C. McDonald Memorial Fund

Assistance from this fund, established in memory of Professor John C. McDonald former Chairman of the Department of Sociology, is awarded to deserving students who need financial help to continue their studies at Trent University.

William Hamilton Munro Bursary Fund

These bursaries, the gift of the late Mrs. Angele Munro in memory of her husband William Hamilton Munro, are to be awarded to deserving students in any undergraduate year.

Native Studies Bursary Funds

The Department of Native Studies provides bursaries for students of Metis and non-status Indian ancestry who do not qualify for educational assistance from the Department of Indian and Northern Affairs. Native students who can establish financial need and have been admitted to Trent University are encouraged to apply.

Otonabee College Council Tenth Year Bursary

This bursary is to be awarded annually to an Otonabee College student on the basis of academic performance (B average or better), athletic ability and participation within the community. The recipient will be chosen by a committee of the Master, the Senior Tutor, the President and Vice-President of College Council.

Norma Parnall Bursary Fund

This discretionary fund has been established by the family in honour of Norma Parnall to assist Aboriginal women who are financially in need and successfully completing undergraduate or postgraduate programs.

Dennis Patterson Northern Bursary

To recognize the visit of the Government Leader of the Northwest Territories in 1990, this bursary is awarded annually to a deserving student from the Northwest Territories based on financial need and satisfactory academic achievement.

Peter Robinson Bursary Fund

These bursaries, a bequest from the estate of the late Lady Maude E. Robinson are to be awarded annually in the name of Peter Robinson, the founder of Peterborough and the brother of Sir John Beverley Robinson, 1st Baronet, to deserving students of Peter Robinson College, demonstrating financial need.

Peter Robinson College Cabinet Bursary

This bursary established by the Peter Robinson College Cabinet, will be awarded to a Peter Robinson student with acceptable academic achievement, and is based on financial need.

Peterborough Professional Fire Fighters' Bursary

Established from gifts to Trent's Second Decade Fund by the Peterborough Professional Fire Fighters Local Number 519,

these bursaries will be awarded annually to students at Trent University.

The Scott Rennie Memorial Bursary

This bursary, the gift of alumni, family and friends, is in memory of Scott Rennie, an alumnus of Otonabee College. The bursary will be awarded to a deserving Otonabee College student to be chosen by the Master of the College in conjunction with the Director of Alumni Affairs.

Royal Canadian Legion Bursary

Bursary assistance of up to \$500 is available for: a) War veterans and their sons and daughters; b) Ordinary members of the Legion and their sons and daughters; c) Associate members of the Legion and their sons and daughters d) Ladies Auxiliary members and their sons and daughters. Awards are determined by the District Bursary Committee.

Setsu Suzuki Bursary

Donated by David Suzuki in memory of his mother, Setsu Suzuki, to be awarded to a deserving student from the Third World on the basis of academic standing and financial need.

Sir Sandford Fleming College Award

Established by Sir Sandford Fleming College in recognition of Trent's 25th anniversary and to acknowledge the excellent relationship between our institutions, this award for a value of full tuition will be made annually to a graduate of SSFC enrolled at Trent University in a full-time or part-time program based on academic achievement and financial need.

Sisters of St. Joseph of Peterborough Bursaries

These bursaries, the gift of the Sisters of St. Joseph of Peterborough, are to be awarded on the basis of need and academic achievement to students completing the Teacher Education Program for use in their fourth year at Queen's University.

Bill and Dorothy Slavin Bursary

Established by members of the Slavin family, in memory of their parents, Bill and Dorothy Slavin, to be awarded to a deserving student from a developing country on the basis of academic standing and financial need.

The J. Herbert Smith Bursary

Established by J. Herbert Smith to be awarded annually to a deserving student in their undergraduate year. As Chief Executive Officer, Dr. Smith was instrumental in arranging for the original gift of land to Trent University by GE Canada.

The Roland Tedford Bursary

Established by Garth Duff in memory of Roland Tedford, former Warden of Peterborough County and Reeve of Douro Township. Bursaries will be awarded annually based on financial need and satisfactory academic progress with preference given to students from Douro and Dummer Townships.

Catharine Parr Traill College Students' Bursary Fund

This bursary is to be awarded to a student of Catharine Parr Traill College who can demonstrate financial need.

William Thompson Graduate Bursary

This bursary, a bequest from the estate of the late William Thompson (1891-1978) of Westwood, Ontario, will be awarded annually to a student registered in a graduate program, based on financial need and satisfactory academic progress.

Trent University Alumni Bursary

Established by the Trent University Alumni Association, to be awarded to returning students on the basis of need, significant contribution to university life, and an acceptable academic average.

TUFA Bursary

These bursaries are funded by the faculty and professional librarian members of the Trent University Faculty Association. They will be awarded annually to students in second year or higher, who achieved a minimum B average in the preceding year and have demonstrated financial need.

The Trent University S & A Bursaries

The employees of Trent University have donated bursaries to be awarded to students who demonstrate financial need, all-round achievement and character, and are permanent residents of the Province of Ontario.

Trent Student Union Bursary

Established by the Trent Student Union, this bursary will be awarded annually on the basis of academic achievement and financial need.

University Women's Club 50th Anniversary Award

Established by the University Women's Club of Peterborough in 1987 in honour of their 50th anniversary, an award will be made annually to a deserving student currently registered in the fourth year of an Honours program and proceeding to graduate studies at Trent University. The award will be based on financial need and academic achievement.

Visa Student Bursary Fund

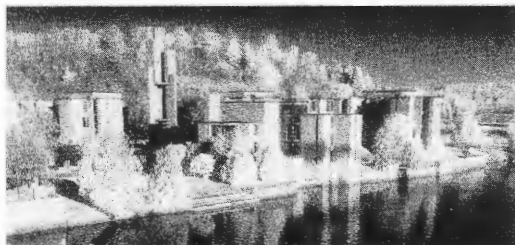
Established by the Board of Governors of Trent University to be awarded to visa students in any undergraduate year with satisfactory academic standing and who can demonstrate financial need.

The Walling Corporation Bursary

Established by the Walling Corporation of Lindsay, these bursaries will be awarded annually to students majoring in business or environmental studies, based on financial need as well as fitness/ health and community involvement.

Rodney F. White Memorial Bursary

This bursary, the gift of alumni, family and friends was established in memory of the late Rodney F. White, Professor of Sociology. Preference for this bursary will be given to Sociology majors or any other needy students.



Scholarships and Prizes

Scholarships

The University has a full and diverse scholarship program designed to foster and reward high academic achievement among its students. Funding for the program comes not only from the University itself, but also from the many private donors whose generosity has created a wide range of endowed scholarships and prizes.

Trent University offers both entrance and in-course scholarships. All new students entering the University are automatically considered for entrance scholarships. No separate application for any major scholarship is required, with the exception of the Champlain Scholarship. Likewise, no separate application is required for in-course scholarships, since all continuing Trent students are automatically considered for such scholarships, normally upon completion of each sequence of five full courses or equivalent.

Trent University's most prestigious scholarships, the Champlain Scholarships, are renewable scholarships awarded to new students entering the first year of study who have displayed exceptional academic and extra-curricular achievement and are likely to make a significant contribution to the life of the University. Students must apply for the Champlain Scholarships.

All University scholarships may be held in conjunction with scholarships awarded by outside agencies when their conditions permit. However, a student may not receive funds from more than one major Trent University scholarship in an academic year. Holders of renewable scholarships must maintain a minimum average of 80% in a sequence of five full courses in order for their scholarship to be renewed. The University endeavours to provide all scholarship holders, including those from the Peterborough area, with places in residence if they wish them.

The Bata Scholarship

This scholarship is the gift of Thomas J. Bata, one of the original honorary sponsors of the University and a member of the Board of Governors.

Biology Department Scholarship

This scholarship is awarded annually to a student, entering the third or fourth year of

the Biology Program, with high academic achievement and promise.

Board of Governors' Leadership Scholarship

A recurring scholarship established by the Board of Governors, awarded to an incoming student who has shown outstanding leadership and involvement in their community as well as academic achievement. Value over four years \$10,000.

The B.P. Canada Science Scholarship

This scholarship, the gift of B.P. Canada is awarded annually to an entering or in-course student who has demonstrated academic excellence in the physical sciences.

Julian Blackburn College Principal's Scholarship

A tuition-based scholarship to be awarded to a student who is enrolled in the part-time credit program, who has completed at least five full courses or the equivalent as a part-time student at Trent and who has demonstrated high overall academic achievement.

Maurice Boote Scholarship

This scholarship, established in honour of Maurice J. Boote, one of the founding faculty members of Trent University and the first chair of the Department of Economics, is awarded annually to an outstanding student entering the fourth quarter of the Economics program.

Winifred Elizabeth Burton Scholarship

This scholarship of the value of \$1,000 is awarded annually to an outstanding student entering first or a higher year.

The Canadian Tire Corporation Science Scholarship

This scholarship, the gift of the Canadian Tire Corporation Limited of the value of \$1,000, is awarded annually for excellence in science to an entering or in-course student proceeding to a Bachelor of Science degree.

The Anthony Cekota Scholarships

These scholarships were established to honour Anthony Cekota. A self-made man, Mr. Cekota edited and published a chain of magazines and newspapers in his native Czechoslovakia. He also authored several books and papers dealing with problems of industrial management and sociology and continued as a consultant and advisor on industrial relations follow-

ing his retirement (after 45 years with the Bata Shoe organization). These scholarships are awarded on an annual basis to students demonstrating exceptional academic performance.

The Champlain Scholarship

The Champlain Scholarships are available for an entering first year student of exceptionally high academic achievement and promise. These scholarships have a value of \$8000 in the first year (\$2500 if not in residence) and \$2500 in each of the next three years providing the holders maintain a scholarship standing. New applicants to the University must apply for the Champlain Scholarship.

The Sylvia Cherney Scholarship

The Sylvia Cherney Scholarship, the gift of the late Harry Cherney and of Brian Cherney and Lawrence Cherney, is named in memory of Sylvia Cherney and is available to in-course students majoring in English Literature with the aim of encouraging promise and interest in the study of drama.

The Howard Darling Scholarship

This scholarship, established in honour of Howard Darling, Supervisor, grounds and custodial services, is awarded annually to an upper-year student who has demonstrated excellence in Environmental Sciences/Studies.

The Roscoe F. Downey Scholarship

The scholarship, the gift of the late Roscoe F. Downey of Peterborough, is available to entering students, one from Peterborough County and one from Victoria County.

William Paxton Eastwood Scholarship

The gift of the late William Paxton Eastwood, a former citizen of Peterborough and Ocala, Florida, is awarded in recognition of academic excellence.

The Roy L. Edwards Scholarship

This scholarship, established in honour of Roy L. Edwards, one of the founding faculty members of Trent University and the first chair of the Department of Biology is awarded annually to an outstanding biology student entering the fourth quarter of the Biology Program, with the aim of encouraging promise and interest in the study of freshwater ecology.

The Ewing Memorial Scholarships and Honours Awards

Several awards are available each year for students entering the University and for Honours students undertaking a fourth year of study. These scholarships are the gift of the late C.W. Ewing, a native of Warkworth, Ontario.

Faculty Scholarship

A scholarship, the gift of a member of the founding academic staff of Trent University, is available to an entering student living in residence.

The Reginald R. Faryon Scholarships

These scholarships, the gift of Quaker Oats Company of Canada, are named in memory of the late Reginald R. Faryon, an active member of the founding board of Trent University and a former president of the company.

The Eugene Forsey Scholarships

These scholarships are named in honour of Senator Eugene Forsey, a former Chancellor of the University and a member of the Board of Governors for 10 years. The scholarships are awarded annually to outstanding students proceeding toward a degree in Administrative Studies.

Robert M. Fowler Scholarship

This scholarship is a gift of the Quaker Oats Company of Canada in memory of the late Robert M. Fowler a former member of the Board of Directors of Quaker Oats and of the Board of Governors of Trent University. The scholarship is awarded annually to students in the Administrative Studies Program and to other students undertaking policy studies in other appropriate university departments.

The Rufus Gibbs Scholarships

These scholarships, the gift of the late Rufus C. Gibbs, are available for annual award to students in all years, on the basis of academic standing, all-round achievement and character.

The John Gilchrist Memorial Scholarship

Named in memory of John Gilchrist, a distinguished medieval scholar who taught at Trent, this scholarship will be awarded to an upper-year student with a single or joint major in one of Canadian Studies, Ancient History and Classics, Cultural Studies, English, History, Modern Languages or Philosophy.

The Joseph Ernest Goodhead Scholarship

The scholarship, the gift of an anonymous donor, of the value of \$100, is awarded for excellence in the study of biology.

The Hector and Geraldine Elizabeth Gray Scholarship

This scholarship, the gift of the late Hector and Geraldine Elizabeth Gray, is awarded annually to students entering the third year of an arts program.

The Brian Heeney Scholarship

Established as a memorial by his family friends and colleagues, this will be awarded annually to an outstanding student entering first year.

The Heritage Scholarship

This scholarship honours the Curtis and Milburn families, both of whom were very early settlers of the Peterborough area and have contributed continuously to its development. The scholarship is awarded annually to an outstanding student entering the final year of Honours in English.

The Howson Scholarship

The George Henry and Jane Laing Howson Scholarship is the gift of the late Miss A. Howson and the late Mrs. M.H. Simpson, and is named in memory of their late parents. The scholarship is available to a student with high academic standing who is proceeding to the degree of Bachelor of Arts.

The Imasco Scholarship

These scholarships, the gift of Imasco Ltd., are available to students of high academic achievement entering first or higher years in the University.

The Richard B. Johnston Scholarship

A scholarship, donated by the family of Professor Richard B. Johnston of the Department of Anthropology in his memory is awarded to a deserving student in North American archaeology.

The Francis Dean Kerr Scholarship

This scholarship, the gift of the late Mrs. F.D. Kerr of Peterborough, is named in honour of her late husband who was one of the original honorary sponsors of the University.

Margaret Laurence Scholarship

This scholarship, named in honour of the late Margaret Laurence, a former Chan-

cellor of the University, is awarded annually for outstanding achievement in the fields of Canadian literature or Canadian studies.

The Lodge Physics Scholarship

This scholarship, named in honour of the founding chair of the Department of Physics, is awarded annually to the student with the highest grade in the introductory Physics course who is continuing in a program which leads to a single- or joint-major in Physics, or who is continuing in the Chemical Physics Program and enrolled in at least one Physics course at an advanced level.

The Dr. Ross Matthews Scholarship

This scholarship, established in honour of the late Dr. Ross Matthews, is awarded annually to an entering student for demonstrated academic excellence.

The Ralph McEwen Scholarship

These scholarships, established in honour of the late Ralph McEwen are awarded annually to students who are undertaking courses in Canadian literature or Canadian social history.

The William Allan Newell Scholarship

This scholarship, the gift of the late Judson Newell of Prescott, named in honour of his father, the chairman and founder of the Newell Manufacturing Co., Ltd., is available to an entering student proceeding to the degree of Bachelor of Science.

The Robert J.D. Page Scholarship in Environmental and Resource Studies

This scholarship, established by Dr. Robert J.D. Page who was associated with the ERS program from its beginning, is to be awarded annually to a student entering fourth year who best combines academic achievement and public environmental service.

Peter L. Roach Scholarship

This scholarship was established in honour of Peter L. Roach, Director of Education from 1975 to 1992 in recognition of his years of service to the Peterborough Victoria Northumberland and Clarington Roman Catholic Separate School Board. In selecting the recipient, priority will be given to a student who has studied in the P.V.N.C. Separate School system. The funding for this scholarship was provided by the employees of the P.V.N.C. Separate School Board through the For Tomorrow Campaign and the friends and associates of Mr. Peter Roach.

The J.J. Robinette Scholarships

These scholarships were established by friends and colleagues to honour the 60th anniversary of Dr. J.J. Robinette's call to the Bar. He was a member of the first Board of Governors of Trent University and Chancellor from 1984 to 1987.

The Peter Robinson Scholarship

This scholarship, of the value of \$1,000, is awarded to a graduate of a Peterborough City or County secondary school on the basis of high scholastic merit.

The Peterborough Examiner Scholarship

This scholarship, the gift of the Peterborough Examiner Co. Ltd., is available to an outstanding student entering first or a higher year and living in residence.

The Helen and Barney Sandwell Scholarship

This scholarship, the gift of the distinguished Canadian publisher, B.D. Sandwell, a long-time member of the Trent Board, and its chair from 1971 to 1975, and of his wife, Helen, is awarded annually to an outstanding student majoring in English Literature entering the third year of a degree program in English.

The Katherine E. Scott Scholarship

This scholarship, the gift of the late Dr. C.M. Scott of Peterborough, is named in honour of his late wife.

The William Bligh Shaw Scholarship

This scholarship, the gift of Muriel Beatrice Shaw, is awarded annually to an outstanding student entering the first year of the Administrative Studies Program.

Binney and Smith Scholarship

Established by Binney & Smith (Canada) Ltd. of Lindsay, to be awarded to students in the Trent-Queen's Teacher Education Program.

The H. Clare Sootheran Scholarship

The gift of the late H. Clare Sootheran a citizen of Peterborough, this scholarship is awarded for excellence in the Faculty of Arts.

The Ian Stonehewer Memorial Scholarship

Named in honour of Ian Stonehewer B.A. Honours 1975, this scholarship, the gift of

Mr. and Mrs. John Stonehewer, is awarded annually for excellence to a student entering fourth year of an Honours History program. The value of the scholarship is determined annually.

The Carolyn Sarah Thomson Scholarship

This scholarship was established by the late Carolyn Sarah Thomson, a Trent alumna who was intensely loyal to Trent and to the people-faculty, staff and students, who make the University so unique. This scholarship is awarded for excellence to a student entering the third year of the Canadian Studies Program.

Town of Lindsay Scholarship

Established by the Corporation of the Town of Lindsay, to be awarded to an entering student of high academic achievement from the Town of Lindsay, who has also demonstrated peer leadership in the school setting and involvement in community affairs.

The James G. Wharry Scholarship

This scholarship, a gift of the Quaker Oats Company of Canada, equal in value to full tuition for the fourth year, is awarded annually for excellence to a student or students entering the fourth year of the Canadian Studies Program.

The Trent University S & A Scholarship

The employees of Trent University have donated two \$500 scholarships to be awarded annually to students from the Peterborough and Victoria County and Separate Boards of Education for academic standing and all-round achievement and character.

The Trent University Scholarship

Several Trent University Scholarships are available to students of high academic achievement entering first or higher years in the University.

City of Trenton Scholarship

This scholarship, established by the Corporation of the City of Trenton, is awarded to an entering student from the city of Trenton.

Twenty-fifth Anniversary Scholarships

These scholarships were established to commemorate Trent's anniversary. These renewable scholarships cover full tuition and are awarded to entering students.

The David and Joyce Woods Graduate Scholarship

This scholarship, to honour David M. Woods, chair of the Board of Governors of Trent University from 1975 to 1980, and his wife, Joyce Woods, has been established by their children and friends and is to be awarded to a student in the Watershed Ecosystems Graduate Program. This is the first graduate scholarship to be established at the University.

Externally Awarded Scholarships

A number of scholarships (and bursaries) are awarded by bodies outside the University. Several corporations, for instance, have special programs for dependents of their employees. Students should consult their guidance counsellors concerning these awards.

Prizes

Governor-General's Medals

The gold medal is awarded to the graduate student with the highest standing on graduation and the silver medal is awarded to the fourth-year student with the highest standing on graduation.

President Symons Medals

The Symons Medals were established in 1972 in honour of T.H.B. Symons, the founding president of Trent University. These medals are awarded to students in the Honours program who achieve high overall standing on graduation.

Professor Gilbert Bagnani Medals

The Professor Gilbert Bagnani Medals were established in 1986 to honour the late Professor Gilbert Bagnani, one of the founding faculty members of Trent University. The medals are awarded to graduating students in the General program who achieve high overall standing.

Ambassador of Switzerland Prizes in French and German

The prizes, the gift of the Ambassador of Switzerland, are awarded to the undergraduates who have obtained the highest standings in the French and German languages in their graduating year.

Anthropology Society Prize

This prize is awarded to the most outstanding Anthropology 100 student on the basis of tutorial work and overall marks.

Sir Donald Banks Prize

This prize, the gift of Professor D.L. Smith, in memory of her father is awarded annually to a promising student in Spanish planning to participate in the Year Abroad Program.

Bruce Barrett Memorial Prizes

In memory of Bruce Barrett, a former Trent Philosophy student, several prizes are awarded annually to outstanding students in first-year courses in Philosophy. Approximate value \$100.

Bigwin Memorial Award

This prize is awarded on behalf of Elizabeth Bigwin to an aboriginal student in Native Studies 260 who not only demonstrates academic excellence, but also contributes to the well-being of the community at Trent or the community at large.

Department of Biology Prizes

Awarded to students who show excellence in the study of Biology in first or higher years.

Gordon Campbell Memorial Award

In memory of Gordon Campbell, a former Trent Geography student, one award of \$500 is given annually to a third- or fourth-year undergraduate student in a single- or joint-major program in Geography with a demonstrated and continuing interest in the Canadian North.

Canadian Association of Geographers' Undergraduate Award

This award, presented by the Canadian Association of Geographers, is offered each year to the Honours Geography student at Trent who is judged to have the best academic record in fourth year.

Donald Chase Memorial Prize

This prize, in memory of Donald Chase, a Trent student in 1989, is awarded annually for the best essay in Canadian history written by a first-year undergraduate at Trent.

William B. Common, QC, LL D Memorial Prize

This prize is awarded to the student achieving the *highest academic standing* in first-year (Canadian) Macroeconomics.

Comparative Development Prizes

The prizes are awarded annually to students with the highest overall standing in the 200, 300 and 400 level central core courses in Comparative Development Studies.

Consul General's Prizes in French

These prizes, the gift of the Consul General of France, are awarded to the leading undergraduates in French Studies within the University.

CRC Press Freshman Chemistry Achievement Award

This prize is a gift of a copy of the CRC Handbook of Chemistry and Physics from the CRC Press Inc., and is awarded to a student at the end of first year on the basis of outstanding academic achievement in Chemistry.

James Creery Memorial Essay Prize

This prize, in memory of James Harold Creery, a Trent student of Philosophy in 1972-74, is awarded annually for the best philosophical essay written by an undergraduate at Trent.

The Cultural Studies Faculty Prize

The Faculty Prize was established in 1988 through contributions from the Cultural Studies faculty. It is awarded to a Cultural Studies major or joint-major for the best essay of a critical or theoretical nature related to the subject areas of the Cultural Studies Program submitted to a juried competition held annually by the program. Value \$300.

Currie Honours Awards

These awards are presented in advance to two students enrolled in Geography 401 or 402 in the Winter session on the basis of both academic achievement and proposed thesis research. They are valued at \$500 each, but under special circumstances three awards of \$333 each may be made.

The Digital Equipment of Canada Award

This award is presented to the student with the highest grades in Computer Studies at Trent University.

The J. Emmett Duff Memorial Prize in Geography

This prize, the gift of Professor T.H.B. Symons and Celanese Canada Inc., and John D. Stevenson QC was established in memory of the late J. Emmett Duff, who, without formal training in the subject, was possessed of an intense love of traditional geography. It is awarded to a student who attains a standing of at least 70% in Geography 411b and who best epitomizes the spirit of cartophilia.

Embassy of Spain Prize in Hispanic Studies

Awarded to an outstanding student in upper years majoring in Spanish.

Department of Economics Prize

This prize, a gift of the Department of Economics, is awarded to the student achieving the highest academic standing in first-year Microeconomics.

Department of English Literature Book Prize

This prize is awarded to the best student graduating from the Honours English Program.

Department of English Literature Prize

This prize, the gift of the Department of English Literature, is awarded to the best student entering the fourth quarter of the Honours program in English Literature.

Environmental and Resource Studies Program Prize

This prize, a gift of the ERS program, is awarded annually to a first-year student achieving the highest academic standard in the first-year ERS course.

Essay Prize in Honours Economics

This prize, the gift of the Department of Economics, is awarded each year to an honours student submitting the most outstanding essay in Economics 401.

The Marjorie Elizabeth Foster Prize

This prize, given in memory of Marjorie Elizabeth Foster, is awarded to the student who writes the best essay or research project in historical geography in a particular year in any Geography course.

French Studies Staff Prizes

These prizes are offered by members of the French Studies section to outstanding students of first-year French Studies.

French Studies Staff Prize (Nantes Program)

This prize is awarded annually by members of the French Studies section to the outstanding participant in the Nantes Year Abroad Program in French Studies.

The Gregory R. Frith Memorial Prize in Cultural Studies

This prize was established in honour of the late Gregory R. Frith, B.A. Honours 1977. It is awarded to a Cultural Studies

major or joint-major for the best submission in any of the arts associated with the Cultural Studies Program to a juried competition held annually by the program. Value \$300.

The Honourable Leslie Frost Prize

This prize, the gift of the late Hon. Leslie M. Frost, PC, Prime Minister of Ontario from 1949 to 1962 and first Chancellor of Trent University, is awarded to the leading undergraduate in the first-year course in Canadian history.

Gadfly Prizes

These prizes are available for award to an outstanding undergraduate in Philosophy in each of the second and third years. The prizes commemorate Socrates' description of himself as one who rouses and reproves the society in which he lives just as a gadfly awakens a sluggish horse.

Department of Geography Prizes

Awarded in the first and second year to students who show excellence in the study of geography. The second-year prize, known as the Geography alumni prize, is donated by the Trent University Geographical Society using funds contributed by Geography alumni.

Guinand Prize

This prize, in honour of the first chair of the Department of Mathematics, is awarded to a student of high promise in the Mathematics Program, normally on entering the fourth quarter of the Honours program.

The Honourable George S. Henry Prize

This prize, in memory of Hon. George S. Henry, Prime Minister of Ontario from 1930 to 1934, and Member of the Legislative Assembly of Ontario for East York from 1913 to 1943, is awarded to the leading undergraduate in the first-year course in Politics.

Graham Hartley Prize

This award, presented by the Chemical Institute of Canada (Peterborough Section) in honour of Graham Harry Hartley, Ph.D., M.C.I.C., is given to first and second year students who have shown excellence in the field of general chemistry.

The Arnold Hyson Prize in Maritime Studies

This prize is awarded to the student with the most outstanding research paper in Canadian Studies-History 307.

The David Sutherland Irwin Prize

Established in memory of the late Professor David Irwin, this prize is awarded on completion of Chemistry-Biology 330 to a student with outstanding performance in Biochemistry.

The Richard B. Johnston Memorial Prize

A prize, donated by the family of Professor Richard B. Johnston of the Department of Anthropology in his memory is awarded to a deserving student in Ontario archaeology.

The K.E. Kidd Memorial Awards

These prizes are awarded each year to graduating students who have demonstrated the highest degree of ability and achievement in the Diploma Program of the Department of Native Studies.

F. Alan Lawson Memorial Prize

Sponsored by the Central Ontario Chartered Accountants Association, this award is made annually to the student majoring in the Administrative Studies Program, who achieves the highest combined mark in fundamentals of financial accounting and fundamentals of management accounting (Administration 201a and 202b).

Robert Lightbody Prize

This prize was established by the Alumni Association to honour the contributions to the University of alumnus Robert Lightbody, a member of Trent's first class. It is awarded annually to an upper-year Peter Robinson College student.

The Helen E. MacNaughton Prize

This prize is awarded to an outstanding student in Philosophy entering fourth year.

The J. Percy MacNaughton Prize

This prize is awarded to the student achieving the highest academic standing in *Environmental and Resource Studies* entering fourth year.

The Makhija Prize in Chemistry

This prize, the gift of R & R Laboratories, is awarded to the student with the best overall performance in 300-level courses in Chemistry.

The McColl Turner Prize in Accounting

Presented by McColl Turner, Chartered Accountants, to the leading undergraduate student in Administration 300, who intends to pursue a career as a chartered accountant.

David N. McIntyre Conservation Award

Presented by the Otonabee Region Conservation Authority to the outstanding Geography student who has demonstrated an interest in conservation.

Jane McLarty Memorial Prize

This prize, given in memory of Jane McLarty, a member of Lady Eaton College from 1987-1990, is awarded annually to a deserving student entering the third or fourth quarter of studies in English Literature.

The Heather J. Glendinning McMurter Memorial Award

This award was established in memory of Heather J. Glendinning McMurter. Heather graduated with a B.Sc. from the Environmental Studies Program in 1988. Awarded annually to a student entering the fourth year (having completed 15 courses) of Environmental and Resource Studies whose research paper in ERS 300 or 400 level is judged to be the best of the year.

Midwives' Prize

This prize is the gift of three members of the Universities Liaison Committee who assisted at the birth of Trent University. The late Professor J.M. Blackburn, then of Queen's University; the late Dean Frank Stiling, then of the University of Western Ontario; and the late Dr. M. St. A. Woodside, former vice-president of the University of Toronto, were named by their universities to act as a liaison committee between these three universities and the Founding Board of Trent University. The prize is awarded to the student with the highest overall standing in the first year.

The Norma Miller Essay Prize

Administered jointly by Catharine Parr Traill College and the Department of Ancient History and Classics, these prizes honour the memory of Norma P. Miller, an honorary fellow of Traill and frequent visitor to the Classics department. They are awarded to the best essay in each of two competitions, one in Classical Literature 100 and the other in Roman history.

Joyce Moonias Memorial Awards

These awards, donated by Frances Six in memory of Joyce Moonias, Native Studies student 1982-83, are offered annually to the student with the highest academic standing in Native Studies 280 and 380 (Ojibway language).

W.L. Morton Essay Prize in History

Awarded to the second- or third-year student writing the best essay.

National Council for Geographic Education Excellence of Scholarship Award

Awarded to the outstanding graduating Geography major.

The Native Studies Award

These prizes, in memory of Harvey G. Greene of Peterborough, are awarded to outstanding students in Native Studies.

The Organic Chemistry Prize

Awarded annually to a student who has demonstrated substantial improvement in the field of organic chemistry, normally on completion of Chemistry 310.

Peace Hills Trust Prize

The Peace Hills Trust Prize of \$500 will be awarded annually to the top aboriginal student, in terms of academic achievement, completing the second year of the Special Emphasis Program in Native Management and Economic Development.

Peterborough Historical Atlas Foundation Prize

This prize is to be awarded to the undergraduate whose essay or project on a Canadian subject is deemed outstanding. An interdisciplinary panel will select the winner from the entries submitted by faculty in appropriate disciplines.

Peterborough Professional Engineers Wives' Association Prize

This prize, a gift of the association, is awarded to an undergraduate who shows excellence in two-hundred series courses in Physics or Chemistry.

John Pettigrew Prizes

These prizes, established in memory of the late Professor John Pettigrew, are awarded annually for the best student essays submitted in first-year English.

Department of Physics Prize

This prize, a gift of the Department of Physics, is awarded to the student achieving the highest academic standing in the first-year Physics course.

The Andrew Priestman Memorial Prize in Political Studies

This book prize was established in honour of the late Andrew Priestman, Honours B.A. 1991. It is awarded annually to a graduating student in Political Studies who has maintained a solid academic achievement and made an above-average contribution to student life and the activities of the Political Studies Department. Students and faculty are encouraged to make nominations.

The R & R Laboratories Prize in Analytical Chemistry

This prize, the gift of R & R Laboratories, is awarded to a student with outstanding performance in analytical chemistry on completion of a 300-level course in chemical analysis.

The Denis Smith Essay Prize

This prize, the gift of the Department of Political Studies, is awarded each year to a fourth-year student submitting an outstanding Politics essay.

Department of Psychology Prizes

These prizes, a gift of the Department of Psychology, are awarded to outstanding students in Psychology.

Victor T. Ridley Memorial Prize

This prize, the gift of Mrs. F. Millard in memory of the late Victor T. Ridley of Peterborough, is awarded to the leading undergraduate in first-year Mathematics.

J.J. Robinette Prize

The J.J. Robinette Prize is awarded in honour of Dr. John J. Robinette, an eminent constitutional and criminal lawyer, and Trent University's fifth Chancellor. The prize is awarded to the scholastically outstanding graduate of Trent University in any year who undertakes the study of law at another Canadian university.

John Rymes Book Award

The book prize is awarded by the senior tutor of Champlain College to a student of the college who has benefitted most from a Trent University education.

J. Paul Scott Jr. Memorial Prize

Established in memory of J. Paul Scott Jr., to be awarded to a deserving student enrolled in Psychology 401 or 402 (Honours thesis).

The Honourable Sidney Smith Prize

This prize is named in honour of Hon. Sidney Smith, Member of the Legislative Assembly of the United Province of Canada from 1854 to 1861, Postmaster General of the United Province of Canada from 1858 to 1862, and elected Member of the Legislative Council from 1861 to 1863. It is the gift of Hon. S. Bruce Smith, Chief Justice of Alberta, and of Muriel Turner and H.G.H. Smith, QC, of Winnipeg and is awarded annually to the leading undergraduate majoring in Politics and History in the second year.

The Society of Chemical Industry Student Merit Award

This award is given to the student having the highest standing in the final year of his or her course. The student must have a minimum average of 75% and have completed the course in the normal number of years.

The Society of Management Accountants Prize

This prize is awarded to the student proceeding to fourth year in the Administrative Studies Program who has achieved the highest overall standing in all accounting subjects.

Soroptimist International of Peterborough Prize

Presented by the Soroptimist International of Peterborough, a service club for business and professional women, this prize is awarded annually to an outstanding female student entering her final year of an Honours degree in the Women's Studies Program.

The Norman Townsend Prize in Anthropology

An annual award, in memory of the late Professor Norman Townsend, presented by the Department of Anthropology on the basis of high academic standing to a student pursuing studies in cultural anthropology.

Harold F. VanDusen Prize

This prize in Economics is awarded annually to the student completing the third quarter of the Honours program who

has demonstrated exceptional promise and enthusiasm for the study and dissemination of the principles and practices of economics.

Rodney F. White Memorial Bursary

This bursary, the gift of alumni, family and friends was established in memory of the late Rodney F. White, Professor of Sociology. Preference for this bursary will be given to Sociology majors or any other needy students.

Symons Essay Prizes in Canadian Studies

These prizes were established through a gift from T.H.B. Symons, the founding president of Trent University, to recognize excellence in performance in courses of the Canadian Studies Program. Three prizes are awarded annually for outstanding essays in second-, third- and fourth-year courses.

Trent Alumni Summer Session Prizes

These two prizes, the gift of the Trent University Alumni Association, are awarded annually for outstanding academic achievement by Julian Blackburn College students in the on-campus and the Oshawa Summer session (including intersession).

Trent Science Fair Award

This award of the value of \$100 to be applied against first-year tuition fees, is offered to a senior secondary school student whose project is judged outstanding at the annual Peterborough Regional Science Fair.

Alan Wilson Prize in History

Awarded to the Honours History student achieving the highest record in fourth year.

Women's Studies Book Prize

This prize, the gift of the Peterborough Women's Committee, will be awarded annually based on academic achievement as well as contributions to the vitality of the program.

College Prizes

Catharine Parr Traill College Scholar

The title of College Scholar is conferred upon the student in his or her graduating year who has achieved academic excellence and who has also made an all-round contribution to the college.

Catharine Parr Traill College

Principal's Prize

This prize is awarded to the Catharine Parr Traill College student with the best academic performance in the freshman year.

Champlain College Master's Prize

The prize is awarded to the graduating student of the college with the highest overall standing in fourth quarter, Honours.

Champlain College Fellows' Prize

The prize is awarded to the graduating student of the college with the highest overall average in the third quarter, General.

Champlain College Senior Tutor's Prize

Awarded annually to the Champlain College student who has achieved the highest average at mid-year.

Christopher Greene Award

Awarded annually in honour of Christopher Greene, former senior tutor of Champlain College, to a graduating student within the college who has demonstrated considerable academic improvement while studying at Trent University.

Lady Eaton College Fellows' Prize

An award given by the Fellows of Lady Eaton College to a graduating student of the college for academic excellence over his or her university career.

The McCalla-Standen Award

This award, in honour of two former principals of Lady Eaton College, is presented annually to a first-year student of the college who has most distinguished him/herself through contribution to the college, the University, or the wider community while maintaining a good academic average.

The Marjory Seeley Prizes

Up to three prizes are awarded annually in honour of the first Principal of Lady Eaton College to students of the college who have distinguished themselves in sports,

academics, student government, or college committees, or who have contributed to the college in such a way as to enrich its life.

Otonabee College Prize

This prize is awarded to the Otonabee College student who has achieved the highest accumulative average in the first three years of a General or Honours program, and is on the Dean's Honours List at the end of the third year.

Otonabee College Senior Common Room Prize

This prize is awarded to the Otonabee College student with the best academic performance in the freshman year.

The John Stubbs Prize

Created as a tribute to Trent University's fourth President, the prize is awarded by the senior tutor to the full-time undergraduate student member of Otonabee College with the highest average at mid-year.

The Eileen Gallagher Otonabee College Spirit Award

This prize, the gift of alumni, friends and family (and companion to the Scott Rennie Award) is awarded to a deserving female Otonabee College member.

The Scott Rennie Otonabee College Spirit Award

This prize, the gift of alumni, friends and family (and companion to the Eileen Gallagher Award) is awarded to a deserving male Otonabee College member.

Julian Blackburn College Student Association Prizes

These prizes are awarded to Julian Blackburn College students with overall academic excellence and involvement in University, college and/or community affairs.



Academic Regulations

Admissions

Application and Admission Procedures for Full-time Studies

Students currently in the Ontario school system should apply to Trent University on the forms developed by the Ontario Universities' Application Centre. These forms are available through the secondary schools and should be completed according to accompanying instructions.

By agreement among the universities, current Ontario secondary school candidates are notified of acceptance on an agreed upon date in mid-June. Other applicants, including those who complete their secondary school studies in January, may have their applications considered as soon as their documentation is complete.

Candidates for admission from outside Ontario, or who are not currently in an Ontario secondary school, may obtain forms from the Registrar's Office. Applicants must submit official transcripts to the University, or certified copies thereof, showing their standing in each subject. Documents submitted for this purpose become the property of the University and will not be returned.

Candidates for admission may be asked to attend an interview at the University. They will be notified of the University's decision concerning their application as early as possible.

Normal Admission Requirements

Ontario Secondary School Requirements

In order to be eligible for admission to Trent University, an applicant is required to achieve standing at a level acceptable to the University in a full Ontario secondary school program. An applicant is required to have the Ontario Secondary School Diploma (OSSD) including a minimum of six Ontario Academic Credits (OACs); or equivalent qualifications from other provinces or countries. For admission consideration, the minimum overall average required on six Ontario Academic Credits is 60%. *However, because of enrolment limitations, applicants presenting the best qualifications will be given preference.*

No minimum number of years taken to achieve this standing is specified. Although the length of time taken by an applicant to complete the Ontario Secondary School Diploma will not in itself be a determining factor in the admission decision, applicants who have spent more than five years in secondary school may be required to present a higher level of achievement.

Applicants must present OACs in a minimum of four different subject areas, including an unspecified OAC in English. English OAC 1 is highly recommended, particularly for applicants to programs in the Humanities and Social Sciences.

Specific Program Course Prerequisites

Administrative Studies

Grade 12 Advanced Math is required for admission to the Bachelor of Administrative Studies degree program.

Biology

OAC Biology, or equivalent, or "permission of course co-ordinator" is required. Refer to the Biology section of the Calendar for further information.

Chemistry

OAC Chemistry is required to major in Chemistry. OAC Calculus and OAC Physics are strongly recommended for chemistry majors.

Environmental and Resource Studies

OAC Chemistry, OAC Calculus, and OAC Biology are recommended for the B.Sc. option. A student who has taken Grade 12 Environmental Science in Ontario or the equivalent elsewhere may opt to write a test during introductory week, for which a grade of 60% will result in exemption from *ES 100*, but will not alter the minimum required number of ERS courses.

Mathematics

OAC Calculus with a minimum 60% or successful completion of Trent's *Mathematics 100* is required to major in Mathematics. OAC Algebra is strongly recommended.

Physics

OAC Calculus or OAC Algebra is required to enrol in *Physics 100* at Trent. OAC Calculus and OAC Physics are strongly recommended.

For more detailed program requirements please consult the appropriate section of the Calendar.

Equivalents to Ontario Secondary School Requirements

Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Northwest Territories, Nova Scotia, Prince Edward Island, Saskatchewan, Yukon-Grade 12. Quebec-Completion of year one of a CEGEP program or equivalent.

Applicants from systems offering the General Certificate of Education (or equivalent) must present (a) passes in at least five subjects, two of which must be advanced level, or (b) passes in four subjects of which three must be advanced level with grades of 'C' or better. Two A/S (Advanced Supplementary) may be substituted for one advanced level course.

Advanced standing may be considered for appropriate advanced level subjects with 'C' grades or better.

International Baccalaureate (IB).

Completion of the IB Diploma with at least six subjects (three of which must be at the higher level) with a minimum grade total of 28 on final grades. Advanced

standing may be considered for appropriate subjects at the higher level with grades of 'S' or better.

USA-High School Graduation Diploma. Applicants are required to submit SAT scores.

For those countries not listed, written requests regarding admission requirements may be directed to the Registrar's Office.

Possession of the minimum requirements does not guarantee admission.

University Transfers

Candidates wishing to transfer from another university to the full-time studies program must apply through the Ontario Universities' Application Centre (OUAC). Successful candidates who are admitted will automatically be considered for advanced standing. Refer to the Advanced Standing section of this Calendar for further details.

Students will not be accepted for transfer from another university during a period in which they have been suspended, barred, or are otherwise ineligible for re-admission to their home university.

Colleges of Applied Arts and Technology

Candidates who have completed a two- or three-year diploma with standing acceptable to the University will be considered for admission. Those admitted with appropriate academic courses and standing in completed three-year diploma programs may receive advanced standing for up to five courses. Candidates admitted with appropriate academic courses and standing in completed two-year diploma programs may receive advanced standing for up to three courses. Applicants are asked to write to the Registrar's Office for specific information.

Possession of the minimum requirements does not guarantee admission.

Bible Colleges

Candidates transferring from Bible colleges accredited by the American Association of Bible Colleges may receive advanced standing for up to five credits depending on the nature and number of courses taken at Bible college and the grades obtained. Each case will be assessed.

sed on an individual basis; however, no credits below a grade of B- will be deemed acceptable for transfer. The candidate seeking to exercise this option must submit course outlines for the courses for which credit is sought.

Possession of the minimum requirements does not guarantee admission.

Students from areas other than those listed above should submit full details and academic documents to the Registrar's Office for evaluation.

English Language Proficiency

The language of instruction at Trent University is English and all students must be proficient in all areas of the English language including speaking, reading, writing and oral comprehension.

Candidates from areas where English is not the language of instruction will be required to provide evidence of a knowledge of English sufficient to enable them to profit from their university studies. All such international students must write the Test of English as a Foreign Language (TOEFL) and obtain a minimum score of 550; or alternatively, write the Michigan English Language Assessment Battery (MELAB) test and obtain an overall score of 85.

Exceptions to the Normal Requirements

The University is prepared to consider other candidates who, while failing to meet the regular requirements, can satisfy the University that they are likely to be successful in university work. Applicants may apply as mature students if they are at least 21 years of age. Any candidate who wishes to apply for admission and who does not possess the normal requirements should write to the Registrar's Office, outlining academic qualifications, experience, and the grounds on which admission is requested. Maturity, motivation, and experience will be taken into account. In some instances, the Committee on Admissions and Scholarships may require the applicant to be present for an interview. Mature student applicants normally are considered for admission to the part-time studies program. In exceptional cases, mature candidates may be considered for admission to the full-time program.

Part-time Studies

Candidates considering a program of part-time studies are subject to the same admission requirements as those applying to full-time studies. Application for admission is made on a part-time application form available from the Julian Blackburn College office, Registrar's Office or can be found in the part-time studies session brochures. Part-time application forms are processed through the Ontario Universities' Application Centre. Refer to the Julian Blackburn College for Continuing Education section of the Calendar for information regarding the different entry points for part-time applicants.

Transferring from Part-time to Full-time Studies

Part-time students must apply to the Registrar's Office on the Early Registration Form by the required submission date if they wish to transfer to full-time status for the next Fall/Winter session. The minimum requirements to transfer to full-time studies include a current academic status of 'eligible to proceed' and a cumulative average of 65% or higher over three or more courses completed for credit. Students placed on probation will not be considered for admission or re-admission to the full-time program.

The Committee on Admissions and Scholarships considers all applications following review of final marks. Notifications are mailed to students with their grade reports in mid-June.

Possession of the minimum requirements does not guarantee admission to full-time studies.

Re-admission

Students who have not completed a course at Trent during the previous 12-month period must apply for re-admission. The deadlines for submitting an application for re-admission are the same as those for admission.

The minimum requirements for re-admission to full-time studies include a current academic status of 'eligible to

proceed' and a cumulative average of 65% or higher over three or more courses completed for credit. Applicants who do not meet these requirements will be considered for re-admission to part-time studies. Applicants whose previous academic standing is 'probation' may be limited to one course.

Applicants who have completed fewer than three full course equivalents for credit will be considered for re-admission to full-time studies on an individual basis based upon the same criteria used for new applicants to Trent University.

Applicants for re-admission, who have previously been rusticated or debarred, are required to provide a letter with their application indicating the grounds on which re-admission is requested. In some instances, the Committee on Admissions and Scholarships may require the applicant to be present for an interview.

Students who have graduated with a General (three-year) degree and wish to pursue an Honours degree must apply for re-admission to the University. Enrolment limits may determine the number of available spaces. Students who are re-admitted and meet the requirements for continuation in an Honours program will be eligible to enter the fourth quarter to pursue a single- or joint-major program provided at least one of the majors for their Honours program is either the same as the single-major or one of the joint-majors from the General degree.

Students who have graduated with a General (three-year) degree and are permitted to pursue a General or Honours degree in a single- or joint-major which does not incorporate the single, or at least one of the joint-majors from the previous degree, will be deemed to be pursuing a second undergraduate degree and should refer to 'Second Degree' in the Admissions section of the Calendar.

Possession of the minimum requirements does not guarantee admission to full-time studies.

Second Degree

Students wishing to pursue a second B.A. or B.Sc. must formally apply for re-admission to the second degree program. All such applications will be considered by the Committee on Admissions and Scholarships as part of the normal re-

admission process. If the student elects to pursue a General degree, up to 7.5 full-courses from the first degree program may be credited to the second program. If the student elects to pursue an Honours degree, up to 10 full courses from the first degree may be credited to the second program. The maximum number of credits that may be credited from the first degree program to the second program must not exceed half of the degree requirements. Students are required to declare their intentions to pursue either a General or an Honours degree upon admission to the second degree program.

Refusal of Admission

The University reserves the right to refuse admission to any candidate.

The University also reserves the right to refuse re-admission to candidates who have not achieved an acceptable academic standing as determined annually by the Committee on Admissions and Scholarships.

Application Deadlines

Applicants are encouraged to apply early. Applications and supporting documentation must be received by the appropriate deadline for admission consideration. Teacher Education applications and documents must be received by April 15. All other full-time applications and documents must be received by June 15.

Part-time students applying for transfer to full-time studies are required to do so on the Early Registration Form by the required submission date in early April. Applicants should refer to the University Diary for all other application deadlines.

Advanced Standing

1. General University Policy
Students transferring into Trent from other post-secondary institutions may receive credit for work satisfactorily completed at the sole discretion of Trent University, in conformance with criteria established by the Senate of Trent University.

Advanced standing will be assessed by the Committee on Admissions and Scholarships prior to the student's admission to the University. Specific course equivalencies will be determined by the Committee on Admissions and Scholarships in consultation with academic department/program chairs, following the student's acceptance of an offer of admission.

Advanced standing will be granted only if that course is not needed to qualify for admission. If the course in question constitutes part of admission requirements, prerequisite standing only can be granted. Prerequisite status in a discipline means that the Trent prerequisite will be waived to enable the student to go on to more advanced work in that discipline, instead of having to repeat subject matter satisfactorily completed at another institution.

2. Transfers from an Ontario University

Trent University subscribes to the following general policy on the transfer of course credits, as adopted by the Council of Ontario Universities:

Acceptance of transfer credits among Ontario universities shall be based on the recognition that, while learning experiences may differ in a variety of ways, their substance may be essentially equivalent in terms of their content and rigour. Insofar as possible, acceptance of transfer should allow for the maximum recognition of previous learning experience in university-level courses.

Subject to degree, grade and program requirements, any course offered for credit by one university shall be accepted for credit by another Ontario university when there is an essential equivalency in course content.

Applicants wishing further information about transfer from another university should contact the Registrar's Office.

3. Degree Regulations re: Transfer Credits

Eligible students will be assessed for transfer credits for both the Honours and General degree programs. A maximum of 7.5 full-course equivalents may be credited towards a General degree. A maximum of 10 full-course equivalents may be credited towards an Honours degree. The maximum number of non-Trent courses that may be counted toward either Trent degree must not exceed half of the degree requirements.

In exceptional circumstances, students with high standing at another university, applying for entrance to the final quarter of the Honours program, may be given transfer credit for up to 15 full courses.

The last five courses of a degree program should be completed at Trent. *Three-hundred* and *four-hundred* level course credits in major(s) obtained at another university may be accepted for credit at Trent. However, individual departments may require that all or most of the courses at these levels be taken at Trent.

Unassigned credits up to a maximum of five courses may be granted for courses which are equal in standard but not comparable in content to courses offered at Trent. Not more than three courses at the first-year level may be unassigned.

Any questions regarding advanced standing must be forwarded to the Registrar's Office in writing by the end of the third week of classes in the Fall term. Advanced standing is determined in accordance with the policies and regulations effective at the time the admission decision is made. Subsequent changes to policies and regulations will not affect previously determined advanced standing assessment; transfer credits will not be re-evaluated.

Registration

1. Academic Adviser

Each full-time student is assigned an academic adviser. Ultimate responsibility for course selection and conformance to the academic regulations of the University rests with the student, but the adviser can assist on matters of course selection, academic regulations, the selection of majors, university deadlines, etc. Students are advised to make maximum use of their adviser in planning their university program.

2. New Full-time Students

New full-time students who have been offered and who have accepted admission to the University will register in person during the Introductory Seminar Week, the week prior to the beginning of classes in September. This is intended to introduce new students to university life at Trent and to complete registration.

During the Introductory Seminar Week students have an opportunity to attend lectures and information sessions in many disciplines and to consult their academic advisers before registering in their courses. In addition, college committees plan a varied program of athletic and social events for the week in order to facilitate new students' integration into both their colleges and the University as a whole.

It is hoped that each student will take full advantage of the opportunities provided to become familiar with the courses offered, the services and the facilities available, and the workings of the University and college system.

Refer to the *Student Guide to September Registration* for further details about the registration process for full-time new and re-admit students.

Please note that late registrants will be charged a late fee.

3. Early Registration for Continuing Students

In order to facilitate academic planning, continuing students intending to study at the University in the following Fall/Winter session, are required to early register. Early registration ensures equal access to limited enrolment courses for all continuing students. Students are required to obtain appropriate departmental authorization for courses (where required); consult with their academic adviser; and, submit a completed Early Registration form to the

Registrar's Office by the required submission date. Students are required to register in all half-courses whether offered in the Fall or Winter terms by this date. Students submitting the Early Registration form after this date will incur a minimum \$50 late fee for part-time and a minimum \$100 late fee for full-time.

An Early Registration Status/Change form and Fee Payment Commitment form will be mailed to students with their final grades in June. Course changes may be made by submitting the change form (with appropriate departmental authorization) to the Registrar's Office by the end of July. Changes may be made in September by completing an official Course Change form.

Completion of Early Registration

Official registration is complete when the student has submitted an Early Registration form and forwarded the Fee Payment Commitment form with first instalment of fees (or evidence of external financial support) to Financial Services. **Failure to complete this requirement by July 31st will result in cancellation of all early registration courses and college residence assignment.**

Students who have had their early registration cancelled and wish to continue studies must contact the Registrar's Office for details on how to proceed with registration. Payment of fees or deposits, related to tuition or residence, does not obviate the need to comply with deadlines and procedures related to registration.

Refer to the *Student Guide to Early Registration* and also to the Fees section of the Calendar under "Ineligibility to Return for Financial Reasons" for further details about the registration process for continuing students.

4. Registration for New and Re-admit Part-Time Students

Registration for new and re-admit part-time students is conducted in person or by mail on the Intent to Register form available from Julian Blackburn College, the Registrar's Office or can be found in the part-time session brochures. Please refer to the part-time summer or Fall/Winter brochures, or the University Diary in this calendar for further details, including deadlines.

Academic Programs and Standings

Academic Programs

Trent University offers the following degree programs:

- Bachelor of Administrative Studies (Honours)
- Bachelor of Arts (Honours)
- Bachelor of Science (Honours)
- Bachelor of Arts (General)
- Bachelor of Science (General)

Trent University offers the following diploma programs:

- Canadian Studies Diploma
- Native Management and Economic Development Diploma
- Native Studies Diploma

1. Enrolment Status

Any student registered in 3.5 or more courses is a full-time student. A student registered in three or fewer courses is classified as a part-time student.

2. Changing from Full-time to Part-time Studies

Full-time students who drop to a part-time course load during the Fall/Winter session may continue in the full-time program in the following Fall/Winter session as long as their academic status is 'eligible to proceed' at the completion of the current session. Students who have dropped to a part-time course load and whose status is probationary at the completion of the Fall/Winter session will be required to proceed in the part-time studies program.

3. Transferring from Part-time to Full-time Studies

Part-time students must apply on the Early Registration form by the required submission date if they wish to transfer to full-time status for the next Fall/Winter session.

The Committee on Admissions and Scholarships considers all applications following review of final marks. Notifications are mailed to students with their grade reports in mid-June. The minimum requirements to transfer to full-time studies include a current academic status of 'eligible to proceed' and a cumulative average of 65% or higher over three or more courses completed for credit. Students placed on probation will not be

considered for admission or re-admission to the full-time program.

Possession of the minimum requirements does not guarantee admission to full-time studies.

4. Definition of Full-time/Part-time Course Load

For purposes of defining a full-time load in the Fall/Winter session, an *a* half-course is equivalent to a full-course for the Fall term; a *b* half-course is equivalent to a full-course for the Winter term; a *c* half-course is equivalent to a half-course for the Fall and Winter terms.

The maximum number of full course equivalents a full-time student may take in the Fall/Winter session without overload approval is five. The maximum number of full-course equivalents a part-time student may take in the Fall/Winter session is three. The maximum load a part-time student may take in any term in the Fall/Winter session is three courses.

Specific regulations related to overload for students taking courses in the Spring Program are specified in the Spring Program brochure.

5. Overload Programs

Full-time students who have achieved a 70% average over a minimum of the last five full courses in the most recent Fall/Winter session will be routinely approved for overload by the senior tutor on the Course Change form in September. Full-time students wishing to enrol in more than five full courses or equivalent in the Fall/Winter session who have not achieved the 70% average must petition the Committee on Undergraduate Standings and Petitions through the senior tutor of the student's college in September.

Overload approvals cannot be given during the early registration period.

6. Course Changes

Students wishing to change or drop courses must submit Course Change forms to the Registrar's Office. These forms must be signed by the instructor of the course which is being added. Once a student registers in a course a grade will be assigned in that course unless the student withdraws from the course in writing prior to the deadline for withdrawal.

Deadlines

Deadlines for course changes and withdrawals are listed in the University Diary in this Calendar.

Students are responsible for making sure that all copies of change forms are received at the Registrar's Office by the deadlines stated in the University Diary.

7. Withdrawal from the University

Full-time students wishing to withdraw from the University should obtain an official withdrawal form from their college head. In all cases, the actual date of withdrawal for both financial and academic purposes will be the date the official withdrawal form is received in the Registrar's Office. Part-time students withdrawing from courses must notify the Registrar's Office in writing.

If formal notice of withdrawal is not received, the student will be responsible for financial obligations. Failing grades may also appear on the students official academic record.

8. Late Withdrawal from Courses

Waiver of academic penalty for late withdrawal may be granted by petition to the Committee on Undergraduate Standings and Petitions (CUSP) when it can be shown that compelling and unforeseen circumstances which adversely affected the student's work *arose* after the deadline for dropping courses. In such cases the student must show that on the last date for dropping courses he or she would be reasonably certain of a passing mark in the course(s) had these circumstances not intervened. When late withdrawal is requested after the end of an academic session, any such request will apply to all courses in which the student was registered unless it can be shown that the circumstances affected adversely only a particular course or courses. The final dates for receipt of such petitions in the Registrar's Office is March 15 for an *a* half-course, July 15 for a full course or a *b* half-course and September 30 for a Summer session course.

9. Letters of Permission

Students may be permitted to take a limited number of courses at other universities on Letters of Permission. These must be obtained from the Registrar's Office *before* courses are taken. Letters of Permission are issued under the authority of the Committee on Undergraduate Standings

and Petitions. It may be necessary to obtain departmental approval in advance and such approval will be required for all courses in a student's major.

Students wishing to undertake summer courses at another university on a Letter of Permission may not attempt more than two full courses (or equivalent). Students on probation may take only one course at a time on a Letter of Permission.

The maximum number of full courses which may be taken for credit on Letters of Permission is normally five. In the case of transfer students it may be fewer than five, depending on how many transfer credits they have received.

The total number of non-Trent credits may not normally exceed one-half of the total degree requirements. It should also be noted that the last five courses taken by a candidate for a degree should be completed at Trent.

For the Fall/Winter session, requests for Letters of Permission must be received no later than August 15. For the Summer session, requests for Letters of Permission must be received no later than two weeks after Spring Convocation. For all Letters of Permission, one week to 10 days must be allowed for processing. A fee is charged for each Letter of Permission.

10. Study at Foreign Universities

All students wishing to take a full year of study at a foreign university must apply through the Trent International Program and have their plans of study approved by the appropriate academic departments.

Normally this year of study abroad will constitute the third quarter of an Honours program. A number of departments and programs encourage students to spend a year studying abroad and formal arrangements with foreign universities exist.

Students granted permission to study abroad will be charged an administrative fee.

Assessment of Performance

A. Exemption from any Regulation on Assessment of Performance

1. Requests for an exemption from any regulation should be forwarded by the department/program Chair to the Dean of Arts and Science, together with an explanation as to why the current regulations are pedagogically inappropriate and/or impose unusual hardship on the faculty

(and/or students) involved in that course. Course syllabuses may not reflect an exemption until that exemption has been formally approved.

2. The Dean approves, or rejects, exemptions from regulations in consultation with the Academic Development Committee.

3. Appeals of Academic Regulations:

Students who believe that academic regulations have imposed undue hardship on them may appeal to the Committee on Undergraduate Standings and Petitions through the Senior Tutor of their college.

B. Grades and Assessment

1. Criteria

In determining an undergraduate's final standing in each course, the following criteria may be considered:

- (a) oral and written work completed during term;
- (b) any mid-year or other term tests or examinations;
- (c) any final examinations.

At the beginning of each session, students will be informed of the method of assessment in each course. Students' attention will also be directed to the course syllabus at the start of each session. This course syllabus may be subject to some modifications as the work of the year progresses.

2. Grading Scheme and the Syllabus

- i) *Weighting of the Final Examination.*
No final examination may count more than 50% toward the final grade in a course.
- ii) *Weighting of Non-Test/Examination Component of a Course.* Instructors are encouraged to design their courses such that some component of the final grade is derived from sources other than tests/examinations, such as seminar presentation/ participation, essays, assignments, and lab reports.
- iii) *Syllabus.*

Each course must have a syllabus which clearly states the contribution of each component of the course (e.g., tests, examinations, essays, seminar presentations, seminar participation, seminar attendance, etc.) to the final grade in that course. Any change to the syllabus description of the grading scheme must be agreed to in writing by

all students who regularly attend classes in that course and must be posted or otherwise communicated to all students enrolled in that course. Notice of such changes, along with appropriate evidence of approval, shall be submitted as soon as possible to the Dean's Office. It is the instructor's responsibility to review the syllabus with students at the first class.

3. Restrictions on assessment prior to the formal examination period

No in-class test or examination (apart from laboratory examinations in the sciences) worth more than 10% of a final grade may be held during the last two weeks of classes in either term, for either full year courses or half courses.

Note:

i) *Fall/Winter Session:*

This policy applies to all courses conducted during the Fall/Winter regular sessions (i.e., 12 weeks for half courses, 24 weeks for full courses), both on- and off-campus. For example, mid-year tests in full courses that contribute more than 10% to the final grade, if held in December prior to the holiday break, will be scheduled by the Registrar's Office during the formal examination period in December.

ii) *Spring/Summer Sessions:*

This policy applies to all courses conducted during the Spring and Summer sessions, both on- and off-campus with the two week period interpreted in terms of the number of teaching days, given the compressed academic terms in these sessions (i.e., 6, 8, and 12 weeks for full courses).

iii) *Field Courses:*

Field courses are exempted from this requirement.

4. Mid-Year Review

Early in the Winter Term, a mid-year progress report summarizing academic performance will be sent to each student. The Academic Advisor and the Senior Tutor of the college will also receive copies of this report. Although the reports are useful in assessing a student's progress, they do not represent official grades and mid-year marks will not appear on any formal document. At least 25% of the mark in each 100, 200 and 300 level full course must be determined before the mid-year review in January.

5. Course Credit

Subject to the regulations concerning academic programs and the maximum number of D grades, students retain credits for every course and every half-course successfully completed. Two half-courses count as the equivalent of one full course. Each full course is equivalent to 3.0 academic credits, each half-course is equivalent to 1.5 academic credits. The student's transcript will show each course and half-course attempted and the grade achieved. Withdrawal from the University without academic penalty will be recorded on the student's transcript.

All Calendar references to D grades and D standing refer to all grades in the D range (50-59).

6. Grades

Prior to June 1982, there were five passing grades, and one failing grade:

A = 100-80	C = 69-60
B+ = 79-76	D = 59-50
B = 75-70	F = 49-0

Precise numerical equivalents to the above letter grades appear for 1982-83 Winter Session only.

Since June 1982, the following grading scheme has been in effect:

A+ = 100-90	C = 66-63
A = 89-85	C- = 62-60
A- = 84-80	D+ = 59-57
B+ = 79-77	D = 56-53
B = 76-73	D- = 52-50
B- = 72-70	F = 49-0
C+ = 69-67	

Numerical equivalents appear on students' transcripts.

7. Dean's Honours List

All students who achieve an average of A- (80%) or better over their most recent five courses will have their names placed on the Dean's Honours List. This list is published as a special issue of *Fortnightly* in the autumn of each year. Graduating students who are eligible for the Dean's Honours List will have that fact noted in the convocation program.

8. Aegrotat Standing and Incomplete Standing

Requests for special consideration because of illness or misfortune should be made as soon as circumstances arise. In all instances, the student should approach the instructor(s), and requests for extensions

or special examinations may be granted. In more serious cases the Academic Adviser or Senior Tutor should be consulted. In certain circumstances, students may appeal for Retroactive Withdrawal (see the section on Withdrawal), for Aegrotat or Incomplete Standing. Petitions for Aegrotat or Incomplete Standing must be made through the academic department concerned and must be accompanied by adequate supporting documentation (e.g., medical certificates or other supporting evidence) confirming the student's inability to write the test/examination on a specific date or to complete the course work in the prescribed time.

Aegrotat Standing exempts the student from writing the final examination in a course, and is granted on the grounds of physical or emotional disability. Students seeking Aegrotat Standing must consult the appropriate instructor(s). Because Aegrotat Standing depends upon the completion of all required term work throughout the year, it is not appropriate in cases of prolonged illness and is granted only when the student is unable to write the final examination.

Incomplete Standing permits the student to submit any remaining work in a course at a specified date following the end of the academic term. Incomplete Standing will be granted only when a student is unable to complete in the prescribed time the required work in a course for reasons (beyond the individual's control), such as illness, physical or emotional disability, or loss or damage to work already done or in progress. Failure by a student to organize the workload will not be considered an adequate reason. Petitions for Incomplete Standing must be made through the academic department concerned and must be accompanied by adequate supporting documentation.

Students with Incomplete Standing from the Fall/Winter Session must have the Incomplete resolved by June 30. Students with Incomplete Standing from the Summer Session must have the Incomplete resolved by September 30.

A student wishing an extension beyond the final deadline must submit a petition to the Committee on Undergraduate Standings and Petitions outlining any compelling or extenuating circumstances that would warrant such an extension. Appropriate supporting documentation including a letter of support from the Department Chair must accompany the petition. In

cases where a petition is not submitted by the deadline or the petition is rejected, the mark assigned will be the mark indicated on the Incomplete form or zero if no mark is indicated.

Re-scheduling an examination. Individual departments may re-schedule an examination or offer an alternative arrangement to writing a final examination. In either case, a request for an alternative arrangement must be made in writing to the academic department concerned, outlining the reason and must be accompanied by supporting documentation. Each request will be considered on its own merit based on the departmental resources and documentation provided (see also Examinations for Special Needs Students, Section C, item 9).

C. Examinations

1. Definition of Formal Examinations

Final examinations and mid-term tests that contribute more than 10% to the final grade will be considered to be formal examinations and will be scheduled during a formal examination period. Formal examinations may be written, oral, or have a performance component associated with them. Formal examinations may be open-book, closed-book, or take-home; and may assume one or more test formats such as essay, short answer, multiple-choice, or mathematical calculation. Not all courses have formal examinations.

2. Take-Home Examinations

- i) A take-home examination will be distributed to students either at the last class meeting or during a formal examination period. All students shall have the same period of time in which to complete take-home examinations, and the date and time by which submission is required should be clearly stated on the paper.
- ii) All take-home examinations must be submitted to the instructor by the last day of the formal examination period, unless an earlier submission date has been set.

3. Availability of Past Examinations to Students

To ensure that all students have equal access to, and familiarity with, the types of questions typically asked on written final examination, the Bata Library and Durham College (Oshawa) library will keep on reserve:

- i) copies of all final examinations administered during the previous three years in currently-offered courses;

or

- ii) a reasonable sampling of the type of questions asked.

The latter may be more appropriate than the former if there is a new course instructor or if there are major changes in course content or approach of the examination format. 'Reasonable' may be defined as at least 2-3 essay questions, 5 short answer questions, 5-10 multiple-choice questions or problems, depending on the format of the examination.

4. Principles Guiding the Scheduling of Formal Examinations

Procedures

Procedures for the scheduling of formal examinations will apply to both mid-year and end-of-year formal examination periods.

- i) there will be no direct conflict for formal examinations scheduled for any student's courses; and,
- ii) no student will be required to write more than 2 formal examinations within a 24-hour period.

5. Faith Dates/Examination Periods

Students who wish to observe their cultural or religious holidays during the scheduled formal examination periods should notify the Registrar's Office in writing by Friday, September 29. The Registrar's Office will, whenever possible, incorporate these exceptions into the scheduling of formal examinations. Where it is not possible to do so, the student should notify the instructor in order to make alternative arrangements.

6. Supplemental Examinations

There are no supplemental examinations.

7. Inability/Failure to Write Examinations or Complete Course Work

(see Aegrotat Standing and Incomplete Standing under B. Grades and Assessment, item 8)

8. Regulations for the Conduct of Formal Examinations

- i) Students must bring their Trent student cards to the examination. Cards must be placed on the top right-hand side of the examination desk/space and be visible to the Course Invigilator when students are asked to sign an attendance list.

- ii) Students who fail to produce a valid student card must report to the Dean's Office, with their card (if available), by 1 p.m. on the next working day. Student's whose names are not on the pre-printed attendance lists must report to the Assistant Registrar of Records in the Registrar's Office by 1 p.m. on the next working day. Failure to do so may result in a grade of zero for the examination.

9. Examinations for Special Needs Students

Special Needs students are those determined to be so by the Special Needs Coordinator. Any request, therefore, for a Special Needs examination, whether initiated by a student or faculty member, must go through the Special Needs Office.

10. Cheating on Tests/Examinations (also see Plagiarism under F.)

The chief invigilator of the test/examination will submit a detailed report to the Dean if acts of cheating or suspected cheating have occurred and describe the actions taken as soon after the test/examination as possible. After consultation with the instructor or department concerned, the Dean will decide if any further action need to be taken.

Acts considered as cheating include misrepresenting oneself (and being misrepresented) at a test/examination, use of aids that are not permitted, conversation during examinations, and reading of another student's work.

D. Appeals and Requests for Reassessment of Grades

1. Release of Final Grades

No grade is official until it has been reviewed by, or on behalf of, the Committee on Undergraduate Standings and Petitions (CUSP) and Senate. Following this, grades are released by mail from the Registrar's Office.

Instructors and/or departments must not release final grades or final examination marks directly to students. Where *a* half-courses are prerequisites for *b* half-courses, the grades for *a* half-courses are released by the Registrar's Office to College Senior Tutors and JBC as soon as available. Where the prerequisite standing has not been achieved, students may be required to withdraw from *b* half-courses.

Frequently students are curious as to how they did on a final examination, particularly if the grade they have received from the Registrar's Office is lower than expected. Faculty may respond to student requests for a breakdown of their marks, if they so wish. Indeed, faculty are encouraged to respond favourably to such requests (assuming the final marks have been released by the Registrar's Office), since such information may free the student from the time and expense of launching an unnecessary formal appeal.

Notwithstanding, the procedures outlined in I) and II) below,

- i) Faculty may, on a voluntary basis, allow students access to their final examination papers, but only under conditions that ensure strict control over the security and integrity of graded examination papers.
- ii) Faculty members may choose to re-read a final examination paper upon student request, although (again) they are under no obligation to do so.

2. Student Access to Graded Final Examination Papers

I. Final examination papers are the property of the University and are not intended to provide substantive feedback to students. Final examinations are kept under conditions of tight security and may be examined by students only under the following circumstances once the grades have been released by the Registrar's Office:

- i) a formal written appeal of the course grade has been made and the appropriate deposit received by the Registrar's Office (see item iii) within the specified time frame; and
- ii) evaluation of the final examination by a second reader has not resulted in a grade adjustment upwards; and
- iii) a formal written request to examine his/her examination paper, accompanied by a non-refundable deposit of \$10, is made by the student to the Registrar's Office.

II. Procedure following item 2, I-iii (above)

- i) the Registrar's Office, through the department chair, will have the relevant instructor/department concerned deliver the examination paper to the office of the Assistant Registrar of Records unless the Department chooses to manage all arrangements;

- ii) an appointment to view the examination paper in a room within the Department/Registrar's Office will be made by the Department/Office of the Assistant Registrar of Records;
- iii) review time will be limited to a maximum of one hour;
- iv) the final examination may not be photo-copied or marked in any way.

3. Student Appeals of Grades

Appeals of Term Work. A student may appeal the assessment of term assignments and tests during the course of the year. Such appeals should be directed to the course instructor and subsequently, if necessary, to the Chair of the Department or Program.

Appeals of Final Marks. Final marks in individual courses will be reviewed by the Department concerned and submitted to the Registrar's Office, countersigned by the Chair.

Every student has a right to appeal final standing in any course, regardless of the grade. However, in considering such appeals only the final examination will normally be reassessed. In courses where there are no final examinations, an appeal will be based upon a re-assessment of the final written assignment in the course. All appeals should be made in writing to the Registrar's Office before March 15 for an *a* half-course, July 15 for a full-course, a *b* half-course, or a *c* half-course, and September 30 for a course in the Summer Session. *Students who have not received final grades because of outstanding financial obligations to the University are subject to the same deadlines.* A fee of \$25 will be charged for the handling of an appeal, refundable if the mark is raised. Marks cannot be lowered as a result of such an appeal.

Special Appeals. If, after exhausting all other areas of appeal, students still feel that undue hardship has been worked on them, they may appeal directly to the Special Appeals Committee through the secretary of the committee. Such appeals should be made within four weeks of receipt of the previous ruling, in writing on forms available from the University Secretariat, Bata Library. All decisions of the Special Appeals Committee are final and take effect when issued.

E. Academic Dishonesty

Except with the permission of the instructor concerned, the same work cannot be submitted for two or more courses.

F. Plagiarism

(also see Cheating on Tests/Examinations under C. Examinations, item 10)

Plagiarism is defined in Trent's *Notes on the Preparation of Essays* as "passing off someone else's words or thoughts as your own", and *Notes* continues:

The worst kind of plagiarism, of course is submitting an essay written in whole or part by someone else. Even a short passage copied directly constitutes plagiarism unless the student encloses the passage in quotation marks and acknowledges his source. But the student who changes only the odd word in someone else's sentences is also (perhaps unwittingly) committing plagiarism, as is one who relies heavily on secondary sources for the argument, organization, and main points of his paper. Even proper paraphrasing of someone else's writing constitutes plagiarism if the facts or ideas thus presented are not commonly known or held in the field.

Although the reference to "an essay" highlights the problem of plagiarism in the arts and social sciences, the main definition's use of "words or thoughts" makes quite clear the broader concern over plagiarism and acknowledges the unhappy fact that lab reports, problem sets, and even computer programs may be subject to plagiarism.

Since plagiarism is theft and fraud combined, and strikes at the very roots of the University by threatening the integrity of its degree, it is obvious that it must be treated as a very serious academic offense and the plagiarist be dealt with accordingly. This is not, of course, to say that every student who inadvertently omits to footnote a brief quotation from a work which s/he has carefully acknowledged in a list of works consulted should be charged with plagiarism. On the contrary, most instructors will certainly continue to judge many such situations as examples of ignorance rather than deceit and will deal with them as they have always done with repeated explanation and with minor penalties (subject to the usual appeal procedures) such as reducing the mark for the assignment or requiring that it be resubmitted.

This policy does not pretend to deal with such cases which should continue to be dealt with at the pedagogical level-between the instructor and the student. What the Policy does do is to set out the procedures to be followed when an instructor wishes to make a formal accusation of plagiarism against a student, and the penalties which are to be imposed if that accusation proves justified.

Procedures

- a) When an instructor wishes to make a formal accusation of plagiarism s/he shall report the matter to the Departmental Chair, at the same time informing the student of what s/he has done. (Where the instructor involved is the Departmental Chair, then the Chair's role shall be taken by a past Chair or other senior member of the department.)
- b) The Chair shall review the evidence with the instructor and if the Chair agrees that there is a case to be answered s/he shall write to the student, enclosing a copy of this *Policy*, to inform the student that s/he has been formally accused of plagiarism, outlining the evidence on which the accusation is based, and pointing out the penalty which will be imposed in the event of a judgement of guilty, as well as of the fact that, should the student have previously been punished for plagiarism, a further penalty would follow automatically.
The Chair shall offer to meet with and/or to receive a written submission from the student and shall request a reply within two weeks of the date of the letter, failing which the penalty will be imposed.
- c) If the student fails to respond to the Chair's letter or declines to make any defense, and the Chair determines that plagiarism has occurred, s/he shall inform the student in writing and, by copy of the letter the secretary of CUSP, that the penalty of a grade of F(0) in the assignment without the right to repeat the assignment is being imposed.
- d) Upon receipt of the copy of the Chair's letter the secretary of CUSP shall place it in the student's file in the Registrar's Office. The secretary of CUSP shall at the same time consult the student's file and if s/he finds that the student has already been penalized for plagiarism shall report the matter to the next meeting of CUSP for CUSP to impose the appropriate penalty for a second (or third or fourth) offense.
- e) If CUSP finds that because of previous plagiarism a penalty beyond that imposed by the departmental Chair is required they shall impose it, informing the student in writing of the additional penalty which is being imposed, and of the consequences which will result from any further plagiarism. If CUSP finds that no additional penalty beyond that imposed by the Departmental Chair is warranted they shall nevertheless inform the student in writing of the fact that the copy of the Chair's letter has been received and included in the student's file, and shall inform the student of the consequences which will result from any further plagiarism.

Appeals

Any student accused and judged guilty of plagiarism may appeal the judgement and the penalty imposed. Appeals against the judgement of a department chair shall be to CUSP and against the judgement and penalty imposed by CUSP, to the Special Appeals Committee whose decision shall be final.

Penalties

- i) For a first case of plagiarism the penalty shall be a grade of F(0) in the assignment concerned without the right to repeat the assignment.
- ii) For any case of plagiarism committed after the student has already received the penalty outlined in (i) above, the normal penalty shall be a grade of F(0) in the course concerned. (Being assigned as a penalty the grade of F(0) will be entered on the student's transcript whether or not the student has since withdrawn or subsequently withdraws from the course).
- iii) For any case of plagiarism committed after the student has already received the penalty outlined in (ii) above, the normal penalty shall be a grade of F(0) in the course concerned and rustication from the University for a minimum period of one year from the end of the academic session in which the offense occurred.
- iv) For any case of plagiarism committed after the student has already received the penalty outlined in (iii) above the

normal penalty shall be a grade of F(0) in the course concerned and immediate debarment from the University.

Publication of Policy

All course syllabuses should contain the following statement:

Plagiarism: Plagiarism is an extremely serious academic offense and carries penalties varying from failure in an assignment to debarment from the University.

Uniformity of Policy

This present *Policy on Plagiarism* as approved by Senate at its meeting of March 22, 1988 supersedes all previous University policies on plagiarism and all policies on plagiarism previously established by any department or program of the University or by any individual instructor.

G. Academic Penalties

1. Three academic penalties may be imposed as a result of weak academic performance:

- (a) **Probation** - A warning of a poor academic situation which, if not corrected, can lead to a more serious penalty.
- (b) **Rustication** - A minimum of a one year absence from the University may be imposed with or without a period of probationary status.
- (c) **Debarment** - A minimum of three years' absence from the University, will occur as a result of a weak academic performance subsequent to the imposition of rustication. Refer to the sections below for complete details.

2. Assessment Average

In determining a student's academic status, an assessment average will be employed. This assessment average is defined as the mean grade earned in a minimum of three full courses (or equivalent) taken either concurrently, or consecutively. All courses completed during one such period will be counted in determining the assessment average. The Committee on Undergraduate Standings and Petitions may reconsider and alter the implications of an assessment average which is unduly affected by extremes in course grades.

In evaluating the **assessment average**, the following criteria will normally be employed:

- a) students with a minimum average of 60% will be *eligible to proceed*;

- b) students with an average of 50% to 59.9% will be placed on *probation*;
- c) students with an average of less than 50% will be *rusticated*.

3. Students on Probation

Students may not proceed for a second assessment period. In the case of a student on probation, an assessment average of 60% or better will clear the student's probation, and the student will be eligible to proceed. Students on probation who fail to attain an average of 60% will be rusticated.

4. Student Previously Rusticated

A student returning must apply for re-admission to the University. If re-admitted, the individual will be placed on probation. If such a student fails to achieve 60% upon the next assessment, the penalty will be debarment. An assessment average of 60% or more will clear the probation and the student will be eligible to proceed. However, once a rustication penalty has been imposed, any subsequent rustication at any assessment period will result in debarment.

Academic Degree Programs

Honours Program

Trent University encourages students to plan programs leading to single-major or joint-major Honours degrees.

The Honours degree provides a broad education with specialization in one or two disciplines (single- or joint-major). It is the basic qualification for entry to graduate programs and generally enhances employment opportunity upon graduation.

The University offers the following Honours degree programs:

- Bachelor of Administrative Studies (Honours)
- Bachelor of Arts (Honours)
- Bachelor of Science (Honours)

Students seeking the Bachelor of Administrative Studies degree are normally admitted at the beginning of their first quarter of study. Students seeking the Bachelor of Arts (Honours) or Bachelor of Science (Honours) who have completed four or more full courses must indicate

their intent to enter or continue in the Honours program at each registration period. No formal application is required for the Bachelor of Arts (Honours) program or the Bachelor of Science (Honours) program. Students are encouraged to contact the appropriate department(s) for further information on planning individual Honours programs.

Students with a General degree, who wish to complete an Honours degree program, should apply for re-admission to the University no later than June 15 indicating their intent to pursue an Honours degree on the Application for Re-Admission.

1. Academic Standings Required for Entry or Continuation in the Honours Program (B.A. and B.Sc.)

All references to courses relate to full course equivalents.

- At any registration period, a minimum cumulative average of 65% on courses completed for credit is required, either to enter or continue in an Honours program. Normally, only those students who have achieved the minimum cumulative average required for the Honours program will be allowed to register in four-hundred series courses.
- Any student who has completed more than six courses for which credit was not granted (NCR) is ineligible to enter or continue in an Honours program.

In order to facilitate student planning, at the end of every academic session the Registrar's Office calculates the cumulative average for all students who have completed at least four courses. The cumulative average is printed on each student's grade report.

Academic Standings Required for an Honours Degree

An Honours degree is awarded upon the successful completion of 19, 19.5 or 20 courses as necessary to meet the requirements of the major- or joint-major subject to the qualifications below:

- no more than seven *one-hundred* level courses may be counted;
- at least three courses must lead to majors in different disciplines;
- at least four distinct disciplines must be included in the student's degree program;
- at least seven courses at the *three-hundred* and *four-hundred* levels (combined) must be included;

- a minimum grade of 60% in the specified introductory course is required to proceed in a given discipline;
- at least nine courses in the major discipline are required in a single-major program. Students in the Bachelor of Administrative Studies program should refer to Administrative Studies under the Programs of Study section of the Calendar for specific requirements;
- at least seven courses are required in each discipline of a joint-major program;
- no department may require a student to take more than eight courses in a joint-major program;
- no more than 12 courses of a 19 course degree, or 13 courses or a 20 course degree, may be in any one discipline;
- specific additional major requirements are listed by academic department in the Programs of Study section of this Calendar;
- no more than three D grades may be counted toward the Honours degree;
- only one course with a D standing may be counted for credit in a student's major. One D grade may be counted in each discipline of a joint-major program;
- a course may be repeated for credit only once, and then only if the grade on the first attempt was below 60%;
- a minimum cumulative average of 65% on all courses completed for credit is required;
- no more than six courses for which credit was not granted (NCR) are permitted.

Students who do not meet the final two requirements will be awarded a General degree, providing all requirements for the General degree have been met.

Single-Major Honours with Minor

Students may indicate, upon applying to graduate with a single-major Honours B.A., B.Sc. or B.A.S. degree, that they wish to be awarded a minor in a second subject.

Those who meet the requirements for a single-major Honours B.A., B.Sc. or B.A.S. degree will be awarded a minor if they have also met or exceeded the requirements for a joint-major General degree in the second subject or, for a minor in Administrative Studies, if they meet the requirements specified by the Administrative Studies Program.

Program Requirements for Joint-Majors

When a joint-major Honours program combines a major requiring 20 courses in the single major and a major requiring 19 courses in the single major, 19.5 courses are required for completion of the Honours degree.

2. Bachelor of Science (Honours)

In order to receive a B.Sc. degree, a student must have completed a university-level mathematics course.

Students will automatically qualify for a Bachelor of Science (Honours) degree on completion of one of the following programs of study:

- a single-major Honours program in Biology, Chemistry, Environmental and Resource Studies (B.Sc. option), Mathematics, Physics, or Psychology (thesis-based option);
- a joint-major in any two of Anthropology, Biology, Chemistry, Computer Studies, Economics, Environmental and Resource Studies (B.Sc. option), Geography, Mathematics, Physics or Psychology (thesis-based option).

Students may petition to receive a B.Sc. (Honours) degree on completion of the following programs of study:

- a single-major in Anthropology, Economics, Geography or Psychology (course-based option);
- a joint-major in Biology, Chemistry, Environmental and Resource Studies (B.Sc. option), Mathematics, Physics or Psychology (either thesis- or course-based option) and in another discipline not listed in this section;
- in each case, the student's program must include at least 14 courses from the disciplines listed in this section;
- the student will require the support of the department(s) concerned.

The petition will be made on the Application for Degree/Diploma Assessment and will be reviewed by the Committee on Undergraduate Standings and Petitions.

Students who complete successfully a joint-major Honours program in one of Anthropology, Computer Studies, Economics, or Geography and in another discipline not listed in this section will normally receive a Bachelor or Arts (Honours) degree.

3. Bachelor of Administrative Studies (Honours)

- Students seeking the B.A.S. degree are normally admitted to the program at the beginning of the first quarter. Later admission is possible upon application.

Applications by students from other programs or by transfer students from other universities will be considered on their individual merits. Upon admission, these students will be assisted by the director of the program in developing an appropriate course of study. Admission is not permitted after the completion of more than 17 courses if taking further courses is necessary to attain the required minimum average.

- Successful completion of Grade 12 Advanced Mathematics or the equivalent is required for admission.
- To remain in the program a cumulative average of 70% in administrative courses must be maintained. Students who are unable to maintain this average must transfer to a B.A. or B.Sc. program.
- To complete the program successfully, students will be required to obtain twenty full-course credits or their equivalents with a 70% average in all required courses, excluding electives.
- Upon successful completion of the third quarter, students who have met the requirements for a single-major General degree in economics may convocate with that degree. Students exercising this option are considered to have completed their first degree program and must apply for readmission to the University, if they wish to pursue the B.A.S. as a second degree. Students should refer to Second Degree under the Admissions section of the calendar for further information.
- It is not possible to combine the B.A.S. degree with a major from any other degree program.

General Degree Program

1. Academic Standings Required for a General Degree

A General degree is awarded upon the successful completion of 15 full courses (or equivalent) subject to the qualifications below:

- no more than seven *one-hundred* level courses may be counted for credit;

- at least three courses must lead to majors in different disciplines;
- at least four distinct disciplines must be included in the student's degree program;
- at least four courses at the *three-hundred* level must be included;
- a minimum grade of 60% in the specified introductory course is required to proceed in a given discipline;
- at least six courses in the major discipline are required in a single-major program;
- at least five courses are required in each discipline of a joint-major program;
- No department may require a student to take more than six courses in a joint-major program;
- no more than eight courses in any one discipline may be counted for credit in a single-major program;
- specific additional major requirements are listed by academic department in the Programs of Study section of this Calendar;
- a student must obtain a minimum of 60% in at least 12 courses;
- a student must obtain a minimum of 60% in at least seven *two-hundred* or *three-hundred* level courses;
- no more than three D grades may be counted toward the General degree;
- only one course with a D standing may be counted for credit in a student's major. One D grade may be counted in each discipline of a joint-major program;
- a course may be repeated for credit only once, and then only if the grade on the first attempt was below 60%.

2. Bachelor of Science (General)

In order to receive a B.Sc. degree, a student must have completed a university-level mathematics course.

Students will automatically qualify for a Bachelor of Science (General) degree on completion of one of the following programs of study:

- a single-major in Biology, Chemistry, Environmental and Resource Studies (B.Sc. option), Mathematics, or Physics;
- a joint-major in any two of Anthropology, Biology, Chemistry, Computer Studies, Economics, Environmental and Resource Studies (B.Sc. option), Geography, Mathematics, Physics or Psychology.

Students may petition to receive a B.Sc. (General) degree on completion of one of the following programs of study:

- a single-major in Anthropology, Economics, Environmental and Resource Studies (B.A. option), Geography or Psychology;
- in each case, the student's program must include at least 11 courses from the disciplines listed in the Bachelor of Science (General) section.

The petition will be made on the Application for Degree/Diploma Assessment form and will be reviewed by the Committee on Undergraduate Standings and Petitions.

Students who complete a joint-major in one of Biology, Chemistry, Computer Studies, Environmental and Resource Studies (B.Sc. option), Mathematics or Physics, and in another discipline not listed in this section will normally receive a Bachelor of Arts (General) degree.

Special Emphasis Program

The Special Emphasis option exists in both the Honours and General programs in order to accommodate students whose academic needs cannot be met by majors in any of the existing disciplines. While the Special Emphasis Program allows considerable scope for students to define their own program, each student must provide an integrating rationale or theme by which the choice of courses may be justified. Examples of such integrating themes have been studies in religion and medieval studies.

An application will not normally be approved which seems to be simply a major or joint-major without one or two of the courses required by the departments or programs concerned. Nor will an application be approved which is simply a collection of courses without a unifying theme.

Students wishing to pursue a Special Emphasis Program should consult the senior tutor of their college early in their program. The senior tutor will advise the student in drawing up a proposal, in obtaining the approval of the academic departments concerned, and in ensuring that the program will meet University degree requirements.

Special Emphasis programs are approved and monitored by the Committee on Undergraduate Standings and Petitions. Application to this committee is made

through the senior tutor. Once a program is approved, changes in course selection can be made only by petition to the committee.

Students should submit applications for the Special Emphasis Program on completion of the first quarter for both Honours and General programs. The student's proposal should outline the integrating rationale of the program and identify the remaining courses required for the degree in question. In exceptional cases only will the committee consider applications for the Special Emphasis Honours Program from students with ten courses completed. In such instances, the second-year courses already completed must be consistent with the rationale behind the program.

Students should note that after enrolment in the program only two D grades among the ten final courses may be counted for credit for both the Honours and General degree. No more than three D grades may be counted for credit overall.

Students considering an Honours Special Emphasis Program must prepare a statement of the work which they intend to carry out upon entry to the program at the end of the first quarter of study. At least two of the final four or five courses must be at the *four-hundred* level. Following consultation with the senior tutor, the statement should be submitted to the Committee on Undergraduate Standings and Petitions. The proposal must be approved by the chairs of all the departments and programs involved prior to its presentation to the committee. Students must also meet the University requirements for entry and continuation in an Honours program. The Committee on Undergraduate Standings and Petitions will make the recommendation to Senate for the awarding, deferring, or withholding of the Honours degree.

Special Emphasis - International Studies

A Special Emphasis Program in International Studies is available as an interdisciplinary Honours degree. It is designed to meet the needs of students whose interests cannot be accommodated within a major in a particular department or program. Students must provide a rationale for their course choices.

Students interested in International Studies should write to the Director of the Trent International Program for information and guidance in selecting their courses. Applications for entry into Special Emphasis, International Studies, are to be made by February 1 of the first year to the International Studies Advisory Committee at the International Program Office. The Committee advises students in formulating their proposal, obtains departmental approval for courses where required, and ensures that the programs meet University degree requirements. The Advisory Committee makes recommendations for program approval to the Committee on Undergraduate Standings and Petitions (CUSP).

Students participating in this program are required to participate in an international study abroad program during their studies at Trent (see International Study Opportunities).

International Program

The Trent International Program (TIP) offers an exciting opportunity for students from many countries to live and study together in an international community. Students in the program, many of whom are interested in pursuing international careers, are committed to deepening their understanding of world issues, increasing their sensitivity to different cultures, and, in the long term, to promoting international learning and understanding. Students come from all provinces across Canada and more than one hundred countries have been represented throughout the years.

Students who enrol in the program have a normal choice of course offerings at Trent and major in any field they choose. An International Studies academic program is available to students whose international interests cannot be accommodated within a major in a particular department or program (see Special Emphasis - International Studies). TIP students gather together to explore international issues in a World Affairs Colloquium on a regular basis. The Program also organizes many social, educational and cross-cultural events.

To make an application to the International Program, students should follow the regular application procedure for entry into the University. In addition, students must write a letter to the Director of the International Program indicating their interest in the Program.

International Study Opportunities

Students are encouraged to spend one year of their undergraduate program in another country, through one of the many Trent International Study and Exchange Programs (TISEP).

Trent has cooperative and exchange agreements with various universities and higher education institutions all over the world.

Convocation and Transcripts

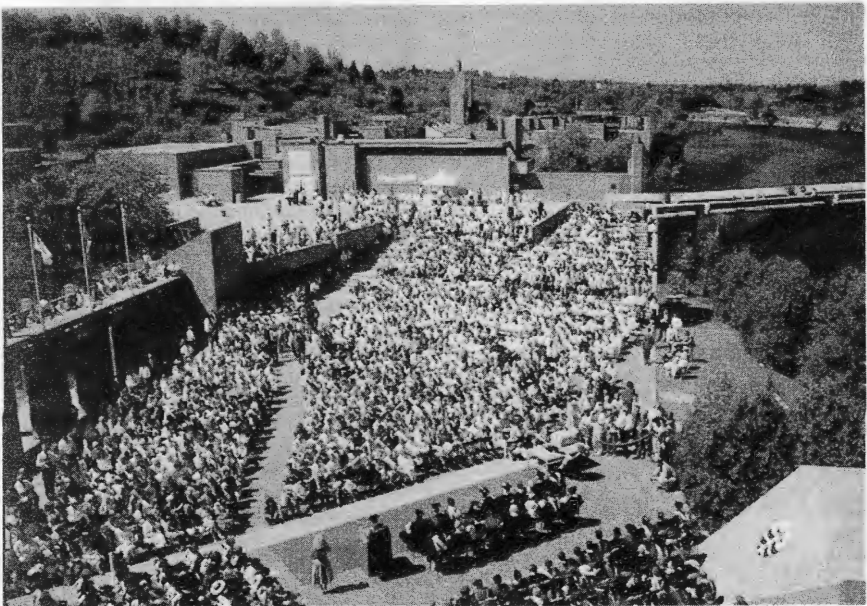
Students who intend to graduate must complete an Application for Degree/Diploma Assessment form by the deadlines listed in the University Diary. Only those students completing the application by the published deadline will be considered for evaluation of eligibility to convocate. Students missing the deadline will be charged a late fee. In addition to academic qualifications, students must have cleared all financial obligations to the University.

Students who anticipate completing their degree/diploma requirements at the end of Summer session should complete the application during the summer in order to be reviewed for eligibility for the fall. A notation as to the degree/diploma completed will appear on the transcript once eli-

gibility has been confirmed by Senate.

Students who have applied and are eligible to graduate may participate in the Convocation ceremonies in the spring of the following year and will receive their degree or diploma at that time. Students with Incomplete Standing in certain courses or on Letters of Permission which have been duly approved should refer to the University Diary for the final date for receipt of such grades for spring and fall eligibility. Students whose final grades have not been received by the published final submission date will be required to delay their convocation and/or will not have the degree or diploma noted on their transcript.

Official copies of a student's academic transcript are transmitted by the Registrar's Office directly to other institutions only at the *student's written request*. Transcript charges are \$5 per copy. *Payment of the fee is required in advance of the release of the transcript.* **Transcripts are prepared in order in which requests are received. Allow 10 working days for processing.** Grade reports are provided free of charge to the student upon completion of each session. *However, neither transcripts nor grade reports will be released for students having a financial obligation to the University.*



Part-time Studies

(See Julian Blackburn College.)

Programs of Study

Explanation of Course Identification

Courses are identified by three digits.

Generally, the first digit indicates the year in which the course is normally taken, and the second digit usually indicates an area of study within a discipline. Half courses are indicated by the suffix *a*, *b*, or *c*; indicating courses taught in the fall term, winter term, or throughout the year respectively. Half-courses equal one and one-half credits. Full courses equal three credits. Any two half-courses equal one full course for credit purposes.

Animal Care Course

This course deals with the ethical principles, legal aspects and practical considerations regarding animal research. There are no prerequisites and the course is not credited towards a degree. The course is mandatory for all students whose work involves handling and experimentation with live vertebrate animals. The course will be offered only once in the academic year at the beginning of the Fall Term. For details of when the course will be offered, contact the Department of Biology, Chemistry, Environmental and Resource Studies, or Psychology.

Administrative Studies

Associate Professor and Director of the Program

K.L. Campbell, B.A. (TRENT), M.B.A. (TORONTO)

Professor Emeritus

I.D. Chapman, B.Sc. (LIVERPOOL), M.A. (TORONTO)

Associate Professors

B. Ahlstrand, B.A. (TORONTO), M.Sc. (L.S.E.), D.Phil. (OXFORD); D. Newhouse, (Onondaga) B.Sc., M.B.A. (WESTERN ONTARIO); D. Torgerson, A.B. (CALIFORNIA-BERKELEY), M.E.S. (YORK), M.A., Ph.D. (TORONTO) (on leave Winter Term 1996-1997)

Conjoint Associate Professor

R. Blackmore, B.Sc. (BIRMINGHAM), M.B.A. (WESTERN ONTARIO), C.A.

Assistant Professors

J. Bishop, B.A. (NEW BRUNSWICK), M.A., M.B.A. (MCMASTER), Ph.D. (EDINBURGH); M. Quaid, B.A. (MCGILL), M.Sc. (L.S.E.), D.Phil. (OXFORD)

Adjunct Faculty

R. Beninger, B.A. (TRENT), LL.B. (OTTAWA), LL.M. (LONDON); R. Chernecki, B.A. (WATERLOO), M.A. (TORONTO); R. Taylor, B.A. (TRENT), LL.B. (QUEEN'S)

Associated Faculty

Computer Studies, J.W. Jury; *Economics*, M. Arvin, D. Curtis, H. Kitchen, J. Muldoon, K.S. Murthy; *History*, D. McCalla, *Mathematics*, E.A. Maxwell; *Political Studies*, M. Gunther, R. Paehlke, J. Wearing; *Sociology*, P. Bandyopadhyay, C. Huxley.

Administrative Studies is a four-year (20 course credits) Honours program leading to the degree of Bachelor of Administrative Studies (B.A.S.). This program is intended for students with an interest in careers in management in the public and private sectors.

The objective of the Administrative Studies Program is to provide students with a generalist rather than a specialist program of study. The administration courses are designed to expose the student to the various administrative techniques (accounting, marketing, management science, computer science, commercial law, etc.) while the policy courses are concerned with strategic decisions affecting the long-range directions of organizations in business and government.

Students entering the B.A.S. degree program in first year must have completed Grade 12 mathematics at the 5th level or its equivalent with a good standing.

To remain in the B.A.S. degree program, a cumulative average of B- (70%) in courses completed (excluding electives) must be maintained. Students who are unable to maintain a B- average may transfer to a B.A. or B.Sc. program in another discipline, provided they can make up any degree requirements for a major.

Students entering the fourth year must indicate their course choices to the director before Early Registration.

Required Courses

Year I

Administration 105, Economics 101a or b and Economics 102a or b, one of Politics 100, Sociology 100; and two electives (at least one first year course from History, Philosophy, English, or Modern Languages is recommended). Upper-year core courses are not open to first year students.

Year II

Administration 201a and 202b, Administration 250, Administration-Economics 225a and 220b, one course in either policy or administration (or either Economics 200 or Economics 201), and one elective.

Year III

Administration 350, a further course in administration, one policy course, one additional course in either policy or administration, and one elective.

Year IV

Administration 400, Administration 410, one policy course, one additional course in either administration or policy, and one elective. Students registered in the B.A.S. degree program before the 1992-93 academic year or students registered to graduate in a year in which AD410 is not offered, may substitute one 400 level administration course for Administration 410.

Students who meet the requirements for a B.A.S. degree will be awarded a minor in another subject if they meet or exceed the requirements for a joint-major general degree in the other subject. Attention is drawn to complementary fields of study such as: Canadian Studies, Computer Studies, Economics, Environmental and Resource Studies, History, Native Studies, Politics, and Sociology.

Requirements for a minor in Administrative Studies: minimum of five courses in Administrative Studies, including AD105, AD250, AD201a, AD202b, and at least one 300 or 400 level Administration course. No course in a student's major subject may be counted towards a minor in Administrative Studies.

Administration Courses

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97

Administration 105

Introduction to managerial communications. The course examines the theory and practice of communications in an organizational context with particular emphasis on written communications. The lectures and workshops stress a strategic approach to management communications in order to enhance the effectiveness of professional writing and the understanding of organization situations. Enrolment normally limited to Administrative Studies students.

Administration-Native Studies 190

Introduction to management and management decision-making in contemporary aboriginal organizations. The course examines the basic tasks, responsibilities, and practices of management in aboriginal and non-aboriginal organizations and by aboriginal managers.

Economics 101a or b

Introductory microeconomic analysis. (See Economics.)

Economics 102a or b

Introductory macroeconomic analysis. (See Economics.)

Administration 201a

Fundamentals of financial accounting. An introduction to the basic concepts and principles underlying financial accounting and to the practices followed in the preparation of financial records and statements required for public reporting. Problems related to different types of business and to the various legal forms of business are considered. Open to all second-year students or by permission of the instructor.

Administration 202b

Fundamentals of management accounting. An introduction to the basic concepts and procedures used in the collection and manipulation of accounting data for ongoing management decision-making. Topics include: manufacturing accounting; cost accounting and variance analysis; cost allocation; cost-volume-profit analysis; introduction to budgeting. Prerequisite: *Administration 201a* or by permission of the instructor. Excludes previous *Administration 305b*.

Administration-Economics 220b

Introduction to statistics for economics and management. (See Economics.)

Administration 222a

Organizational behaviour. A conceptual and methodological analysis of how individuals react to their employment environment. Topics include motivation, job satisfaction, leadership, group dynamics and decision-making. Prerequisite: Open to any second year student or by permission of the instructor. (Excludes *Administration 322a*.)

Administration 223b

Human resource management. A survey of the concepts and practices in the major functions of human resource management. Topics include human resource forecasting, human rights, recruitment and selection, training and development, performance appraisal and compensation. Prerequisite: *Administration 222a* or equivalent or permission of the instructor.

Administration-Economics 225a

Introduction to mathematics for economics and management. (See Economics.)

Administration 250

Organization theory. An introduction to organizational theory and an examination of specific organizations. Structure, process, environment, and other aspects of organizations are approached through multiple-frame analysis. Prerequisite: Open to any second year student or by permission of the instructor.

Administration-Native Studies 272

This course looks in general at the issues affecting organizational behaviour. There is a special focus on the performance, aboriginal character, and people management of contemporary aboriginal organizations. *Native Studies 100* and *Administration/Native Studies 190* recommended. Lecture and seminar weekly.

Computer Studies 202a

Intermediate computer science. (See Computer Studies.)

Computer Studies 203b

Data structures and processing. (See Computer Studies.)

Computer Studies 220b

Information systems in organizations. (See Computer Studies.)

Administration 310a

Introduction to marketing (Part I). This course examines the nature of the marketplace, and introduces basic strategy for adapting a marketing mix to the external environment. Students are required to review a current advertising campaign. The development of ideas through interactive learning is encouraged. Open to any second year student or by permission of instructor.

Administration 315b

Introduction to marketing (Part II): advertising and promotion. This course, a continuation of *Administration 310a*, focuses on sales, advertising and the media, and sales promotions. Students are invited to create independent projects, usually involving work with a corporation or organization. Prerequisite: *Administration 310a*.

Administration 320a

Financial management. A systematic survey of the fundamental concepts of corporate finance including: the tax environment, financial planning and control, working capital management, capital budgeting, the market for long term securities, debt and preferred shares, valuation and rates of return, and the cost of capital. Attention will be given to applying these concepts to particular cases. Prerequisites: *Administration 201a* (or other accounting deemed sufficient by the instructor).

Administration 325a

The legal environment of management. The course will direct itself to the legal limits within which management operates and the laws with which business decision-making must comply. The use of law for protection of the competitive market place, of the consumer and of the businessman will be reviewed and explained through the primary sources of law: cases and statutes. Prerequisite: *Administration 250*, or permission of the instructor.

Administration-Sociology 333b

Social organization and bureaucracy. An overview of different approaches to the analysis of complex organizations including classical theories of bureaucracy, the managerial tradition and perspectives drawn from contemporary sociology. Selected case studies are examined with special emphasis on the analysis of the

modern business enterprise. Prerequisite: *Sociology 100* or *Administration 250* or permission of the instructor.

Administration 340

Entrepreneurship and small business. Students learn about the challenges facing a small business within the Canadian social, economic, political and regulatory environments. Prerequisites: *Administrative Studies 201a/202b* and *Administrative Studies 310a/315b* (the latter may be taken concurrently).

Administration 341b

Communications in organizations. Theory of organizational communications. Strategies and skills applicable to communications in an organizational setting - interviews, group meetings and presentations. One lecture and one two-hour practice lab weekly. Prerequisite: *Administration 105* or *Administration 222a* or by permission of the instructor.

Administration 350

Managerial planning and control. The processes and problems of planning and control with particular attention to budgeting. The course will focus critically on traditional and innovative budget procedures for organizations in both the private and the public sectors. Emphasis will be placed on the vital role of the budget process in management. Prerequisite: *Administration 201a/202b* and *Administration 250*.

Administration 400

Strategic management. The course focuses on the definition and analysis of strategic problems faced by business and government organizations in adapting to changes in their internal and external environments. Students will be expected to draw broadly on knowledge and skills developed over their first three years. Restricted to students with fourth-year standing in the B.A.S. degree program.

Administration 410

Management thought. The course will focus on leading ideas and figures in the development of management thought, particularly through a close reading of some of the 'classics' in the field. Emphasis will be placed on developing individual student skills and on examining in depth selected topics. Prerequisite: Fourth-year standing in the B.A.S. degree program or permission of the instructor.

Administration 420

Business Ethics. Examines the ethical issues encountered in business and other organizations, and the ethical issues raised by contemporary capitalism. The purpose of the course is to encourage identification and careful reflection on moral problems. Prerequisite: Fourth-year standing in the B.A.S. degree program; or third-year standing with permission of the instructor.

Administration 430

Workplace diversity. This course addresses some of the workplace problems and opportunities that arise from the demographic diversity of the 1990s and beyond. The course will also examine the human resource implications of conducting business on an international basis. Prerequisite: *Administration 223b* or equivalent or permission of the instructor.

Administration 490

Reading course. By individual arrangement, normally before early registration. Prerequisite: permission of the instructor.

Administration 495

Special topics. For course details offered in a particular academic year please contact the Program Office.

Administration 499

Research project. Research based on a project developed with a local organization. Details must normally be arranged with the Director by May 1 of the preceding academic year.

Policy Courses

(See Calendar description in the respective departments or programs.) Students are advised to check prerequisites and the pertinent department regulations for courses in planning their academic programs.

Canadian Studies-Environmental and Resource Studies 310: Public policy and the Canadian environment

Comparative Development 400:

Modernity and development

Economics-Canadian Studies 260a/b:

Canadian economic development I: up to 1929

Economics-Canadian Studies 261a/b: The Canadian economy II: since 1929

Economics 301a: Monetary theory

Economics 302a/b: Monetary institutions and policy

Economics 311a: International trade
Economics 312b: International finance
Economics 316a: Government expenditure analysis
Economics 317a: Canadian tax policy
Economics-Comparative Development 331a: The economics of developing countries
Economics-Comparative Development 333b: The economics of global interdependence
Economics 341b: Industrial organization
Economics 350a: Economics of Trade Unions (See Economics)
Economics 351b: Labour Economics (See Economics)
Economics 361a/b: An economic history of the Industrial Revolution
Economics 362a/b: International economic history, 1850 to present
Economics-Environmental and Resource Studies 381a/b: Environmental economics
Economics-Environmental and Resource Studies-Canadian Studies 382a: Canadian renewable resource policy
Economics-Canadian Studies 384a/b: Health economics
Environmental and Resource Studies 311b: Environmental impact assessment
Geography-Canadian Studies 371b: Urban planning
Geography 380a: Regional economic development
History-Canadian Studies 235: Canada since 1914
History-Canadian Studies-Politics 301: Canadian political culture, 1864 to the present
History-Canadian Studies 308: Business history
Native Studies 200: Politics and aboriginal communities
Native Studies 260: Social service and aboriginal people
Native Studies 290: Aboriginal economic development
Native Studies 300: Aboriginal governance
Native Studies-Comparative Development 305: Aboriginal community development
Native Studies 320: Urbanization and the aboriginal peoples
Native Studies 330: Education and the aboriginal peoples
Native Studies 340: Aboriginal law
Native Studies 381a: Theory of community-based research
Native Studies 383b: Community based Oral history methods

Philosophy 232: Philosophy of law, justice and the state
Politics-Canadian Studies 201: Canadian politics
Politics 220: International politics
Politics 260: An introduction to political analysis and public policy
Politics-Canadian Studies 309: Ontario politics
Politics 320: Ordering world politics
Politics-Canadian Studies 362: Public policy and administration in Canada
Politics 420: Advanced topics in International Relations Theory
Politics 425: Advanced topics in international political economy
Politics-Comparative Development 450: Democracy and democratization
Politics-ERS 460: Public policy in comparative perspective
Sociology 230: Self and society
Sociology 334a: Sociology of work
Sociology-Women's Studies 343a: Sociology of gender
Sociology-Women's Studies 344b: Selected issues in gender and sexuality

Ancient History and Classics

Associate Professor and Chair of the Department

D.F.R. Page, B.A., DIP.ED. (SHEFFIELD)

Professors

J.P. Bews, B.A. (QUEEN'S), M.A., PH.D. (LONDON); K.H. Kinzl, DR. PHIL. (VIENNA) (on leave 1996-97); I.C. Storey, B.A. (UNIV. TRIN. COLL.), M.A., PH.D. (TORONTO), M. PHIL. (OXFORD)

Adjunct Faculty

J. Tinson, B.A. (TRENT), M.A. (QUEEN'S)

The department offers courses in English translation on the history, literature and civilization of the ancient Greek and Roman world, as well as courses in the ancient languages (Greek and Latin).

Majors and joint majors are offered in:

- Classical History
- Classical Studies
- Degree programs in Greek and Latin are also available

Notes

- The single-major Honours program consists of nineteen courses.
- Students are not limited to a maximum of twelve courses within the depart-

ment (eight in a General program), as long as they do not exceed the maximum of twelve (or eight) within a particular discipline.

- Students who propose to pursue a single or joint-major within the department should consult the chair at the end of their first year or very early in their second year.
- Courses at the *four-hundred* level are normally limited to students in the fourth quarter of the Honours program.
- Reading (390 and 490 designation; normally 12 meetings) and special topics (395 and 495; 24 meetings) courses require consultation with the department by March of the preceding academic year and are offered only if faculty are available. Students may take more than one such course in either one year or their overall program.
- Students considering graduate work in Ancient History and Classics are strongly advised to include as many courses in the ancient languages as possible (a minimum of five is suggested) in an Honours program if they expect their applications to be considered by a Graduate School, and to begin the study of German or French as undergraduates.

Classical History (Greek and Roman history) (Courses in English)

Notes

- Students may take both *Classical History 100* and *Classical History 201* in their first year.
- Classical History majors may substitute a course in Classical Civilization or Greek or Latin, or *Classical Literature 100*, *Philosophy 210*, *History 205*, for a non-prescribed course in Classical History.
- One Classical History course beyond *Classical History 201* may be counted for credit toward a major in History; a second course may be counted with permission of the Chair of the Department of History.
- Students in the Honours program in Classical History are strongly advised to include at least one course in Latin or Greek.

Single-major Honours program in Classical History, nine courses: *Classical History 100*, *201*, *410* or *420*, *490*; five more *two-hundred* level or *three-hundred*

level courses in Classical History, of which at least two must be at the *three-hundred* level.

Joint-major Honours program in Classical History, seven courses: *Classical History 100*, *201*, *410* or *420*, *490*; three more *two-hundred* level or *three-hundred* level courses in Classical History, of which at least two must be at the *three-hundred* level.

Single-major General program in Classical History, six courses: *Classical History 100*, *201*; and four more *two-hundred* level or *three-hundred* level courses in Classical History, of which at least two must be at the *three-hundred* level.

Joint-major General program in Classical History, five courses: *Classical History 100*, *201*; three more *two-hundred* level or *three-hundred* level courses in Classical History, of which at least one must be at the *three-hundred* level.

Classical History 100

The history of Greece, to the decline of the city-states. An introduction to the study of ancient history illustrated by problems of the period 600-323 B.C. (early Sparta, the Athenian reformers Solon and Kleisthenes, Greek tyranny, Athenian democracy, the Athenian Empire, the world empire of Alexander). Two lectures weekly, fortnightly seminar.

Classical History 201

Rome from the Republic to the Caesars, c. 150 B.C. - A.D. 69: a study of republican institutions, Roman imperialism, the collapse of the republic in the last century B.C., the 'monarchy' of Julius Caesar, the 'restored republic' of Augustus and the reigns of the Julio-Claudian emperors (Tiberius, Claudius, Caligula and Nero). Two lectures weekly, fortnightly seminar. Open to first-year students.
D.F.R. Page

Classical History 205a

International relations in the Greek world, c. 500-338 B.C. This course examines such aspects as national and 'racial' attitudes, imperialism, alliances and diplomacy, political propaganda, etc. Special attention will be given to the original documents of the time, to be studied in English. Weekly two-hour meetings. Open to students beyond first year.

Classical History 207b

Alexander the Great and his age. A course offering both a survey of the life and deeds of Alexander and an examination of the background, the ancient sources (studied in English), and modern assessments. Weekly two-hour meetings. Open to students beyond first year.

Classical History 305

Government and politics in the Greek city-states, c. 600-300 B.C. A course examining such forms of government as democracy, tyranny, oligarchy, etc. Two-hour meeting weekly. Open to Classical History students beyond second year, or with the permission of the instructor.

Classical History 331

The Augustan principate and its origins, 44 B.C. - A.D. 14: a study of the political, constitutional, administrative, social and cultural history from the assassination of Julius Caesar to the death of Augustus, with special attention paid to the ancient sources (studied in English) and to modern assessments. Two-hour lecture weekly. Prerequisite: *Classical History 201*, or with permission of the instructor.

D.F.R. Page

Classical History 351a

The Roman Empire from Nero's suicide to the resignation of Diocletian, A.D. 69-305: the Roman world under the Flavians, A.D. 69 - 96, and during its peak in the second century; the militarization under the Severan emperors and the crisis of the third century; and the new order of Diocletian's tetrarchy. Weekly two-hour lecture, fortnightly tutorial. Prerequisite: *Classical History 201*, or with permission of the instructor.

Classical History 352b

The Late Roman Empire, A.D. 305 to c. 600: the emergence of Christianity as the state religion under Constantine; the collapse of the Empire in the West and its replacement by Germanic kingdoms; the survival of the Empire in the east and the birth of Byzantine civilization. Weekly two-hour lecture, fortnightly seminar. Open to students beyond first year. Prerequisite: at least one half-course in Classical History or History, or with permission of the instructor.

Classical History 390 or 395

A reading or special topic course. Open to students beyond second year. Prerequisite: two courses in Ancient History and Classics in English, one of which must be at the upper-year level. Open also to majors in History.

Classical History 410

The Athenian Empire: political and intellectual developments in the fifth century. Regular two-hour meetings. Open to students beyond third year.

Classical History 420

Nerva, Trajan, and Hadrian, A.D. 96-138: the politics, administration, society and economy of the three principates (including a glance back to the reign of Domitian, A.D. 81-96) and the expansion of Rome's frontiers under Trajan, with special emphasis placed on the literary, epigraphic and numismatic evidence and on modern assessments. Regular two-hour meetings. Open to Classical History and History students beyond third year, or with the permission of the instructor.

Classical History 490 or 495

A reading or special topic course.

Classical Studies (Classical Literature and Civilization)

(Courses in English)

Notes

- Students in the Honours program in Classical Studies are strongly advised to include at least one course in Latin or Greek.
- *Philosophy 210* may be counted as a credit toward a major in Classical Studies.
- One of *Classical Literature 100* or *200* may be counted for credit toward a major in English.
- *Classical Civilization 231a* and *232b* are core courses in the Program of Women's Studies.

Single-major Honours program in Classical Studies: ten courses within the department, of which six must be beyond the *one-hundred* level, at least two at the *three-hundred* level, and two at the *four-hundred* level.

Joint-major Honours program in Classical Studies: seven courses within the depart-

ment, of which five must be beyond the *one-hundred* level, at least one at the *three-hundred* level, and two at the *four-hundred* level.

Single-major General program in Classical Studies: seven courses within the department, of which four must be beyond the *one-hundred* level and two at the *three-hundred* level. Students who propose to include more than two courses in Greek or Latin must obtain the permission of the department.

Joint-major General program in Classical Studies: five courses within the department, of which four must be beyond the *one-hundred* level and at least one at the *three-hundred* level. Students who propose to include more than two courses in Greek or Latin must obtain the permission of the department.

Classical Literature 100

Greek drama in translation. Selected plays of the three major tragedians (Aeschylus, Sophokles, Euripides), and of the two comic poets (Aristophanes, Menander). Lectures will present also the role of drama in classical Greek society. Two lectures weekly, fortnightly seminar.

Classical Literature 200

Mythological themes in Greek and Latin literature. A course examining the nature of myth from Babylonian epic to C.S. Lewis. Themes will include creation myths; gods and human heroes; women in myth; and the nature of love. Weekly lecture, fortnightly seminar. Open to students beyond first year.

Classical Literature 390 or 395

A reading or special topic course. Open to students beyond second year. Prerequisite: two courses in Ancient History and Classics in translation, one of which must be at an upper-year level.

Classical Literature 490 or 495

A reading or special topic course.

Classical Civilization-Anthropology-Geography 223a

The ancient city. The developments, innovations, and achievements of the city in the Greek and Roman world from the Bronze Age to the Late Empire. Weekly two-hour lecture, fortnightly seminar. Open to students beyond first year.

Classical Civilization-Anthropology 224b
Introduction to classical archaeology. The course will focus on the methods and achievements of classical archaeologists and on the art history of the actual remains (sculpture, architecture, vases) as well as examining particular sites. Weekly two-hour lecture, fortnightly seminar. Open to students beyond first year.

Classical Civilization-Anthropology 227a
Archaeology of religion and culture. Physical remains from Greek archaic and classical cultural institutions are examined. Topics may include: theatres, sacrifice, pottery, temples, mystery cults, festivals, athletics, and the close examination of particular sites. Weekly two-hour lecture, fortnightly seminar. Open to students beyond first year.

Classical Civilization-Anthropology 228b
Archaeology of religion and culture. Physical remains from Roman imperial cultural institutions are examined. Topics may include: housing, trade, aqueducts, temples, imperial cult, early Christianity, provincial administration, public entertainment, and the close examination of particular sites. Weekly two-hour lecture, fortnightly seminar. Open to students beyond first year.

Classical Civilization-Women's Studies 231a

Women in the Greek world, c. 700-300 B.C. Material studied will be drawn from literature, philosophical and medical treatises, law codes, and the visual arts and will be considered within the context of current trends of approach (feminist, sociological, anthropological, literary). Weekly lecture and seminar. Open to students beyond first year.

Classical Civilization-Women's Studies 232b

Women in the Roman world, 100 B.C.-A.D. 300. Topics will include the status of women in Roman law, the Roman family, sexuality and motherhood, feminine religious cults, women in Roman literature. The material will be considered within the context of current trends of approach (feminist, sociological, anthropological, literary). Weekly lecture and seminar. Open to students beyond first year.

Classical Civilization 390 or 395

A reading or special topic course. Open to students beyond second year. Prerequisite: two courses in Ancient History and Classics in translation, one of which must be at an upper-year level.

Classical Civilization 490 or 495

A reading or special topic course.

Ancient Philosophy

See the entry under Philosophy 210.

Greek Language and Literature Notes

- The availability of degree programs in Greek is subject to departmental staffing conditions. Interested students must consult with the chair as early as possible.
- Only one course in New Testament Greek may be counted toward a major in Greek.

Single-major Honours program in Greek, eight courses in Greek: these must include two *four-hundred* level courses in Greek plus one course in Greek history.

Joint-major Honours program in Greek, seven courses in Greek: these must include two *four-hundred* level courses in Greek.

Single-major General program in Greek, six courses in Greek.

Joint-major General program in Greek, five courses in Greek.

Greek 100

Elementary Greek. An introduction to the basic elements of ancient Greek providing the fundamentals of grammar and vocabulary. Some easy selections of ancient Greek will be read in this course. Four hours weekly. No prerequisite.

Greek 200

Intermediate Greek. Continuation and completion of classical Attic syntax and grammar, with readings from Lysias (*Against Eratosthenes*), Plato (*Symposium*), Lucian (*'Real' History*). Three hours weekly, including language study. Prerequisite: *Greek 100* or OAC Greek. I.C. Storey

Greek 220

Epic and tragedy. Prerequisite: *Greek 100*.

Greek 240

New Testament Greek. Prerequisite: *Greek 100*.

Greek 390 or 395

A reading or special topic course.

Greek 490 or 495

A reading or special topic course.

Latin Language and Literature Note

- The availability of degree programs in Latin is subject to departmental staffing conditions. Interested students must consult with the chair as early as possible.

Single-major Honours program in Latin, eight courses in Latin: these must include two *four-hundred* level courses in Latin plus one course in Roman history.

Joint-major Honours program in Latin, seven courses in Latin: these must include two *four-hundred* level courses in Latin.

Single-major General program in Latin, six courses in Latin.

Joint-major General program in Latin, five courses in Latin.

Latin 100

Latin for beginners: an introduction to Latin through reading and comprehension. Special emphasis will be placed on acquiring a working vocabulary and on the grasp of Latin syntax. For students who have little or no previous knowledge of the language but who wish to be able to understand 'the basics'. No prerequisite. Four hours weekly.

D.F.R. Page

Latin 200

Intermediate Latin. Continuation and completion of Latin grammar, with reading of relatively easy selections from prose and verse, republic to silver age. Three hours weekly, including language study. Prerequisite: *Latin 100* or OAC Latin.

J.P. Bews

Latin 220

Myths and legends of the origins of Rome, as illustrated in the works of Vergil and Livy, writers of the Augustan period. Three hours weekly, including language study. Prerequisite (or corequisite): *Latin 200*, or permission of the Department.

Latin 390 or 395

Reading or special topic course. In 1996-97 the topic is mediaeval Latin. Prerequisite in 1996-97: *Latin 100*.

Latin 490 or 495

Reading or special topic course.

Anthropology**Acting Chair**

H.W. Helmuth, D.Sc. DR. HABIL (KIEL)

Professor Emeritus

K.A. Tracey, B.Sc. (HOWARD), D.Sc. (KIEL)
R.K. Vastokas, M.A. (TORONTO), PH.D. (COLUMBIA)

Professors

R.S. Hagman, PH.D. (COLUMBIA); P.F. Healy, B.A. (CALIFORNIA-BERKELEY), M.A., PH.D. (HARVARD); J.K. So, M.A., PH.D. (SUNY, BUFFALO) (on leave Winter term); E.M. Todd, B.A. (TORONTO), PH.D. (NORTH CAROLINA); J.R. Topic, M.A., PH.D. (HARVARD); J.M. Vastokas, M.A. (TORONTO), PH.D. (COLUMBIA) (on leave)

Associate Professors

S.M. Jamieson, B.A. (MCMASTER), M.A. (MANITOBA), PH.D. (WASHINGTON STATE); R.D. Powell, LIC. EN HISTORIA (CORDOBA), PH.D. (MCGILL) (on leave); J. Solway, M.A., PH.D. (TORONTO) (on leave Winter term); M.J. Tamplin, B.A. (TORONTO), M.A. (LONDON), PH.D. (ARIZONA) (on leave).

Assistant Professors

J. Harrison, B.A. (SASKATCHEWAN), M.A. (CALGARY), D.PHIL. (OXFORD); S. Hepburn, B.A. (CALGARY, CAMBRIDGE), M.A. (MCGILL), PH.D. (CORNELL).

Conjunct Professors

T.J. Brasser, PH.D. (LEIDEN); D. Pendergast, PH.D. (CALIFORNIA-BERKELEY); P.L. Storck, PH.D. (WISCONSIN)

Research Associate

K. Cassavoy, M.A. (TEXAS A&M)

Anthropology, the study of humankind, is an inter-disciplinary field with four main subdivisions that range across science, social science, and the humanities: archaeology, linguistics, biological anthropology, and cultural anthropology. Archaeologists recover material, human, and faunal remains in order to interpret the cultures of past societies. Linguists record, analyze and compare languages worldwide in order to trace the origins and development of language in relation to society and culture. Biological anthropologists investigate human physical origins, growth, and development in relation to environmental, genetic, and sociocultural factors. Cultural anthropologists work with living human groups and individuals throughout the world, recording their ways of life and beliefs (ethnography) and analyzing and interpreting their findings with a view to understanding and explaining similarities and differences in human behaviour.

In the past, anthropologists focused almost entirely upon non-Western, small-scale and prehistoric societies. Today, anthropologists are increasingly concerned with the present in both simple and complex societies within the larger inter-cultural processes of globalization. Anthropological discourse today addresses such issues as economic and social inequality; identity, ethnicity, and nationalism; ethnocentrism and racism; gender and society; the individual and society; tensions between the global and the local; and problems of cross-cultural representation and the politics of interpretation. Anthropologists today no longer focus entirely upon the "other" but are turning as well to the study of contemporary Western Society. What has remained a constant and distinctive feature of anthropology as a discipline is its insistence upon the pre-eminence of lived experience, of man and woman alive, the anthropology of everyday life.

Required Courses:

The single-major Honours program consists of twenty courses. Minimum ten courses in Anthropology, including: *Anthropology 100, 200*, any two of *212, 230, 240*, at least four Anthropology courses at the 3rd and 4th year levels, and *420*.

Joint-major Honours program. Minimum seven courses in Anthropology, including: *Anthropology 100, 200* and, one of *212, 230, 240* and, two three- or four-hundred series courses in Anthropology, and *420*.

Single-major General program. Minimum six courses in Anthropology, including: *Anthropology 100, 200* and any, two of *212, 230, 240* and two *three- or four-hundred series* Anthropology courses.

Joint-major General program. Minimum five courses in Anthropology including *Anthropology 100, 200* and two of *212, 230, or 240* and at least one *three- or four-hundred series* Anthropology course.

Note:

- Students are reminded that anyone not achieving 60 or better in *Anthropology 100* is not eligible to major in Anthropology.
- Students undertaking Joint-majors in Anthropology and Comparative Development Studies are advised that they may substitute *Comparative Development-Anthropology 221* for one of *AN212, 230, or 240* in their Anthropology requirements.
- In order to be eligible to graduate with a B.Sc. degree, a student must include *Mathematics-Statistics 150* in their program of studies.
- Students intending to pursue graduate studies in anthropology upon graduation are strongly advised to include all four of *AN200, 212, 230, and 240* in their program of study.

Special Provisos

- Anthropology Honours students who joint-major in a Department or program which offers a 19-course Honours degree must include at least 19.5 courses in their overall program.
- Students who have taken all four of *Anthropology 200, 212, 230, and 240* may recognize one of these courses as equivalent to a *three-hundred series* course.
- Students undertaking a single- or joint-major Honours program should consult the Chair of the Anthropology Department for advice in preparing their programs of study.
- Students are limited to no more than one full reading course in Anthropology or its equivalent for the Honours degree. Only students who have an overall A (80% or better) average will be allowed to enrol in reading courses.
- Details of prerequisites are given under the individual course listings, but it should be noted that *Anthropology 100* is a normal prerequisite for other courses in Anthropology.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97

Anthropology 100

Introductory anthropology. Understanding and explaining humanity in all its variety. An interdisciplinary, comparative study of people and their cultures throughout the world (cultural anthropology), of human evolution, adaptation, and genetics (physical anthropology), the recovery and development of prehistoric societies (archaeology), and language as an aspect of culture (linguistics). Two-hour lecture weekly, compulsory film hour weekly, and fortnightly tutorial.

J. So, R. Hagman, J. Harrison, T. Topic

Anthropology 200

Cultural anthropology. An introduction to the history, theory, and ethnographic methods of cultural anthropology and their role in understanding religion, exchange systems, political and social organization, kinship, gender, and issues of social and cultural change. Prerequisite: *Anthropology 100 or Sociology 100* or permission of the instructor. Two-hour lecture weekly, seminar fortnightly.

S. Hepburn and Staff

Anthropology 212

Introduction to archaeology. An introduction to the methods used by archaeologists to recover and analyze their data, and a survey of selected culture histories in the Old and New World. No prerequisite. Two-hour lecture weekly, tutorial fortnightly.

S. Jamieson and Staff

Anthropology-Comparative Development 221

Comparative agrarian structure. (See Comparative Development Studies)

Anthropology-Classical Civilization 227a

Archaeology of ancient religion. (See Classical Studies.)

Anthropology-Classical Civilization 228b

Archaeology of Greek and Roman culture. (See Classical Studies.)

Anthropology 230

Introduction to language. How to develop an understanding of any language through linguistic analysis of sounds, words, and sentences; how languages change and language classification; acquisition of language, language in society, and writing; human vs. non-human forms of communi-

cation. No prerequisite. Two one-hour lectures weekly, seminar fortnightly.
R. Hagman and E. Todd

Anthropology 240

Introduction to physical anthropology. The study of human evolution, the physical characteristics of the living varieties, the genetics and growth of the human species. Prerequisite: *Anthropology 100* or permission of the instructor. Two-hour lecture weekly, two-hour seminar in the laboratory fortnightly.

H. Helmuth

Anthropology-Canadian Studies-Native Studies 253

Aboriginal art of North America. An introduction to the visual arts and architecture of the Aboriginal peoples of North America and their development from prehistory to the present. No prerequisite. Three-hour lecture/discussion period weekly.

Anthropology 300

Field methods and techniques in anthropology. An introduction to methods and techniques of discovery, analysis, and interpretation in a field situation in any one sub-discipline (archaeology, cultural, physical, or linguistic anthropology). Occasional summers only: confirm with the Department Office. Prerequisite: *Anthropology 200, 212, 230, or 240* as appropriate or permission of the instructor. (Excludes *Anthropology 211*).

Anthropology-Comparative Development 301

African culture and society. An introduction to contemporary African culture and society, focusing on culture history and indigenous institutions, the impact of colonial rule, and present-day problems of development. Prerequisite: *Anthropology 100, Comparative Development 100* or permission of instructor.

Anthropology 302

Cultures of the Pacific. An introduction to the peoples of Oceania - Polynesia, Micronesia, Melanesia and New Guinea. Outline of prehistory, physical and cultural diversification, traditional lifeways, and the impact of colonialization. Focus on contemporary issues of ethnicity, political control, development, and participation in the global culture. Prerequisite *Anthropology 100*. Lecture, seminar weekly.
E. Todd

Anthropology 303

Caribbean societies. The comparative analysis of Caribbean societies; historical, economic, demographic, racial and cultural conditions. Current problems, regional associations, development, change. Prerequisite: *Anthropology 200*. Two-hour seminar weekly.

Anthropology-Comparative Development 304

Latin America. Examination of ethnic and historical foundations of Latin American society. Problems of modernization with special emphasis on peasant movements and interethnic relations. Prerequisite: *Anthropology 100* or permission of instructor. Two-hour lecture, one hour seminar weekly.

Anthropology 309

Ethnographic method and theory in cultural anthropology. The course will cover research design, field methods, ethics, styles of ethnographic writing, and ongoing critical debates about methodology. Three-hour seminar weekly. Prerequisite: *Anthropology 200* or permission of instructor.

Anthropology 311

Prehistory of North America. A survey of the prehistoric cultures of North America north of Mexico from first human entry into the New World to European contact. Prerequisite: *Anthropology 212* or permission of instructor. Lecture weekly, seminar fortnightly.

Anthropology 312

Old World prehistory: Pleistocene and recent periods. A general survey of Old World prehistoric cultural adaptations to changing environments during the Pleistocene, followed by a more intensive study of post-Pleistocene European prehistory, concentrating on recent research to the end of the Neolithic. Prerequisite: *Anthropology 212* or permission of instructor. Two-hour lecture/seminar weekly.

Anthropology 313 a/b

Agriculture and urbanism. Agricultural origins around the world and factors that affect agricultural intensification in complex society. Prerequisite: *Anthropology 212* or permission of the instructor. Two-hour lecture/seminar weekly.

Anthropology 314

Archaeology, ethnohistory, and ethnography of South America. An examination of native societies of selected areas of South America with an emphasis on the Andean and Amazonian areas. Prerequisite: *Anthropology 100* or permission of instructor. Two-hour lecture weekly, seminar fortnightly.

Anthropology 320

Anthropology of religion. An exploration of how anthropologists have approached phenomena such as witchcraft, shamanism, ritual, and myth as a way of understanding the epistemologies and cosmologies of people in diverse cultural contexts, both in times of relative stability and times of change. Prerequisite: *Anthropology 200* or permission of instructor. Three-hour lecture/seminar weekly.

S. Hepburn

Anthropology 330 a/b

Language history. Examination of the various ways in which languages may change; techniques for the reconstruction of extinct languages; inquiry into economic, social, and ideological causes of language change. Prerequisite: *Anthropology 230* or permission of the instructor. Two-hour lecture/seminar weekly.

R. Hagman

Anthropology 332 a/b

Language in Society. Significance of variations in language use by class, gender, ethnicity, age. Bilingualism, methodology, applied sociolinguistics. Two-hour seminar weekly. Prerequisite: *Anthropology 200* or *230*.

R. Hagman

Anthropology-Biology 341

Comparative human osteology and evolution. The skull and postcranial skeleton of early and modern humans and non-human primates; methods of description and measurement; determination of age and sex. Prerequisite: *Anthropology 240* or permission of instructor. Two-hour lecture weekly, two-hour seminar in the laboratory weekly.

H. Helmuth

Anthropology-Biology 344 a/b

Human genetics. A survey of genetic principles as applied to the human being with special emphasis on clinical, popula-

tional and evolutionary genetics. Prerequisite: *Anthropology 240* or permission of instructor. Two-hour lecture and 2-hour seminar weekly. (Excludes ANBI343)

Anthropology-Biology 346 a/b

Human growth and adaptation. A comprehensive survey of the human life cycle from conception to old age, with special emphasis on theories of growth and adaptation; comparative and evolutionary aspects of growth; anatomy and physiology of pregnancy, prenatal and postnatal development; human adaptation to the environment; biocultural determinants of health; and the aging process. Prerequisite: *Anthropology 240* or permission of instructor. Two-hour lecture and 2-hour seminar weekly. (Excludes ANBI 343)

Anthropology-Biology 347 a/b

Primate Behaviour. Behaviour of non-human primates and their importance for the understanding of human evolution and behaviour. Two-hour lecture and one-hour seminar in laboratory weekly. Prerequisite: *Anthropology 240* or permission of the instructor. (Excludes ANBI 340)

J. So

Anthropology 348

Medical anthropology. An intensive and comparative survey of the fundamental aspects of the anthropology of health; research methodology, biological, ecological and sociocultural factors influencing disease patterns; cross-cultural differences in medical systems. Prerequisite: *Anthropology 240*. One-hour lecture and two-hour seminar weekly.

Anthropology-Biology 349 a/b

Primate Evolution. General biology, systematics, anatomy, and paleontology of non-human primates, including the importance of primates for understanding human evolution. Two-hour lecture and one-hour seminar in laboratory weekly. Prerequisite: *Anthropology 240* or permission of the instructor. (Excludes ANBI 340)

Anthropology-Cultural Studies-Sociology 350

Modern cultural theory. (See Cultural Studies)

Anthropology-Canadian Studies 351

Art, architecture and society. An introduction to the analysis of visual art and archi-

texture in their sociocultural contexts. Themes include: art and architecture as systems of nonverbal communication, artist's role in society, art and religion, art as propaganda, and cultural conditions of creativity. Lectures take a cross-cultural global perspective; seminars focus upon Canadian examples. No prerequisite. Three-hour lecture/seminar weekly.

Anthropology 360 a/b

Ceramics in archaeology. Introduction to the study of ceramics from archaeological sites. Examines how ancient pottery was manufactured (raw materials and techniques) and how pottery artifacts are analyzed and classified by archaeologists (composition, form, function, decoration, style, dating). Ceramic ecology, economics, and ethnoarchaeology. Laboratory exercises. Prerequisite: *Anthropology 212* or permission of instructor. One-hour lecture and two-hour seminar/lab weekly. Limited enrolment.

Anthropology 361 a/b

Lithic technology. Introduction to the recognition, analysis, and interpretation of stone artifacts. Focus is upon the identification of technological, functional and stylistic indicators of past behaviours, societies, and culture. Prerequisite: *Anthropology 212*. Two hours of lecture/lab and one hour seminar weekly. S. Jamieson

Anthropology 362 a/b

Zooarchaeological interpretation. The identification and interpretation of faunal remains recovered from archaeological sites. Prerequisite: *Anthropology 212*, 240 or permission of instructor. One-hour lecture, two-hour lab weekly, 1-hour seminar fortnightly.

Anthropology-Computer Studies 363 a/b

Computer applications in anthropology. This course explores the use of computers in the four fields of anthropological research, accessing or creating and using anthropological databases, social simulation studies and the anthropology of computer-human interaction. Prerequisite: Any one of AN200, 212, 230, 240 and *Computer Studies 101a* or equivalent OR CS210 and permission of instructor.

Anthropology 365 a/b

Archaeological settlement and spatial studies. The course explores the spatial dimension of archaeological data and its

relationship to ecology and human behavior. Approaches to the distributions of artifacts and sites, the organization of buildings and settlements, and the interactions between cultures will be discussed. Both techniques of analysis and interpretative concepts will be presented. Prerequisite: *Anthropology 100* or permission of instructor. Three-hour lecture/lab/seminar weekly.

Anthropology-Women's Studies 369 a/b

Gender in prehistory. An examination of gender roles and ideologies in the prehistoric and protohistoric past; examples will be drawn from Palaeolithic and Neolithic cultures, and from early civilizations of both Old and New Worlds. Prerequisite: *Anthropology 212*. Two-hour seminar weekly.

Anthropology 371 a/b

The Maya. Survey of the ancient and modern Maya of Central America. Examines the culture of the contemporary Maya, one of the largest native groups of the Americas, as well as the archaeology of Pre-Columbian Maya civilization. Prerequisite: *Anthropology 212* or permission of the instructor. Two-hour lecture weekly. One-hour seminar fortnightly. P. Healy

Anthropology-Comparative Development 407

Politics, economics and culture. Anthropological approaches to the study of politics and the economy in non-industrial and industrial societies. The change and transformation of local economic and political units in the context of contemporary state organization and transnational economic systems. Prerequisite: *Anthropology 200* or permission of instructor. (Support course for Comparative Development Studies). Two-hour seminar weekly.

Anthropology 411

Andean prehistory. A detailed survey of the prehispanic civilizations of Peru and Bolivia. Archaeological evidence for the economy, ideology, and social organization of Inca, Tiwanaku, Moche, and other Andean civilizations will be reviewed. Prerequisite: *Anthropology 212* or permission of instructor. Two-hour lecture weekly, seminar fortnightly. J. Topic

Anthropology 412

Prehistory of Mesoamerica. A survey of the ancient Native civilizations of Mexico and Central America from the earliest settlement to the European conquest. The course includes a study of Aztecs, Maya, Olmec and other societies of Mesoamerica. Prerequisite: *Anthropology 212* or permission of the instructor. Two-hour lecture, seminar weekly.

Anthropology 413

Prehistory of the Intermediate Area. Detailed survey of the ancient Native cultures of lower Central America and northern South America from the earliest settlement to the 16th century. The course examines Precolumbian evolution of cultures from Honduras to Ecuador, focusing upon aboriginal arts and technologies and contacts with the civilizations of Mesoamerica and the Andes. Prerequisite: *Anthropology 212* or permission of instructor. Lecture and seminar weekly.

Anthropology-Canadian Studies 415

Prehistory of Ontario. A detailed survey of Ontario prehistory within the context of general Northeastern archaeology. The course will focus upon both local and regional development from the first human entry to European contact. Prerequisite: *Anthropology 212* or permission of instructor. Three-hour lecture/seminar weekly. S. Jamieson

Anthropology 420

The history and theory of anthropological thought. Structured thematically, the course will survey the principle theoretical developments in the discipline. Prerequisite: *Anthropology 200* and one of *212*, *230* or *240*. A two-hour lecture weekly and a weekly discussion group. J. Harrison

Anthropology-Women's Studies 422

Gender: An Anthropological Perspective. A methodological and theoretical re-evaluation of anthropology's approach to gender. Cross-cultural approaches to biology, sex roles, ideology, politics, economics, kinship, etc. Prerequisite: *Anthropology 200*. Three-hour seminar weekly.

Anthropology 423

Nonverbal communication. An introduction to the anthropology of everyday life: to kinesics (gesture, posture, body move-

ment); to proxemics (relations of persons and objects in space); to visual representations (pictures, advertisements, photographs, etc); to the body and its adornment; and to objects and commodities as vehicles of sociocultural transaction and communication. Prerequisite: *Anthropology 200* or *351*. Three-hour lecture/seminar weekly.

Anthropology 430

Methods in linguistics. Discovery procedures for the analysis of words and sentences. Study of morphology and syntax using several samples of world languages, with experience in working with texts and directly with a Native speaker. Practical applications for second-language learning and teaching, and for research in cultural anthropology. Prerequisite: *Anthropology 230*. One-hour lecture and 2-hour seminar/workshop weekly. E. Todd

Anthropology 432 a/b

Phonetics. A survey of articulatory and acoustic phonetics emphasizing the attainment of practical skills in the recognition and the recording of speech sounds. Prerequisite: *Anthropology 230* or permission of the instructor. Two-hour seminar weekly.

Anthropology 442 a/b

Applied anthropometry in modern societies. The methods of static, spatial and dynamic-functional measurements of the human body. The application of anthropometry in providing better relationships between humans and their technological innovations, i.e. tools, clothing, workspace, sports and medicine. Prerequisite: *Anthropology 240* or permission of instructor. One-hour lecture and two-hour lab session per week.

ANCD 475 a/b

Perspectives on ethnicity. Examination of ethnic consciousness and identity formation through theoretical and ethnographic case studies in a variety of settings. Identity construction in relation to process of development. Articulation and comparison of ethnicity with gender, class, kinship, nationalism and other markers of social and cultural difference. Prerequisite: *AN200* or *CD 200* or permission of the instructor. Three-hour seminar weekly. J. Solway

Anthropology 490, 491a, 492b

Reading course. A course designed to pursue special interests largely through independent study. Signature of instructor and department required. Details to be arranged in advance consultation with faculty in Anthropology and proposals to be submitted to the Chair of the department for approval and signature before registration.

Anthropology 496 a/b

Special Topic. Anthropology and the Aboriginal Peoples of Canada. The character of the relationship between Canadian Aboriginal people and anthropology has ranged from historically problematic to constructively symbiotic. By focusing on selected case studies, this course will reflect on the changes that have occurred in paradigms in anthropology since the mid 19th century and how these changes have affected the discipline's relationship with Canadian Aboriginal peoples. A two-hour seminar weekly with a fortnightly film hour. Prerequisites: AN200, AN420 (can be taken concurrently), or permission of instructor. Recommended NS100 and/or 200. J. Harrison

Anthropology 497 a/b

Special Topic. Ethnography of South Asia. An exploration of the ways anthropologists have approached the study of South Asian societies and cultures. Topics include caste, brahmanical ritual, renunciation, untouchability, kinship and marriage, Sanskritization and Westernization, religion and identity. Prerequisite: *Anthropology 200* and *420* or permission of the instructor. Three-hour lecture/seminar weekly. S. Hepburn

Anthropology 498 a/b

Special Topic: Anthropology of race and racism. An in-depth survey of the historical development of the race concept in science and society, and its current status in teaching and research in anthropology, in the social and biomedical sciences, and its representation in popular culture. Prerequisites: AN200 and AN240. Limited enrolment. One hour lecture and two-hour seminar weekly. J. So

Biochemistry**Program Co-ordinators**

Chair of the Department of Biology
J.F. Sutcliffe, B.Sc. (WATERLOO), M.Sc.,
Ph.D. (TORONTO)

Chair of the Department of Chemistry
(To be named)

Professors

See listing of faculty in Biology and Chemistry.

Required Courses

Because it rests on the disciplines of Chemistry and Biology, Biochemistry can be studied only as a single-major. No joint-major programs exist.

The General program consists of a minimum of seven Biology, Chemistry, and Chemistry-Biology courses, including *Biology 101*, *Chemistry 100*, *Biology 206a* and *207b*, *Chemistry/Biology 230b* and one other two-hundred level Chemistry course, *Chemistry-Biology 330* and one full course or equivalent from *Biology 325a*, *326b*, *382*, *408b*, and *409a/b*.

The Honours Program

Requirements for the General program must be met, plus; *Chemistry-Biology 431a*, and *433b*, three other courses in Chemistry (four-hundred level) or Biology (three- or four-hundred level).

Notes:

For more detailed information, see separate Calendar entries for Biology and Chemistry.

Students who successfully completed *Chemistry-Biology 330* during the 1993-94 or 1994-95 academic years are not required to take *Chemistry-Biology 230b* in order to fulfil the General or Honours Biochemistry program degree requirements.

For purposes of meeting degree requirements, *Chemistry 100* may be replaced by *Chemistry 113a* and *Chemistry 123b*, or *Chemistry 120*.

Biology 206a and *207b* may be substituted with *Biology 203*.

Biology

Professor and Chair of the Department
J.F. Sutcliffe, B.SC. (WATERLOO), M.SC.,
PH.D. (TORONTO)

Professors Emeriti

R.L. Edwards, M.A., D.PHIL. (OXON);
P.M. Powles, B.A., (MCGILL), M.SC. (WEST-
ERN ONTARIO), PH.D. (MCGILL)

Professors

M. Berrill, B.SC. (MCGILL), M.SC. (HAWAII),
PH.D. (PRINCETON); T.C. Hutchinson, B.SC.
(MANCHESTER), PH.D. (SHEFFIELD); R. Jones,
B.SC. (WALES), M.SC. (KANSAS), PH.D.
(WALES); D.C. Lasenby, B.SC. (TRENT), PH.D.
(TORONTO) (on leave Winter term 1996-
97); I.M. Sandeman, B.SC. (ST. ANDREWS),
F.L.S.

Associate Professors

M.G. Fox, B.SC. (PENNSYLVANIA), M.E. DES.
(CALGARY), PH.D. (QUEEN'S) (on leave Fall
term 1996-97); T.R. Matthews, B.SC.
(SOUTHAMPTON); C.D. Maxwell, B.SC.
(WALES); E. Nol, B.SC. (MICHIGAN), M.SC.
(GUELPH), PH.D. (TORONTO).

Assistant Professors

M. Bidochka, B.SC. (BROCK), M.SC. (REGI-
NA), PH.D. (SASKATCHEWAN); C. Kapron,
B.SC. (WATERLOO), PH.D. (MCGILL)

Adjunct Faculty

G. Mitchell, B.SC. (TRENT), A.R.T.

Senior Demonstrator

D. Buelow, B.SC. (TRENT), M.SC. (TORONTO)

Associated Faculty

M. Havas, B.SC., PH.D. (TORONTO)

Note:

The curriculum of the Biology Department has been designed to allow students to specialize in one or more major approach to biology; A) physiology and medical biology, B) plant biology, C) animal biology, and/or D) ecology and evolution. Most of the courses offered by the Department are included in one or two of four categories, representing these four approaches. A number of other cross-listed courses, offered by other departments, are also available.

First-year Course *Biology 101*

Upper-year Courses

Categories

(See note above for descriptions)

A	B	C	D
203	201	204	202
205a	321a	211b	205a
206a	322a	309a	306a
207b	324b	310b	305
310b	327b	312	314b
325a	328a	313b	321a
326b		314b	327b
382		336b	328a
405		382	350a
408b		404a	360
410a		410a	361a
411b		414a	362b
		415b	403b
			404a
			409a/b
			414a
			415b
			439b

In some years, *a* half courses may be offered as *b* half courses and *b* half courses may be offered as *a* half courses.

The following cross-listed courses may be taken as Biology courses, but do not fulfil category requirements.

CE-BI 230b	AN-BI 340	ES-BI 240
CE-BI 330	AN-BI 341	ES-BI 304
CE-BI 430	AN-BI 343	ES-BI 412a
CE-BI 431a	AN-BI 344a	ES-BI 406a
CE-BI 432b	AN-BI 346b	ES-BI 407b
CE-BI 433b	AN-BI 347a	ES-BI 413
GO-ES-BI 208a	AN-BI 349b	PS-BI 375a
		PS-BI 376b

Further specialization is possible through supervised independent study in *Biology* 390, 490, 401 and 402.

Required Courses

Note:

Courses appearing in two or more categories may only be counted in one of those categories.

The single-major Honours program consists of twenty courses with a minimum of ten in Biology, including: *Biology 101* and the equivalent of at least one full course from each of the four categories above. At least eight of the ten courses must be selected from the four categories. It is recommended that fourth quarter courses be at the three- or four-hundred level. In ad-

dition, *Chemistry 100* (or *Chemistry 113a* and *Chemistry 123b* or *133b*) is required.

The joint-major Honours program consists of twenty courses, with a minimum of seven in Biology, including: *Biology 101* and the equivalent of at least one full course from two of the four categories above. At least five of the seven courses must be selected from the four categories.

The single-major General program consists of fifteen courses of which at least six must be in Biology, including: *Biology 101* and the equivalent of at least one full course from three of the four categories above. At least four of the six courses must be selected from the four categories. In addition, *Chemistry 100* (or *Chemistry 113a* and *Chemistry 123b* or *133b*) is required.

The joint-major General program consists of fifteen courses of which at least five must be in Biology, including: *Biology 101* and the equivalent of at least one full course from two of the four categories above. At least three of the five courses must be selected from the four categories.

Note:

There is a mathematical requirement for the B.Sc degree. See the Academic Degree Programs section of this calendar for details.

Highly Recommended Additional Courses
Chemistry 100
Mathematics-Statistics 150
Chemistry 21Ca, 230b

Recommended Additional Courses
Environmental and Resource Science 100
Geography 101
Mathematics 100 or 110
Physics 100
Science 350

Biochemistry

For a program in biochemistry see the Biochemistry section.

Notes:

- If fewer than ten students enrol in a course the format may be changed. If fewer than five students enrol in a course, it may be cancelled.
- All *three-hundred* and *four-hundred* series courses except *Biology 401/402*, and *490* can be taken in either the third

or the fourth quarter of the Honours program, and some will be offered only in alternate years. Second year students wishing to register in a *three-hundred* or *four-hundred* series course may do so if they have the necessary prerequisites, otherwise they must obtain the permission of the instructor.

- Students planning to take *Biology-Environmental and Resource Science 202* should take *Mathematics-Statistics 150* in their first year.
- Transfer students should consult with the Department Chair before selecting courses.
- Charges may be made for field trips in some courses.
- A student may take a maximum of two full reading course credits in Biology (the equivalent of one full course from *Biology 390, 391a, 392b* and *393c* plus the equivalent of one full course from *Biology 490, 491a, 492b* and *493c*), but may not take both in one academic session.
- The following courses may require the completion of the Animal Care course: *Biology 336b, 382, 401/402, 408b, 410a*. (See course descriptions.)
- Students intending to take the Graduate Record Examinations (GRE) Advanced Biology Test, required by some Canadian and American Graduate Schools, should include the following courses in their program: *Mathematics 110, Chemistry 100, Biology-Environmental and Resource Science 202, Biology 205a, Biology 206a, Biology 207b, Biology 361a* and *Biology 362b*.
- Students intending to pursue graduate studies should take *Biology 401/402*.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97

Biology 101

Biological interactions. An introduction to selected aspects of biology, including ecology, plant and animal associations, cell biology and molecular genetics, illustrated by examples of current biological interest, and providing the foundations for the four categories of upper-year courses. Prerequisite: OAC Biology or its equivalent or permission of the Department. Two lectures weekly and two- to three-hour laboratory weekly.

M. Berrill and staff

Biology 201

Biology of plants. An introduction to the diversity of plants, focusing on their evolution, design, nutrition, water relations, growth and reproductive biology. Prerequisite: *Biology 101*. Two lectures and three-hour laboratory weekly, tutorials every three weeks.

C.D. Maxwell and staff

Biology-Environmental and Resource Science 202

Ecology. A study of the interactions between organisms and their environment; the study of individuals, populations and communities with emphasis on the current theoretical and practical problems in ecology. Prerequisite: *Biology 101*. Highly recommended: *Mathematics-Statistics 150*. Two lectures weekly, and three-hour laboratory fortnightly.

E. Nol and R. Jones

Biology 204

Biology of invertebrates. An introduction to the diversity of invertebrate animals emphasizing their evolutionary relationships and focusing on functional, behavioral and ecological aspects of their biology. Prerequisite: *Biology 101*. Two lectures and one three-hour laboratory weekly.

I.M. Sandeman and T.R. Matthews

Biology 205a

Introduction to genetics. This course will develop a basic understanding of genetics: Mendelian inheritance, chromosome structure, genetic recombination, mutation, the structure of DNA, the nature of genes, and current topics in genetics will be investigated using examples from plants, animals, insects, bacteria, fungi and viruses. Prerequisite: *Biology 101* and *Chemistry 100*, or *Chemistry 130*, or *Chemistry 113a* and *Chemistry 133b*. Two lectures weekly and three-hour laboratory fortnightly.

M.J. Bidochka

Biology 206a

Molecular biology. This course introduces students to molecular biology with emphasis on the mechanisms of DNA replication, repair, recombination, as well as transcription and translation. Signal transduction and current topics in recombinant DNA technology will be discussed. Not available to students with credit for *Biology*

203. Prerequisite: *Biology 101* and *Chemistry 100*, or *Chemistry 130*, or *Chemistry 113a* and *Chemistry 133b*. Two lectures weekly, and three-hour laboratory fortnightly.

M.J. Bidochka

Biology 207b

Cell biology. An introduction to cell structure and function, including the organization, physiology, architecture and interactions of cells. Cellular mechanisms of differentiation, development, cancer and the immune response will be explored. Not available to students with credit for *Biology 203*. Prerequisite: *Biology 101* and *Chemistry 100*, or *Chemistry 130*, or *Chemistry 113a* and *Chemistry 133b*. Highly recommended: *Biology 206a*. Two lectures weekly and three-hour laboratory fortnightly.

C. Kapron

Biology-Environmental and Resource Science-Geography 208a

Natural Science Statistics (See *Geography*)

Biology 211b

Vertebrate zoology. The evolution, structural and functional morphology of the vertebrates. Not available to students with credit for *Biology 312*. Prerequisite: *Biology 101*. Two lecture and three-hour laboratory weekly with required dissections.

Biology-Chemistry 230b

Elementary biochemistry. (See *Chemistry*.)

Biology-Environmental and Resource Science 240

Environmental microbiology. (See *Environmental and Resource Science*.)

Biology 306a

Limnology. Ecology of freshwater ecosystems. Biology, geochemistry and physics of freshwater lakes, rivers and streams. Not available for students with credit for *Biology 305*. Prerequisite: *Biology 101* and *Biology/ERS 202*. Highly recommended: *Chemistry 100*, *Chemistry 120*, *130*, *113a*, *123b* or *Chemistry 133b*. Lecture weekly, second lecture or workshop and three-hour lab fortnightly and field trips for which there will be no charge.

D.C. Lasenby

Biology 309a

Biology of insects. An introduction to the organization and diversity of insects. Lectures emphasize insect physiology, ecology and behaviour. Labs support lectures and provide an overview of insect taxonomy. Prerequisite: *Biology 101*. Highly recommended: *Biology 204*. Two lectures per week, three-hour laboratory most weeks and occasional tutorials. An insect collecting kit for making required insect collection will be available for cash deposit from Biology Department in April preceding the beginning of the course.

J.F. Sutcliffe

Biology 310b

Medical entomology. A study of medically important insects and the disease conditions they produce in humans and animals. Prerequisite: *Biology 101* and *309a* or permission of instructor. Two lectures weekly, three-hour lab or tutorial weekly.

J.F. Sutcliffe

Biology 314b

Fish ecology. The biology of fishes with emphasis on biotic and abiotic factors that affect their life histories, distribution, population dynamics, feeding and growth. Prerequisites: *Biology 101* and *Biology-Environmental Resource Studies 202*. Highly recommended: *Mathematics-Statistics 150*. Two hours of lecture weekly and three hours of laboratory, fieldwork or workshop fortnightly.

M.G. Fox

Biology 321a

Plant ecology. A study of the relationships of plants to one another and to their environment. Prerequisite: *Biology 101* and *201* or permission of instructor. Lecture and three-hour laboratory or field studies weekly; seminar or tutorial fortnightly.

Biology 322a

Biology of seed plants. The biology of seed producing plants including topics such as identification, growth, development, reproduction, distribution and resource use. Prerequisite: *Biology 101* and *201*. Two lectures weekly; weekly field trips for the first 6 weeks; seminar or tutorial every three weeks. A shrub and tree species collection is required. Details may be obtained from the Secretary of the Biology Department. There will be a total charge of \$35 for field trips.

R. Jones

Biology 324b

Biology of the algae and cyanobacteria. An introduction to these important groups of plants which, though often considered a nuisance, are also one of the world's important natural resources. Their ecological role in both the marine and freshwater environments will be emphasized as well as their economic importance. Prerequisite: *Biology 101*. Lecture, three-hour laboratory and seminar or tutorial weekly.

C.D. Maxwell

Biology 325a

Microbiology. An introductory course in microbiology with consideration given to the diversity of microscopic forms, their presence in various habitats, and their impact on humanity. This course places heavy emphasis on laboratory work. Prerequisite: *Biology 101* and permission of instructor. Recommended: *Biology 203* or *Biology 206a* and *207b*. Two-hour lecture/tutorial and three-hour laboratory weekly. Enrolment will be restricted to 30, and preference will be given to Biology students in their third and fourth years.

Biology 326b

Advanced microbiology. This course examines the principles of microbial ecology as it relates to humans, lake water and sediments. Laboratory sessions are of a project nature and place heavy emphasis on independent laboratory analysis. Students are required to be present in the laboratory twice per week. Prerequisite: *Biology 325a*. Recommended: *Biology 203* or *Biology 206a* and *207b*. Three-hour lecture/tutorial/laboratory setup and three-hour laboratory weekly.

Biology 327b

Plant population biology. The study of reproductive strategies of plants, with particular emphasis on the success of weed species. Seed production, dispersal, germination, establishment and vegetative means of reproduction will be examined. Prerequisite: *Biology 201*. One lecture and laboratory or project time equivalent to three hours per week. Tutorial fortnightly.

C.D. Maxwell

Biology 328a

Stress ecology of plants. An examination of how plants, including individuals, populations and ecosystems, respond to stresses in the environment. Prerequisite: *Biology 101*. Recommended: *Biology 202*, and *203* or *Biology 206a* and *207b*. Two lectures and seminar or tutorial weekly.

T. Hutchinson

Biology-Chemistry 330

General biochemistry. (See Chemistry.)

Biology-Psychology 336b

Animal behaviour. An introduction to the ecological, physiological and evolutionary mechanisms which influence the behaviour of animals, with particular emphasis on animal societies. Prerequisites: *Biology 101*, and Animal Care Course for those involved in projects using vertebrates. Recommended: *Biology 202*. Lecture and film-seminar weekly, tutorial fortnightly, and projects equal to a three-hour laboratory weekly.

Biology-Anthropology 347a

Primate Behaviour. (See Anthropology.)

Biology-Anthropology 349b

Primate evolution. (See Anthropology.)

Biology-Anthropology 341

Comparative osteology and human evolution. (See Anthropology.)

Biology-Anthropology 344a

Human genetics, growth and adaptability. (See Anthropology.)

Biology-Anthropology 346b

Human growth and adaptation. (See Anthropology.)

Biology 350a

Biogeography. Major patterns of distribution and abundance of animal and plant species as affected by geological, ecological and evolutionary processes. Prerequisites: *Biology 101* and *Biology 202*. Two hours of lectures weekly, seminar fortnightly, and an optional field trip.

Biology 361a

Evolution. A study of the pattern of the evolution of life over the past billion years focusing on key events and transitions, and the underlying processes that made them happen. Not available to students with credit for *Biology 360*. Prerequisites: *Biology 101* and at least one second-year biology course. Two lectures per week, one lab or workshop every one to two weeks.

M. Berrill

Biology 362b

Population genetics. This course introduces students to microevolutionary processes. A study of sources of genetic variation, genetic composition of populations and forces that determine and change that composition. Laboratory component will be in the form of group projects on population genetics of *Drosophila* or *Daphnia*. Not available to students with credit for *Biology 360*. Prerequisite: *Biology 101* and at least one second year biology course. Two lectures weekly and three-hour laboratory fortnightly.

Biology-Psychology 375a

Principles of the nervous system. (See Psychology.)

Biology-Psychology 376b

Neuropsychology. (See Psychology.)

Biology 382

General physiology of animals. The general principles governing physiological processes in animals. Prerequisites: *Biology 101*, one of *Biology 203*, *204* and *207b*, and Animal Care Course. Highly recommended: *Chemistry 230b* and *Biology 203*. Lecture, three-hour laboratory weekly and tutorial or seminar fortnightly.

T.R. Matthews

Biology 385, 386a, 387b, 388c

Field courses. Courses are offered through the Ontario Universities Program in Field Biology.

Biology 390, 391a, 392b, 393c

Reading course. This course provides an opportunity for more intensive or broader study of a selected topic under the guidance of a faculty member. Open to students who have obtained credits in at least two full courses taught by members of the department of Biology and who have an average of at least 75% in the Biology courses they have taken. Students wishing to enrol in this course must complete an application form available from the Department Secretary. It is the responsibility of the applicant to find a course supervisor and a second reader. All University deadlines as specified in the University Calendar apply. These courses may not be taken in the same academic session as *Biology 490*, *491a*, *492b* and *493c*.

T.R. Matthews and staff

Biology 395, 396a, 397b, 398c

Special topics in biology. These courses are not established as part of the regular Biology program and are offered when staffing is available. The topics are in the fields of interest and expertise of the instructor. If offered, the courses will be advertised by the Biology Department.

Biology 401, 402

Research thesis. *Biology 402* is a double credit in Biology. *Biology 401* is a single credit involving the same thesis as submitted to the other department/program in a joint major. In this research course students will investigate a specific field of interest under the guidance of a faculty member. The Animal Care Course is a prerequisite, if applicable. To qualify for research theses courses (*Biology 401* and *402*) students should have a 75% average in Biology courses, and the willingness of a faculty member to supervise the project. (In some cases, it may be possible to take *Biology 402* with a 70% average in Biology courses if recommended by a faculty member willing to supervise it.) To be accepted into a joint thesis course the student must meet the requirements of both departments/programs.

Biology-Environmental and Resource Science 403b

Research design and data analysis. Practical instruction in design of research projects, data collection and analysis, and presentation of results. Prerequisite: *Biology 202*, and *Mathematics-Statistics 150* or *GOESBI 208a*, or permission of instructor. Lecture and workshops weekly and three-hour laboratory every three weeks. Enrolment will be limited to 30. E. Nol

Biology 404a

Coral reef biology. An introduction to the ecology and physiology of coral reef organisms and communities. Compulsory week-long field trip to Jamaica in the Fall Reading Week at cost to student. Prerequisites: *Biology 202* and *Biology 204* and at least one other course in Biology or permission of instructor. Lecture and seminar weekly.

T.R. Matthews and staff

Biology 405

Electron microscopy. The biological applications of transmission and scanning electron microscopy. Course emphasizes practical instruction in use of microscopes and preparation of biological materials for the electron microscope. Prerequisite:

Biology 101. Two-hour lecture weekly for first 12-16 weeks, demonstrations and two- to three-hour tutorials most weeks. Enrolment will be restricted, with preference given to Biochemistry majors, Biology majors and Biology Joint majors in the 4th quarter of their programs, and who have taken *Biology 203*. Registration will be by permission of the instructor.

J.F. Sutcliffe

Biology-Geography-Environmental and Resource Science 406a

The geochemistry of natural waters. (See Environmental and Resource Science.)

Biology-Geography-Environmental and Resource Science 407b

The fate of contaminants in the aquatic environment. (See Environmental and Resource Science.)

Biology 408b

Developmental biology. An exploration of the cellular and molecular bases of embryonic development. Emphasis will be placed on how the intricate and diverse processes of embryogenesis are dependent on common mechanisms, including cell division, cell death, adhesion, migration, gene expression, and intra- and intercellular signalling. Prerequisite: *Biology 101*, *Biology 203* and Animal Care Course. Two hours of lectures weekly and one three-hour laboratory fortnightly, alternating with a one-and-a-half hour seminar fortnightly.

C. Kapron

Biology 409a/b

Molecular ecology. This course will develop a basic understanding of molecular techniques currently used to address problems in ecology, population genetics and conservation biology. Six weeks of lectures followed by student seminar presentations. One two-hour evening lecture weekly. Course is open to fourth year and graduate students. Prerequisites: *Biology 203* (or *Biology 206a* and *Biology 207b*), *Biology 202*, and *Biology 336b* or *Biology 360* (or *Biology 361a* and *Biology 362b*). M.J. Bidochka

Biology 410a

Parasitology. The ecology, life cycles, physiology and host interactions of the major groups of animal parasites. Prerequisite: *Biology 204*. The Animal Care Course will be required for those intending to study vertebrates. Two lectures, three-hour laboratory period and tutorial weekly.

I.M. Sandeman

Biology 411b

Infectious disease biology. An examination of current concepts of the nature, development and spread of pathogenic agents. Topics include emerging disease, drug resistant bacteria, vaccines, pathogen evolution and virulence. Prerequisite: *Biology 101*. Highly recommended: *Biology 203*, *325a* and *410a*. Two lectures weekly, one and one-half hour tutorial/ workshop fortnightly.

J. Sutcliffe

Biology-Environmental Resource Science 412a

Environmental health. (See Environmental and Resource Science.)

Biology 414a

Ornithology. An introduction to the study of birds with emphasis on field and behavioural ecology of birds. Field identification, anatomy, physiology, phylogenetic trees and mapping of behavioural characteristics, field census and trapping techniques, bird management. Prerequisite: *Biology 101* and *202*. Lecture weekly, one two-hour laboratory weekly, two-hour problem solving workshop fortnightly.

E. Nol

Biology 415b

Biology of Marine Mammals. A study of the evolution, population genetics, physiology, behaviour and conservation of cetaceans and seals. Prerequisites: *Biology 101* and *Biology 202*. One two-hour lecture weekly and one tutorial weekly.

M. Berrill

Biology-Environmental and Resource Science 423a

Aquaculture. (See Environmental and Resource Science.)

Biology-Environmental and Resource Science 424b

Fisheries assessment and management. (See Environmental and Resource Science)

Biology-Chemistry 431a

Development of enzymology. (See Chemistry.)

Biology-Chemistry 432b

Theoretical aspects of enzymology. (See Chemistry.)

Biology-Chemistry 433b

Secondary metabolism. (See Chemistry.)

Biology-Environmental and Resource Science 439b

Conservation biology. Focuses on the causes and consequences of reductions to biodiversity and the design of strategies to counterbalance these reductions. The course attempts to provide a balanced overview of the discipline outlining both biological and human oriented dimensions. Prerequisites: *Biology 101* and *202*. Two hours of lectures and seminar weekly.

Biology 490, 491a, 492b, 493c

Reading course. Provides an opportunity for more intensive or broader study of a selected topic under the guidance of a faculty member. Open to students in their fourth quarter who have obtained credits in two full courses taught by members of the Department of Biology and who have an average of at least 75% in the Biology courses they have taken. Students wishing to enrol in this course can obtain an application form from the Department Secretary. It is the responsibility of the applicant to find a course supervisor and a second reader. All University deadlines as specified in the University calendar apply. These courses may not be taken in the same academic session as *Biology 390*, *391a*, *392b* and *393c*.

T.R. Matthews and staff

Biology 495, 496a, 497b, 498c

Special topics in biology. Not established as part of the regular biology program. Offered only when staffing is available. The topics are in the fields of interest and expertise of the instructor. If offered, these courses will be advertised by the Biology Department.

Canadian Studies

Professor and Chair of the Program

C. Verduyn, B.A. (TRENT), M.A., PH.D.
(OTTAWA)

Founding President and Vanier Professor Emeritus

T.H.B. Symons, O.C., B.A. (TORONTO), M.A. (OXFORD), LL.D. (CONCORDIA, DALHOUSIE, LAURENTIAN, MANITOBA, MOUNT ALLISON, NEW BRUNSWICK, PRINCE EDWARD ISLAND, TRENT, WILFRED LAURIER, YORK), D.U. (OTTAWA), D.LITT. (COLOMBO), DIPLÔME D'ÉTUDES COLLÉGIALES (DAWSON), F.R.S.C.

Professors Emeriti

G. Roper, M.A., PH.D. (CHICAGO); A. Wilson, M.A. (DALHOUSIE), PH.D. (TORONTO)

Professors

J.E. Struthers, M.A. (CARLETON), PH.D. (TORONTO); J.H. Wadland, M.A. (WATERLOO), PH.D. (YORK)

Associate Professors

D. Clarke, B.A. (TRENT), M.A. (MCMASTER), PH.D. (CARLETON) (on leave 1996-97); M. Lacombe, M.A., PH.D. (YORK)

Conjunct Professor

S.G.D. Smith, B.A. (MCGILL), M.A., B.LITT. (OXFORD), D.LITT. (TRENT)

Adjunct Faculty

S.D. Grant, M.A. (TRENT); J. Favreau, M.A. (TRENT); M. McGraw, M.S.W. (CARLETON)

Associated Faculty

Anthropology, J. Harrison, S.M. Jamieson, J.M. Vastokas; *Comparative Development Studies*, D.R. Morrison; *Cultural Studies*, J. Bordo; *Economics*, J. Muldoon, P. Wylie; *English Literature*, G.A. Johnston, S.H.W. Kane, O.S. Mitchell, J.E. Neufeld, M.A. Peterman, Z. Pollock; *Environmental and Resource Studies*, T. Whillans; *French*, J.-P. Lapointe; *Geography*, A.G. Brunger, F.M. Helleiner, J.S. Marsh; *History*, J.N. Jennings, E.H. Jones, P.D.W. McCalla, J. Sangster, S.D. Standen, K. Walden; *Native Studies*, P. Kulchyski, J.S. Milloy; *Philosophy*, J.W. Burbidge; *Political Studies*, R. Campbell, E. Helleiner, R.C. Paehlke, J. Wearing; *Sociology*, J. Conley, B. Marshall, G. Thibault; *Women's Studies*, S. Arat-Koc, M. Hobbs

The Canadian Studies Program is not founded upon a single department, but is the product of co-operation by members of several departments and programs within the University. At all levels the Program encourages the interdisciplinary examination of Canadian experience.

Notes:

- Students must have completed at least three courses before enrolling in any Canadian Studies course. Exceptions by permission of the instructor only.
- There is no *one-hundred* level course requirement for intending majors in Canadian Studies, but students are strongly encouraged to include in the first year of their program one or more courses that make Canada a central focus, such as *History 100*, *Native Studies 100*, or *Women's Studies 100*.
- Students normally must have completed fifteen courses before enrolling in a *four-hundred* series course. Exceptions by permission of the instructor only, with notice to the Program Chair.
- Available at the office of the Chair is a Program Brochure, providing detailed information about course options for students in Canadian Studies, scholarships and prizes, reading course requirements, and graduate studies.

Required Courses

The single-major Honours program consists of nineteen courses. Minimum nine courses in Canadian Studies. These courses will include *Canadian Studies 200*, *Canadian Studies 300*, *Canadian Studies 352* and at least three *four-hundred* series Canadian Studies courses.

Joint-major Honours program. Minimum seven courses in Canadian Studies. These courses will include *Canadian Studies 200*, *Canadian Studies 300*, *Canadian Studies 352* and at least two *four-hundred* series Canadian Studies courses.

Joint-major General program. Minimum five courses in Canadian Studies. These courses will include *Canadian Studies 200*, *Canadian Studies 300*, and *Canadian Studies 352*.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97

Canadian Studies-Environmental and Resource Studies 200

Canada: The land. An interdisciplinary enquiry into the function and idea of the land in Canadian culture; concepts of the land in history, geography, literature, art, economics, politics and philosophy; settlement and resource development, land policy, aboriginal rights, bioregionalism and social ecology. Lecture weekly; tutorial weekly.

J. Wadland

Canadian Studies-Politics 201

Canadian politics. (See Political Studies.)

Canadian Studies-History 221

Modern Ontario: Social, political and economic development in Ontario from Confederation to the present, emphasizing late nineteenth and twentieth century problems. Education, social policy, multiculturalism, economic change, northern regionalism, literature, and political culture. Lecture weekly; seminar weekly.

Staff

Canadian Studies-History 235

Canada since 1914. (See History.)

Canadian Studies-Environmental Studies 250

Canadian natural resource theory and management. (See Environmental Studies.)

Canadian Studies-Anthropology-Native Studies 253

Aboriginal Art of North America. (See Anthropology.)

Canadian Studies-History 254

Canada and the modern experience. (See History.)

Canadian Studies-Native Studies-History 255

History of the Indians of Canada. (See Native Studies.)

Canadian Studies-Economics 261a

Canadian economic growth and development I: up to 1929. (See Economics.)

Canadian Studies-Economics 261b

Canadian economic growth and development II: after 1929. (See Economics.)

Canadian Studies-Geography 263a

Historical Geography. (See Geography.)

Canadian Studies-English 265

English Canadian Prose. (See English Literature.)

Canadian Studies-English-Women's Studies 266

Canadian Women's Writing. Works by women in both English Canada and Quebec with special emphasis on contemporary literary theories (feminist, postmodern, postcolonial) and practices (including fiction-theory, lifewriting).

C. Verduyn

Canadian Studies-Native Studies-History 270

History and politics of the Metis and non-status Indians of Canada. (See Native Studies.)

Canadian Studies-Women's Studies 275

Women in Canada. Introduction to six (selected, varying) themes in Canadian feminist studies, such as, native women; Quebec women; rural women; women and religion; life writing; literary theory; women and political processes; ecofeminism; women and work. Weekly lecture and tutorial.

Canadian Studies-Native Studies 285

Native People and the North. (See Native Studies.)

Canadian Studies-History 300

Canada: Communities and identities. An interdisciplinary study of regionalism ethnicity and community in Canadian life. First Term: regional identity in Western, Atlantic, Central and Northern Canada. Second Term: immigration, multiculturalism, minority rights, and ethnic identity. Lecture weekly; seminar fortnightly.

J. Struthers

Canadian Studies-History-Politics 301

Canadian political culture, 1864 to the present. (See History.)

Canadian Studies-History 302

The emergence of modern Quebec, 1886-1970. (See History.)

Canadian Studies-History 303

Early French Canada: economic, social, institutional and ideological foundations of Quebec. (See History.)

Canadian Studies-Politics 305

Politics and society in Quebec. (See Political Studies.)

Canadian Studies-History 308

Business history: The Canadian experience in international perspective, 1650-1960. (See History.)

Canadian Studies-Politics 309

Ontario politics. (See Political Studies.)

Canadian Studies-Environmental and**Resource Studies-Politics 310**

Public policy and the Canadian environment. (See Environmental and Resource Studies.)

Canadian Studies-History-Women's**Studies 316**

Women in North America. (See History.)

Canadian Studies-Politics 322

The Politics of North American Economic Integration (See Political Studies.)

History - Canadian Studies 324

Canada: The North (See History.)

Canadian Studies-French 325

Théâtre et poésie du Québec. (See MLL-French section.)

Canadian Studies-Geography 332b

Settlement Geography. (See Geography.)

Canadian Studies-Environmental and**Resource Studies-Geography 333a**

Wilderness resources. (See Geography.)

Canadian Studies-Sociology 340

Sociology of education. (See Sociology)

Canadian Studies-Anthropology 351

Art, architecture and society. (See Anthropology.)

Canadian Studies 352

La Francophonie: French identities in Canada. Overview of the cultural perspectives and historical experiences of Québécois, franco-American, Acadian, "Ontariois" and Franco-Manitoban communities. Lectures, films, readings, and tutorials in English, but French texts op-

tional and one French tutorial available if numbers warrant. Weekly lecture; fortnightly tutorial.

M. Lacombe

Canadian Studies-Cultural Studies 356

(Post) Modernity and the sublime. (See Cultural Studies.)

Canadian Studies-English-Native Studies**360**

Native peoples in literature. (See English Literature.)

Canadian Studies-Geography 361

Geography of Canada. (See Geography.)

Canadian Studies-Politics 362

Public policy and administration in Canada. (See Political Studies.)

Canadian Studies-Geography 363b

Historical Geography of Canada before 1900. (See Geography.)

Canadian Studies-Geography 364 (a/b)

Geography of the Polar regions. (See Geography.)

Canadian Studies-Politics 366

Canadian political economy. (See Political Studies.)

Canadian Studies-Geography 371 (a/b)

Urban planning. (See Geography.)

Canadian Studies-Geography 376 (a/b)

The urban-rural fringe. (See Geography.)

Canadian Studies 380

Religion in Canada. A consideration of the role religious traditions have played in Canadian culture. Two-hour seminar weekly. (Excludes CA 290)
J. Burbidge

Canadian Studies-Economics-ERS 382a

Canadian Renewable Resource Policy (See ERS)

Canadian Studies-French 383

Le roman québécois. (See MLL-French Section.)

Canadian Studies-Economics 384b

Health economics. (See Economics.)

Canadian Studies-Sociology 389

The social structure of Canada. (See Sociology.)

Canadian Studies 390, 391a, 392b, 393c
Reading course. A structured course arranged between student and instructor, approved by the Program Chair, involving independent study of material. Regular meetings and detailed written work. See Program brochure for further details and requirements.

Canadian Studies 395, 396a, 397b, 398c
Selected topics. Special topic 1996-97: *Canadian Studies-Women's Studies 3952* Immigrant women in Canada. (See Women's Studies.)

Canadian Studies 401
Single credit Honours thesis. Arrangements to be made through the Program Chair.

Canadian Studies 402
Double credit Honours thesis. Arrangements to be made through the Program Chair.

Canadian Studies-History 403
The History of Night. (See History.)

Canadian Studies-Politics 405
Contemporary Canadian problems. (See Political Studies.)

Canadian Studies-History 406
Upper Canada. (See History.)

Canadian Studies-History 407
The Canadian-American frontier. (See History.)

Canadian Studies-Anthropology 415
Prehistory of Ontario. (See Anthropology.)

Canadian Studies-History-Native Studies 425
The evolution of the settlement commonwealth. (See History.)

Canadian Studies-Sociology 445
The media and communications in Canada. Overview of the history and political economy of the media industries, including publishing, film, radio, television, and new communication technologies. Special topics include media ownership and control, the process of television news production, and the dynamics of media reception. Prerequisite: *Canadian Studies 300 or 389* or permission of the instructor. Two-hour seminar weekly.

Canadian Studies-Comparative Development-Politics 464
Canada and International Development (See Comparative Development Studies.)

Canadian Studies-English 4652
Contemporary Fiction: The Canadian Post-Modern. (See English Literature.)

Canadian Studies-English 466
Canadian literary pluralities. An introduction to work by writers of immigrant, ethnic or racial minority identification in Canada. After an initial exploration of the theoretical issues involved in the study of this literature, the course will examine a selection of literary works. Prerequisite: *Canadian Studies 266 or 300*, or permission of the instructor.
C. Verdun

Canadian Studies-Environmental and Resource Studies 470
Bioregionalism: The Otonabee River Watershed, Haliburton Section. Ecology, history and culture; sustainable development; appropriate technology; regional planning. Permission of instructor required prior to pre-registration. Two-hour workshop and one-hour tutorial weekly.
J. Wadland, T. Whillans

Canadian Studies-History 475
History of everyday life. (See History.)

Canadian Studies-History 477
Studies in Canadian social policy. This research course examines the evolution of social policy from the early 19th to the late 20th century; governmental, professional and organizational responses to poverty, disease, old age, mental illness, physical disability, family fragmentation. Seminar Weekly.
J.E. Struthers

Canadian Studies 485, 486a, 487b, 488c
Field course. A structured course of supervised activity in the field, including detailed written work. Arrangements to be made through Program Chair.

Canadian Studies 490, 491a, 492b, 493c
Reading course. A structured course arranged between student and instructor, approved by the Program Chair, involving independent study of material. Regular meetings and detailed written work. See Program Brochure for details and requirements.

Canadian Studies 495, 496a, 497b, 498c
Special topics.

Diploma Program in Canadian Studies

The Canadian Studies Program offers a special Diploma for students who wish to undertake a single academic year (September-April) focused directly upon Canadian political economy, society, environment and culture. Individuals wishing to enrol in the diploma program must apply, in writing, to the Chair of the Canadian Studies Program, indicating course preferences. As the number of spaces is limited, acceptance is not automatic. A committee made up of faculty members teaching in the Canadian Studies Program, will select the successful candidates in consultation with the Admissions Committee.

Eligibility

Applicants must either be students registered in, or graduates of an accredited post-secondary educational institution *other than Trent University*. An official transcript, including evidence of the content of courses completed and grades received must accompany the application.

Language Requirements

In accordance with University regulations applicants must have a competence in written and spoken English. Facility in the French language is desirable but not compulsory.

Special Events

All students admitted to the Diploma program will attend field trips, films, special lectures and conferences as part of their curricular activity.

Visas, Fees and Accommodation

International students admitted to the Diploma program are expected to make their own arrangements for visas, financing and accommodation during the year at Trent. Nevertheless, every effort will be made to assist in this process.

The Diploma

The official Diploma will be awarded in the Spring. With it will be included an official Trent University transcript identifying all courses undertaken and grades received.

Course Requirements

All students admitted to the Diploma program will be required to take four courses, of which one may be an independent directed reading course arranged through the Program. One course must be selected from each of columns A, B and C (for a total of three courses):

A Studies in the Social Sciences	B Studies in Regionalism and the Environment	C Studies in Culture
201	200	253
230	221	254
235	285	265
255	300	266
260a	302	
261b	303	325
270	305	356
275	309	352
301	332a/b	357
308	333a/b	360
316	361	365
322	364a/b	380
340	371a/b	383
362	376a/b	403
366	406	445
370	407	465
375	415	466
384b	422	
389	470	
405	250	
410	310	
425	382a	
464		
475		
477		

All students must enrol in either *Canadian Studies 200* or *Canadian Studies 300*.

Students must complete formal courses with a mark of 60% or better in order to qualify for the Diploma.

Chemical Physics

Program Co-ordinators

Chair of the Department of Chemistry
(To be named)

Chair of the Department of Physics

P.C. Dawson, M.SC. (TRENT), PH.D.
(VICTORIA)

Professors

See listing of faculty in Chemistry,
Mathematics and Physics

Required Courses

The program in Chemical Physics is a sequence of mutually supportive courses offered by the Departments of Chemistry, Physics and Mathematics that comprise an integrated whole. Not available as a joint-major.

The General program consists of a minimum of ten courses in the three disciplines, including: *Chemistry 100, 200, 300, Physics 100, 202a, 203b, 321, Mathematics 110, 200, 301 or 205a and 305b*, a two-hundred or three-hundred level Physics or Chemistry course.

The Honours Program

Requirements for the General program must be met, plus: *Chemistry 404a and 405b; Physics 400*; three more courses in Chemistry, Physics or Mathematics, of which two must be at the four-hundred level.

Notes:

- For more detailed information, see separate Calendar entries for Chemistry and Physics.
- Students wishing to transfer to a single-major program should consult the appropriate Department Chair before commencing the third quarter.
- For purposes of meeting degree requirements, *Chemistry 100* may be replaced by *Chemistry 113a* and *Chemistry 123b*, or by *Chemistry 120*.

Chemistry

Chair of the Department
To be announced

Professors Emeriti

S.A. Brown, B.S.A. (TORONTO), M.S., PH.D. (MICHIGAN STATE); K.B. Oldham, PH.D., D.S.C. (MANCHESTER), F.C.I.C.; A.H. Rees, M.A., PH.D. (CAMBRIDGE), M.A. (OXFORD), PH.D. (LONDON), F.C.I.C., ASSOC. R.C.S.; R.A. Stairs, B.S.C. (MCGILL), M.S.C. (WESTERN ONTARIO), PH.D. (CORNELL), F.C.I.C.

Professors

P.F. Barrett, M.S.C. (QUEEN'S), PH.D. (TORONTO), F.C.I.C.; E.G. Lewars, B.S.C. (LONDON), PH.D. (TORONTO); R.E. March, B.S.C. (LEEDS), PH.D. (TORONTO), F.C.I.C.

Associate Professors

R.G. Annett, B.S.C., PH.D. (WINDSOR), J.M. Parnis, B.S.C., PH.D. (TORONTO)

Conjunct Associate Professors

R.C. Makhija, M.S.C., PH.D. (LUCKNOW), C.CHEM., F.C.I.C.; A.M. Zobel, M.S.C., PH.D. (WARSAW)

Senior Demonstrator

H. Al-Haddad, B.S.C. (BAGHDAD), PH.D. (STRATHCLYDE), M.C.I.C.

Demonstrator

S. Landry, B.S.C. (TRENT)

Required Courses

The single-major Honours program consists of twenty courses of which at least ten and a half must be Chemistry courses, including: *Chemistry 100, 200, 210a and 211b, 240a*, three three-hundred level Chemistry courses, four four-hundred level Chemistry courses, including at least three lecture half courses. A student may take up to two course equivalents in Chemistry project courses. Up to one four-hundred level Chemistry course may be replaced by a three-hundred level Chemistry course or a four-hundred level course from another discipline.

Joint-major Honours program. To arrange an appropriate program, early consultation with both departments is urged. A minimum of seven courses in Chemistry is required, including: *Chemistry 100*, three two-hundred level or three-hundred level Chemistry courses, two four-hundred level Chemistry courses.

Single-major General program. Minimum six Chemistry courses, including: *Chemistry 100, 200, 210a, 240a*, two three-hundred level or four-hundred level Chemistry courses.

Joint-major General program. Minimum five Chemistry courses, including: *Chemistry 100*, three two-hundred level or three-hundred level Chemistry courses.

See also listings under Biochemistry and Chemical Physics.

Special Provisos

- Students may count no more than two Chemistry full course equivalents at the one-hundred level to satisfy Chemistry program requirements.
- In order to meet degree requirements, *Chemistry 100* may be replaced by: *Chemistry 113a* and *Chemistry 123b*, or *Chemistry 120*.
- In order to meet the University requirement of a minimum grade of 60% in an

introductory chemistry course, the average of the two final marks obtained in either *Chemistry 113a* and *Chemistry 123b* or *Chemistry 113a* and *Chemistry 133b* must be at least 60% and a minimum mark of 50% must be attained in each of the two courses if either of these pairs of courses is to be used to meet this requirement.

- Students who had successfully completed two or more full Chemistry courses at the *two-hundred* level prior to September 1992 are not required to take *Chemistry 240a* for the purpose of fulfilling single-major, General or Honours Chemistry degree requirements.
- If successfully completed before September 1994, the combination of *Chemistry 240a* and *Chemistry-Environmental and Resource Science 341b* may be regarded as a full *three-hundred* series course in Chemistry.
- Departures from the normal pattern of courses may sometimes be permitted. Apply to the Chair.

Notes:

- *Chemistry 100* proceeds at a pace appropriate to students with an OAC or equivalent in Chemistry. Students without this background should contact the Chemistry Department during the weeks prior to registration, so that extra studies during the summer can be arranged.
- Students who intend to major in Chemistry should note that a grounding in Physics and in Mathematics is essential.
- There is a mathematical requirement for the B.Sc degree. See the Academic Degree Programs section of this calendar for details.
- All students taking one or more Chemistry courses pay a laboratory deposit of \$100 for one or more laboratory courses. This deposit may be returned wholly or in part depending on breakages incurred.
- Laboratory manuals or other course materials, where provided, are subject to a charge.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Chemistry 100

Introductory Chemistry. Essential aspects of general, physical, inorganic, and organic chemistry, and biochemistry. Atoms, molecules, bonding, equilibrium, gases,

liquids, solutions, crystals, redox chemistry, reaction kinetics and chemical thermodynamics. Introduction to organic and biologically important molecules and their chemistry. Prerequisite: OAC Chemistry or equivalent or permission of instructor (see notes). Excludes: *Chemistry 123b*. Three lectures weekly; laboratory and problem sessions in alternate weeks.

Chemistry 200

Elementary physical chemistry. The kinetic theory of gases; thermodynamics of physical and chemical processes; chemical kinetics; electrochemistry. Prerequisites: *Chemistry 100, 120 or 123b*; *Mathematics 110* (preferred for students continuing in physical chemistry), *Mathematics 100* or permission of instructor. One laboratory and three lectures weekly. Tutorials to be arranged by instructor.

Chemistry 210a

Elementary organic chemistry. Chemical techniques and the chemistry of those important classes of organic compounds that form the basis of both organic chemistry and biochemistry. Prerequisite: *Chemistry 100, 113a or 130*. Three lectures and laboratory weekly; tutorial to be arranged.

Chemistry 211b

Continuing organic chemistry. Main classes of compounds including some with more than one functional group. Synthetic methods and mechanisms; spectroscopy; qualitative organic analysis; laboratory preparations. Prerequisite: *Chemistry 210a*. Three lectures and laboratory weekly; tutorials to be arranged by instructor.

Chemistry-Biology 230b

Elementary biochemistry. Designed to interest both chemists and biologists, this course deals with the properties of biologically-important compounds, and the mechanisms and energetics of metabolic processes. Prerequisite: *Chemistry 133b* (for 1996/97 only), and *Chemistry 210a*. Two lectures weekly; laboratory or tutorial in alternate weeks.

Chemistry 240a

Analytical chemistry. The theory of chemical equilibrium as it applies to chemical analysis; experiments in gravimetric and volumetric analysis. Prerequisite: *Chemistry 100 or 123b*. Two lectures and laboratory weekly; tutorials to be arranged by instructor.

Chemistry 300

Physical chemistry. Introduction to quantum chemistry, chemical bonding, statistical mechanics, spectroscopy and reaction rate theory. Prerequisite: *Chemistry 200*. Recommended: *Mathematics 200*. Two lectures weekly, tutorials fortnightly; laboratory weekly. Seminars to be arranged.

Chemistry 310

Advanced organic chemistry. A survey of organic chemistry; Theoretical and mechanistic aspects will be emphasized. Prerequisite: *Chemistry 211b*. Two lectures or tutorials and one laboratory weekly.

Chemistry 320

Inorganic chemistry. Atomic structure and its relation to chemical properties of the elements, theories of chemical bonding, stereochemistry of inorganic compounds, coordination chemistry. Prerequisite: *Chemistry 200*; or *123b* with permission of instructor. Two lectures and laboratory weekly; tutorial or seminar in alternate weeks.

Chemistry-Biology 330

General biochemistry. Chemical processes in animals, higher plants and micro-organisms; composition of tissues; biocatalysis and the nature of enzymes; energy relationships; the formation and degradation of metabolically important compounds and the control of metabolism. Prerequisite: *Chemistry-Biology 230b* or *Chemistry 211b* with permission of instructor. Two lectures and laboratory weekly; tutorial or seminar in alternate weeks.

Chemistry-Environmental and Resource Science 341b

Instrumental analysis. Theory and practice of electrochemical, spectroscopic and chromatographic methods in analysis; sampling theory and strategies; trace analysis. Prerequisite: *Chemistry 240a*. Laboratory and three lectures weekly, tutorials to be arranged by instructor.

Chemistry 404a

Gas phase reaction dynamics. The molecular mechanism of elementary physical and chemical rate processes. An examination of micro-level phenomena revealed by molecular dynamics. Prerequisite: *Chemistry 300*. Two lectures, tutorials or seminars weekly.

Chemistry 405b

Quantum mechanics in chemistry. Fundamentals and applications of quantum mechanics in chemical systems. Wave functions, rotational and vibrational motion, structure of atoms and molecules, bonding theories, spectroscopy. Prerequisite: *Chemistry 300* and *Mathematics 200* or permission of instructor. Three lecture hours per week.

Chemistry 410b

Qualitative Spectroscopic Analysis. Application of UV-visible, infrared, nuclear magnetic resonance and mass spectrometry to the elucidation of molecular structure. Two lecture hours weekly. Prerequisite: *Chemistry 211b*.

Chemistry 412a

Modern organic synthesis. Retrosynthetic strategies for the preparation of complex molecules from accessible starting materials. Methods for carbon-carbon bond formation, reagents for oxidation and reduction, and the use of protecting groups. Introduction to information resources for organic chemistry. Prerequisite: *Chemistry 310*. Two lectures, tutorials or seminars weekly.

Chemistry 413a

Computational Chemistry. The use of molecular mechanics, semi-empirical and ab initio methods in the investigation of molecular structure and reactivity. Prerequisite: *Chemistry 200* and *Chemistry 211b*. Two lectures, tutorials or seminars weekly.

Chemistry 421b

Organometallic chemistry. Fundamentals of organotransition metal chemistry and their applications in homogenous catalysis. General properties, metal-carbon and metal-hydrogen bonds, addition, substitution, abstraction, insertion and elimination processes, catalysis and small molecule activation, applications in organic and inorganic chemistry and biochemistry. Prerequisite: *Chemistry 320*. One two-hour discussion meeting weekly.

Chemistry-Physics 422a

Principles and applications of group theory. Principles and applications of symmetry and group theory in molecular systems. Quantum mechanics, molecular orbital theory, ligand field theory, electronic and vibrational spectroscopy. Prerequisite: *Chemistry 300* or *Chemistry 320* or *Physics 302a* or permission of instructor.

One two-hour lecture or discussion meeting weekly.

Chemistry-Biology 431a

Development of enzymology. Protein structural determination, development of enzyme kinetics, rate equations for two-substrate systems, inhibition and predictions of mechanism. Prerequisite: *Chemistry-Biology 330*. Two lectures weekly.

Chemistry-Biology 433b

Secondary metabolism. Biosynthesis of secondary metabolites and their biological role. Detoxification of mutagenic phenolic compounds. Structure and function of natural products. Prerequisite: *Chemistry-Biology 330*. One two-hour lecture weekly and seminar weekly.

Chemistry 451

Project course in chemistry or biochemistry. Study, usually involving experimental research, under the supervision of a faculty member. Seminars and written report. About eight hours per week. Prerequisite or corequisite: two chemistry lecture half-courses at the *four-hundred* level. Permission required. Contact Coordinator as soon as possible and no later than the end of the previous Winter term. Coordinator: E.G. Lewars

Chemistry 452

Double-credit project course in chemistry or biochemistry. About 16 hours per week; otherwise, as *Chemistry 451*. Coordinator: E.G. Lewars

Chemistry 453a, 454b, 455c

Half-credit project courses in chemistry or biochemistry. As *Chemistry 451*; about eight hours per week (about four hours for *Chemistry 455c*). Coordinator: E.G. Lewars

Chemistry 490

Reading course: Topics from one of the following fields: analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, physical chemistry, and theoretical chemistry. Project work outside the laboratory may be involved. Offered only by prior arrangement; see Chair.

Comparative Development Studies

Professor and Chair of the Program

J. Hillman, M.A. (OXFORD), PH.D. (SUNY, BUFFALO)

Professors

P. Bandyopadhyay, B.A. (CALCUTTA); M.A. (OXFORD, MANCHESTER), PH.D. (MANCHESTER); C.V. Huxley, B.A. (YORK, ENGLAND), M.A. (SIMON FRASER), PH.D. (TORONTO); D.R. Morrison, M.A. (SASKATCHEWAN), D.PHIL (SUSSEX).

Associate Professors

W. Lem, B.A., M.A., PH.D. (TORONTO); R.D. Powell, LIC. EN HISTORIA (CORDOBA), PH.D. (MCGILL), (on leave 1996-97); J. Solway, B.A. (OAKLAND), M.A., PH.D. (TORONTO)

Associated Faculty

Economics: S. Choudhry, K.S.R. Murthy; *Cultural Studies*: A. O'Connor; *Environmental & Resource Studies*: S. Bocking; T. Whillans; *Geography*: J.S. Marsh; *Hispanic Studies*: T. Noriega; *History*: D. Sheinin; *Native Studies*: D.N. McCaskill; *Political Studies*: M. Gunther, E. Helleiner, M. Neufeld, A. Pickel.

Honorary Professor

L.A. Costa Pinto, LIC.SOC. (BRAZIL)

Conjunct Professors

B. Beck, B.A. (CHICAGO), B.LITT. (OXFORD), D.PHIL. (OXFORD). T. Korovkin, B.A., M.A. (MOSCOW), M.A. (YORK), PH.D. (YORK).

The Program in Comparative Development Studies involves the comparative examination of societies and cultures undergoing rapid change, and of the complex global relations between industrialized countries and the developing areas of Africa, Asia, the Caribbean, and Latin America. It is offered with the cooperation of the following Departments and Programs: Anthropology, Cultural Studies, Economics, Environmental and Resource Studies, Geography, History, Hispanic Studies, Native Studies, Political Studies, Sociology and Women's Studies.

Students are strongly encouraged to enrol in some cognate courses. *Economics 101a/b*, *102a/b*, *Anthropology 100*, *Politics 100*, and *Sociology 100* are recommended. Students are also advised that

some Program courses offered by participating departments carry prerequisites.

Required Courses

The single-major Honours program consists of nineteen courses. Minimum nine courses in Comparative Development Studies, including: *CD 100*, *CD 200*, *ECCD 331a*, *333b* (prerequisite: *Economics 101a/b* and *102a/b*), one of *CD 300*, *ANCD 301*, *ANCD 304*, *HICD 340*, *CD 400*, and at least three other core courses, two of which must be at the *four-hundred* level.

Joint-major Honours program. Minimum seven courses in Comparative Development Studies, including: *CD 100*, *CD 200*, one of *CD 300*, *ANCD 301*, *ANCD 304*, *HICD 340*, *CD 400*, and at least one other course in the *four-hundred* series.

General joint-major. Minimum five core and support courses, including: *CD 100*, *CD 200*, one of *CD 300*, *ANCD 301*, *ANCD 304*, *HICD 340*, *HICD 347*.

Notes

Only one support course can be counted towards the minimum requirements of each degree program. Courses from the student's other joint-major cannot be included among the minimum five courses for a General degree.

Anthropology students: Students undertaking joint-majors in Anthropology and Comparative Development Studies are advised that they may substitute *Comparative Development-Anthropology 221* for one of *Anthropology 212*, *230* or *240* in their Anthropology requirements.

Depending upon their area of interest, students are encouraged to enrol in French or Spanish language courses.

Year Abroad Program

This program is offered in Ecuador and is designed primarily for CDS and Anthropology majors. The program consists of the following courses:

Spanish 201, Intermediate Spanish
CD 380, Community Development
CD 387, Introduction to Quechua
CD 388, Ecuador Seminar
*CDAN 389**, Andean economy, society and culture

*meets 300 level requirement for CDS majors

Spanish 100 and high academic standing is a prerequisite.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Core Courses

Comparative Development 100

Human inequality in global perspective. An interdisciplinary introduction to the basic ideas and perspectives of development analysis including issues of population growth, food, transformation of rural life, gender, the environment, urbanization and industrialization. The investigation of development and under-development proceeds from comparative and historical perspectives with illustrations from widely differing societies.

C. Huxley

Comparative Development 200

Development analysis. An examination of the strengths and limitations of the major perspectives that have informed development studies. Consideration of selected monographs which address critical issues on the basis of well-defined models and sound empirical research. Prerequisite: *CD100* or departmental permission.

J. Solway and Staff

Comparative Development-Anthropology 221

Comparative Agrarian Structures. The course focuses on how development processes have transformed agrarian societies. Using comparative and anthropological approaches we will examine the dynamics of agrarian change in colonial, 'post-colonial', capitalist, socialist and 'post-socialist' contexts. Case studies will be drawn from Asia, Africa, South America and Europe. Prerequisite: *CD100* or *AN100*.

W. Lem

Comparative Development 300

South Asian development. An examination of the structure of agrarian production systems, role of land tenure and market relations in selected Asian societies. The process of social change from precapitalist, precolonial to colonial and contemporary institutions and the development of political and ideological movements will be analyzed. Two-hour lecture, seminar fortnightly. Prerequisite: *Comparative Development 200* or permission of instructor.

P. Bandyopadhyay

Comparative Development 385c

Field course. An examination of the development experiences and strategies in a Caribbean country. Particular attention is devoted to relations with Canada. The course involves a ten-day field trip coinciding with the Winter Reading Break. Students pay a field trip fee and cover their other costs. In 1996-97 the focus will be on Trinidad. Fortnightly lecture/seminar. (Offered alternate years.)
J. Hillman

Comparative Development 400

Modernity and Development. A study of the problems developing countries face in the passage from local or national traditions, cultures, and relations to modernity and global integration and hierarchy. This year the focus will be on indigenization and westernization with regard to industry, law and national institutional development in various regions. Prerequisite: *Comparative Development 300* series required course or permission of the instructor.
P. Bandyopadhyay

Comparative Development 421c

Assessment of development projects. An examination of techniques for analyzing and assessing projects for industrial, rural and social development, and of selected case studies. Case studies will include Canadian projects for development assistance in third world countries. Introductory lectures and weekly seminars. Prerequisite: *Comparative Development 300* series required course or permission of the instructor.

Comparative Development-Canadian Studies-Political Studies 464

Canada and International Development. Canada's relations with developing countries - economic, political and socio-cultural - and Canada's role in North-South issues, especially the debt crisis and structural adjustment, human rights and democratization, immigration and refugees, ecologically-sustainable development, and regional conflicts. Also applies theoretical perspectives on comparative and international development to Canada. Two-hour seminar weekly. Prerequisites: *Comparative Development 200* or *Canadian Studies 200* or *Political Studies 220* or permission of the instructor. Open only to students in the fourth quarter of the Honours degree.
D.R. Morrison

Comparative Development-Sociology 470a

Religion and Social Movements. An examination of the religious movements within the Catholic tradition generated by social upheaval in contemporary Latin America, with particular attention given to new forms of religious organization, and theology, together with the revitalization of popular religion. Weekly seminar. Prerequisite: *Comparative Development 200* or permission of the instructor.

Comparative Development-Anthropology 475a

Perspectives on Ethnicity. Examination of ethnic consciousness and identity formation through theoretical and ethnographic case studies in a variety of settings. Identity construction in relation to process of development. Articulation and comparison of ethnicity with gender, class, kinship, nationalism and other markers of social and cultural difference. Prerequisite: *AN200* or *CD200* or permission of the Instructor.
J. Solway

Other Core Courses**Comparative Development 390, 391a, 392b**

Reading course in comparative development. Open only to students taking a major in Comparative Development Studies, and designed to provide an opportunity for specialized studies on selected topics. Periodic tutorials. Prerequisite: Permission of the Chair and the instructor concerned.

Comparative Development 490, 491a, 492b

Reading courses in comparative development open to students in the fourth quarter of the Honours program in Comparative Development Studies. Periodic tutorials. Prerequisite: Permission of the Chair and the instructor concerned.

Anthropology-Comparative Development 301

African Culture and Society. (See Anthropology)

Anthropology-Comparative Development 304

Latin America. (See Anthropology)

Economics-Comparative Development
331a

Economics of developing countries. (See Economics)

Economics-Comparative Development
333b

The economics of global interdependence. (See Economics)

History-Comparative Development 340

The emergence of modern Africa. (See History)

HICD 347

Survey of Latin American history

Native Studies-Comparative Development
305

Aboriginal community development. (See Native Studies)

Women's Studies-Comparative Development 325

Women and development. (See Women's Studies)

Environmental and Resource Studies-Comparative Development 360

Environment and development. (See Environmental and Resource Studies)

Cultural Studies-Comparative Development 332

Media and development. (See Cultural Studies)

Comparative Development 401/402

Honours thesis. A specific scholarly project on a well-defined topic for which double credit or single credit will be given. Prerequisite: Permission of the Chair and instructor concerned.

Anthropology-Comparative Development
407

Politics, economy and culture. (See Anthropology)

Politics-Comparative Development 440

Political economy and in comparative perspective. (See Political Studies.)

Politics-Comparative Development 450

Democracy and Democratization. (See Political Studies)

Native Studies-Comparative Development
482

Aboriginal responses to cultural interaction. (See Native Studies)

Support Courses

Economics 311a: International trade

Economics 312b: International finance

English 315: Commonwealth fiction

Geography 380a: Regional economic development

History 444: African labour history

History 447: Topics in Latin American History

Politics 220: International politics

Politics 240: Comparative politics and modern revolution

Politics 320: Ordering world politics

Spanish 326: Contemporary Latin-American novel

Computer Studies*Chair of the Program*

E.A. Maxwell, M.Sc., Ph.D. (TORONTO)

Professor

James W. Jury, M.Sc., Ph.D. (TORONTO)

Associate Professors

Stephen B. Regoczei, M.Sc. (TORONTO);

Morgan J. Tamplin, B.A. (TORONTO), M.A. (LONDON), Ph.D. (ARIZONA) (on leave 1996-97)

Assistant Professor

Richard T. Hurley, B.Sc. (NEW BRUNSWICK), Ph.D. (WATERLOO)

Associated Faculty

Geography, J.G. Cogley; *Mathematics*, S.

Bilaniuk, D.G. Poole, E.A. Maxwell;

Philosophy, B. Hodgson, R.M. Neumann

Laboratory Demonstrator

Meredith E. Soper, B.A. (WESTERN ONTARIO), B.Sc. (TRENT)

The Program offers study in computer science, information systems and related cultural ideas. It approaches these from a specialist and generalist liberal arts and sciences point of view. It combines courses in computer science with courses in mathematics, philosophy and social and behavioral studies. The intent is to provide students with a sound basis in computer studies along with a comprehensive education in areas where the use of computer

technology and computational ideas have a major influence. To meet these goals, many courses in the program deal with advanced technical material, and in addition, provide a humanities and social sciences perspective. Students in the Program pursue General or Honours Joint-major Degrees by combining core and cross-listed Computer Studies courses with courses in another area of study, either in the arts or the sciences.

The program is presently undergoing a substantial curriculum review. Program changes may be in effect for 1996-97. Students should consult the Supplement to the Academic Calendar when it is published.

Required Courses

Joint-major Honours program. Minimum of eight courses in Computer Studies of which at least five must be core courses and include: *Computer Studies 102b*, *202a* and *203b*, *300a* or *301b*, *330*, and *400*. At least two courses must be at the *four-hundred* level. Joint-major Honours in Science requires a minimum of 20 courses. Joint-major Arts requires a minimum of 19.5 courses. At least one university-level mathematics credit (i.e. one of *Mathematics 110*, *130* or *150*, or a course in another discipline with an equivalent mathematics content) is required.

Joint-major General program. Minimum five courses in Computer Studies including *Computer Studies 102b*, *Computer Studies 202a*, *Computer Studies 203b* and three and a half other courses in Computer Studies, at least two of which must be core courses. At least two core courses or cross-listed courses must be at the third year level.

Notes:

1. Only one of the half courses *Computer Studies 102b* or *Computer Studies 150b* may be taken by students in their first quarter of study.
2. *Computer Studies 280a* is open to first-year students with previous computing experience.
3. In order to be eligible to graduate with a B.Sc. degree, a student must have completed a university level Mathematics course.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Core Courses

Computer Studies 101a

Introduction to computer studies with applications. An introduction to general principles of computing with practical experience in modern applications including spreadsheets and database management systems. Topics include impact of computers on society, architecture/organization of personal computers and mainframes, binary representation, input/output and storage, operating systems, networks and communication. No prerequisite. Two lectures weekly, monthly workshops, frequent hands-on sessions.

J.W. Jury and staff

Computer Studies 102b

Introduction to software engineering with Pascal. This course is the introductory programming course for Computer Studies majors and is a prerequisite for most higher-level Computer Studies courses. Students will learn how to design, test, and debug computer programs using the Pascal programming language. Topics to be covered include a general discussion of programming languages, algorithm design, program testing, program debugging, introductory data structures. Prerequisite: *Computer Studies 101a* or equivalent. Three lectures weekly, fortnightly labs.

R.T. Hurley and staff

Computer Studies 150b

Introduction to visual programming. Software engineering for students not intending to major in Computer Studies. This service course provides skills in developing computer programs using visually-based languages such as Visual BASIC. Included are procedures, arrays, strings, files, records, windows and graphics. Prerequisite: *Computer Studies 101a* or equivalent. Not open to students enrolled in, or with credit for, *Computer Studies 102b*. Two lectures weekly, periodic workshops.

J.W. Jury and staff

Computer Studies 202a

Intermediate computer science: data structures and algorithm design. Examination of data structures, abstract data types and algorithm design in a language-independent environment intended to develop knowledge and programming skills be-

yond an introductory level. Topics include algorithm and data structure design; abstract data types; queues, stacks, lists, trees and graphs; sorting and searching techniques; motivation and introduction of analysis for algorithm complexity. Prerequisites: *Computer Studies 102b* or equivalent. Three lectures weekly. Workshops as required in place of one of the lectures.

Computer Studies 203b

Data processing and file structures. Introduction to file structures and processing. Use of COBOL for data processing, including use of advanced language features and modular software engineering techniques. Efficiency in data management. Prerequisites: *Computer Studies 102b* or equivalent. Double lecture weekly plus workshops as required.

Computer Studies 210

Computing in the social and natural sciences and humanities. A survey of various approaches to data analysis using computer-based methods. It introduces data and problems not usually encountered by Computer Studies joint majors and is also intended for non-Computer Studies students who intend to use computers for research in their disciplines. Prerequisites: *Computer Studies 101a* and another course with computing content such as *Computer Studies 102b* or *150b*, *Geography 201*, *Mathematics-Statistics 150*, or *Psychology 215*. Two lectures and one one-hour laboratory weekly.

Computer Studies 220b

Information systems in organizations. Management information systems, including decision support and expert systems in organizations, with an introduction to end-user computing, systems analysis, software development, and office automation. Systems in the organizational context. Major hardware, software, and communications technologies employed in data processing and applications. Prerequisite: *Computer Studies 102b* or *150b* or equivalent. Two lectures weekly.

Computer Studies 280a

Introduction to cyberspace. An introductory course emphasizing the cultural implications of interactive digital technology. Convergence of communications, public media, and entertainment industries. Emphasis on current concerns such as the Internet and multimedia. No prerequisite.

Open to first-year students with previous computing experience. Two lectures weekly.

S.B. Regoczai

Computer Studies 300a

Advanced data structures and algorithms. Topics include design of effective and efficient data structures and algorithms; advanced data structures and algorithm design paradigms; algorithm analysis techniques; intractability. The course gives the student greater experience in program design in a language-independent setting and emphasizes pragmatic and mathematical aspects of program efficiency. Prerequisites: *Computer Studies 202a* and one of *Mathematics 110*, *100*, or *130*; or permission of the instructor. *Mathematics-Computer Studies 260* recommended. Three lectures weekly.

Computer Studies 301b

Object-oriented software engineering techniques. Introduction to programming in the C and C++ languages with emphasis on algorithm design, incorporating efficiency, modularity, and cohesiveness. Special emphasis on object-oriented software including classes, relationships and antibugging techniques. Prerequisite: *Computer Studies 202a*. Two lectures weekly.

J.W. Jury

Computer Studies 320

Social impact of computer technology. This course deals with the applications, use and impact of computers and information technology on societies. Topics covered are chosen from the following: historical impact of computers and automated technology; ethical, legal and privacy issues for software, software development and computerized information storage and flow; software risks; computer technology in medicine, law and education. Prerequisites: *Computer Studies 102b* or *150b*, or permission of the instructor. Two lectures weekly, periodic tutorials.

Computer Studies 330

Computer organization. This course begins with an investigation of digital logic where topics such as boolean algebra, sequential logic, and circuit design are discussed. Computer architecture is addressed next concentrating on issues such as busing, main memory, secondary memory, the central processing unit, and I/O organization. Finally, assembly language program-

ming will be covered. Prerequisite: *Computer Studies 202a and 203b*, or permission of the instructor. Two lectures and one tutorial weekly.

R.T. Hurley

Computer Studies 340b

Data base design and data modelling. Data base systems and their use in the management of data. History and development of data base theory. Hierarchical, network and relational data base structures. Prerequisite: computing experience equivalent to that obtained in *Computer Studies 102b or 150b*, or permission of the instructor. Two lectures weekly.

Computer Studies 350

Artificial intelligence and artificial life. Foundations, directions and applications of artificial intelligence; knowledge acquisition, representation and processing, knowledge bases and rule-based systems; vision systems, natural language processing, machine learning, applications in knowledge-based fields and industry. Issues and techniques will be addressed primarily through expert systems. Prerequisite: *Computer Studies 202a or 203b* or permission of the instructor. Two lectures weekly.

S.B. Regoczei

Computer Studies 390, 391a, 392b

Reading, research or project course dealing with advanced topics in Computer Studies chosen in consultation with supervising faculty members in Computer Studies. Prerequisite: permission of the Program.

Computer Studies 400

Software engineering: theory and project. This course combines theory and project work to examine software engineering methodologies for development of large software projects. Topics covered include: requirements analysis and feasibility studies; requirement specification; software design; implementation and installation; testing; system maintenance; impact assessment; quality assurance; project management; and CASE tools. Prerequisites: *Computer Studies 301b or 300a; Computer Studies 220b and 340b* recommended. Two lectures weekly, periodic tutorials.

Computer Studies 410

Computer languages. Programming languages, their structures as intellectual objects, and their future uses. Discussion of general language design goals, data and control abstractions and structures, progressing through lower level assemblers to higher block structured languages (Ada), special purpose languages (such as Modula, FORTH, LISP) to concepts of verifiable and applicative languages, large programs, predicative programming and program transformation. Prerequisite: *Computer Studies 300a or 301b*. Two lectures weekly. Periodic workshops.

S.B. Regoczei

Computer Studies 430

Advanced operating systems. This course examines the issues and concepts of computer operating systems. The first half of the course examines the traditional centralized operating system: management of processors, file systems, processes, and memory. The second half of the course examines the distributed system: networking, remote procedure calls, concurrency control, and resource management. Prerequisite: *Computer Studies 330* or permission of the instructor. Two lectures and one tutorial weekly.

R.T. Hurley

Computer Studies 490, 491a, 492b

Advanced reading, research or project course. Prerequisite: permission of the Program.

Cross-listed Courses

Computer Studies-Philosophy 240a
Symbolic logic. (See Philosophy)

Computer Studies-Mathematics 260
Discrete structures. (See Mathematics)

Computer Studies-Mathematics 341
Linear and discrete optimization. (See Mathematics)

Computer Studies-Philosophy 341b
Logic and logical theories. (See Philosophy)

Computer Studies-Mathematics-Statistics 351
Linear statistical models. (See Mathematics)

Computer Studies-Anthropology 363a/b
Computer Applications in Anthropology. (See Anthropology)

Computer Studies-Mathematics 405
Logic and computability. (See Mathematics)

Cultural Studies

Professor and Chair of the Program

I. McLachlan, M.A. (OXFORD)

Professors Emeritus

D.F. Theall, B.A. (YALE), M.A., PH.D. (TORONTO); D. Smith, M.A., D. PHIL. (OXFORD)

Professors

R.J. Dellamora, A.B. (DARTMOUTH COLLEGE), B.A. (CAMBRIDGE), M.PHIL., PH.D. (YALE); J. Fekete, M.A. (MCGILL), PH.D. (CAMBRIDGE); S. Kane, B.A. (CARLETON), M.A., PH.D. (TORONTO); A. Wernick, M.A. (CAMBRIDGE, TORONTO)

Associate Professors

Z. Baross, B.A. (U.B.C.), M.A. (LONDON), PH.D. (AMSTERDAM); J. Bordo, B.A. (MCGILL, ALBERTA), M.A., M.PHIL., PH.D. (YALE); A. O'Connor, B.A. (TRINITY COLLEGE, DUBLIN), M.A., PH.D. (YORK) (on leave 1996-97)

Assistant Professor

V. Hollinger, M.A. (CONCORDIA), M.ED. (NEWCASTLE-UPON-TYNE), PH.D. (CONCORDIA) (on leave 1996-97)

Lecturer

S.F.S. Young, B.A. (SIMON FRASER), M.A. (CALIFORNIA)

Adjunct Faculty

D. Bateman, M.A. (TORONTO); M. Blyth, B.A. (TORONTO) M.A. (YORK); S. Bush; M. de Guerre, A.O.C.A. (ONTARIO COLLEGE OF ART); V. de Zwaan, B.A. (TRENT), M.A. (MCGILL), PH.D. (TORONTO); M. el Komos, M.A. (CAIRO); G. Genosko, PH.D. (TORONTO); A. Hearn, M.A. (SIMON FRASER); M. Hoechsmann, B.A., M.A. (SIMON FRASER); R. Kerr, M.A., PH.D. (TORONTO); M. Morse, M.A. (YORK), M.F.A. (YORK); W. Pearson, M.A. (MCGILL); D. Sugar, B.A., B.F.A. (YORK), L.L.B. (OSGOODE HALL, TORONTO); R. Wright, B.A. (TRENT), M.A., PH.D. (QUEEN'S)

Associated Faculty

Sociology, S. Katz

The Program offers study in the nature and criticism of culture and the arts, chiefly literature, film, drama, music and the visual arts, in the light of guided interdisciplinary enquiry into the social conditions in which thought and expression take shape. The Program as a whole pro-

vides the kind of academic experience which may have pre-professional value to a cultural and social critic or to a teacher of literature, drama or the arts who wishes to emphasize workshop experience in future teaching. This focus of practical and speculative needs is realized in courses whose overall concern is for the way in which theoretical understandings inform as they are informed by actual practice by artists, critics and thinkers in different conditions. The focus is preserved on the level of term-work in that actual production experience or critical work in cultural activity is recommended as a way of sustaining a reflection on cultural problems and conditions in Canada and elsewhere.

The *one-hundred series* course is the normal entry point to the Program for first-year students and should normally be taken by all students who are, or who are preparing to be, Cultural Studies majors or joint-majors. First-year students who also wish to take, in exceptional circumstances, a second Cultural Studies course, must obtain written permission from both the course instructor and the Chair of the Program. First-year students who may wish to major or joint-major in Cultural Studies are urged to take one or more of the following courses as well: *Classical Literature 100*, *English 100*, *History 120*, *Philosophy 101*, *Sociology 100*, and any of the first-year language courses in the department of Modern Languages and Literatures.

Two-hundred and three-hundred series courses are grouped into two categories: (a) 205, 225, 235, 245, 246, 250, 305, 322, 325, 350, 356, 370 and (b) 211, 216, 217, 222, 226, 229, 260, 270, 280, 311, 315, 321, 329, 332, 345, 346, 375, 380, 381, 385, 395.

Cultural Studies majors are required to choose at least two courses from each category. In so doing they may pursue a particular concentration within the different cultural areas that the Program draws together (e.g., Comparative Literature; Fine Arts; Performing Arts; Social and Cultural Theory).

Required Courses

The single-major Honours program consists of nineteen courses. Minimum nine courses in Cultural Studies including *Cultural Studies 100*, at least two from

category (a), at least two from category (b), and at least two Cultural Studies courses at the *four-hundred* series level.

Joint-major Honours program. Minimum seven courses in Cultural Studies including *Cultural Studies 100*, at least two from category (a), at least two from category (b), and at least two Cultural Studies courses at the *four-hundred* series level.

Single-major General program. Minimum six courses in Cultural Studies including *Cultural Studies 100*, at least two from category (a) and at least two from category (b).

Joint-major General program. Minimum five courses in Cultural Studies. Same requirements as for single-majors.

Special Provisos

Two-hundred and *three-hundred* series courses: any *two-* or *three-hundred* series course is open to any upper-year student, subject only to the conditions specified below under the descriptions of certain individual courses.

Four-hundred series courses are normally limited to students in the fourth quarter of Honours Cultural Studies. However, students may petition the Program to enrol in a *four-hundred* series course as part of a General program. Students wishing to take more than one *Cultural Studies 490* reading course must petition the Chair of the Program. The fourth quarter of the Honours program will normally consist of four courses.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Cultural Studies 100

Introduction to the study of modern culture. Introduction to the interpretation and foundations of modern culture. Looks at the problem of how to make sense of art works and other forms of cultural expression, both as texts and as practices in a context. What distinguishes twentieth-century culture from, and what connects it to, the tradition of modern culture as a whole? Lecture and seminar, weekly. Field trips fee: \$40. (Excludes *Cultural Studies 200*.)

Staff

Cultural Studies 211

Drawing. An introduction to basic ideas and skills in the visual arts. The course will deal with concepts and realities of form and the making of signs and symbols in two and three dimensions. Lecture and studio instruction four to six hours weekly. Open to Cultural Studies majors and students with the pre- or co-requisite *Cultural Studies 216* or *315* or permission of the Chair of the Program. Art materials fee: \$65. Enrolment limited to 20.

Staff

Cultural Studies 216

(Mostly) Western art, the monument and modernity. Considers such monumental vestiges as the glyph site, the temple, the cathedral, the gallery and the current "heritage" site as preparations for exploring the picture and its extraordinary emergence in Renaissance art and science and how this kind of picturing became and continues to be the predominant mode of cultural transmission inseparable from and defining cultural "modernity." Field trip fee: \$40. Students may take the course for double credit by taking *Cultural Studies 217* (workshop) in conjunction with *Cultural Studies 216*.

J. Bordo

Cultural Studies 217

(Mostly) Western art, the monument and modernity. Workshop. The course follows the sequence of *Cultural Studies 216*. This workshop will permit students to devise artmaking projects that give expression, articulate, and make materially discursive the issues discussed in *Cultural Studies 216*. Co-requisite: *Cultural Studies 216*. The course will meet as a workshop once a month. Workshop fee.

J. Bordo

Cultural Studies 222

Culture in the novel. A study of the nineteenth-century novel as a focus for current theories of culture, gender and narrative. Texts for discussion will include works by Balzac, Sand, the Brontës, Eliot, Flaubert, Dostoyevsky, Tolstoy and Huysmans. Particular attention will be given to the thought of Lukacs, Bakhtin, Barthes and Foucault. Lecture, seminar weekly.

I. McLachlan

Cultural Studies 225

Oral narrative. The world of story and memory. Myth: recovering the aboriginal dialogue with Nature. The wondertale: the vision of oral humanity. Concerned with voice in told and written story, the course involves creative writing, telling and evaluation of narrative, inherited as well as improvised. Two hours weekly.
S. Kane

Cultural Studies 226

Storytelling workshop. An exploration of the world of story by enacting the story-maker's relationship to everyday discourse, oral tradition, literary models, and to the community that survives by listening. The course offers experience in the improvisation and performance of all kinds of narrative from the ancestral tale to postmodernist self-writing.
S. Kane

Cultural Studies-English 229

Science fiction. Introduction to the history, theory, and representative works and authors, from Mary Shelley and H.G. Wells to Philip Dick, Ursula Le Guin, Marge Piercy, and William Gibson. Will examine alternate worlds, human destiny stories, space adventure, stories of alien encounters and non-contemporary earth life, new capacities, new technologies, or new belief systems. Two hours weekly.
J. Fekete / V. Hollinger

Cultural Studies 235

Mass media and society. Introduction to the history, sociology and critical interpretation of contemporary mass-communicated culture, both as an overall formation and with reference to such specific elements as the newspaper press, advertising, network TV and recorded popular music. Two-hour lecture and seminar weekly. (Excludes *Cultural Studies-Sociology 240*.)

A. O'Connor

Cultural Studies 245

Music and Society. An introduction to music as cultural practice, exploring formulations of the relationship between music and society offered by ethnomusicology, sociology, semiotics, and feminist theory. Emphasis is placed on the development of listening skills through engaging with a variety of musical texts/practices from Western art music, popular music, and

world music traditions. No formal background in music required. Lecture and seminar weekly.

Staff

Cultural Studies 250

Civilization and human nature. An introduction to the thought of several of the founders of modern social and cultural theory including Marx, Nietzsche and Freud. Such topics explored as ideology and illusion, reason and eros, individualism and alienation, and the idea of progress. One hour lecture, seminar weekly.

A. Wernick

Cultural Studies 260

The making of the modern body. Focuses upon modernity's relation to the body as both project and work site; examines such contemporary obsessions as the expression and experience of (post)modern subjectivity. Diverse cultural and theoretical materials explore the burgeoning of body-images that exercise contemporary cultural imagination in various media. Writers in feminist criticism, film theory, psychoanalysis and social theory will explore the modern body as a site of power (relations), desire, signification, subjection and subjectification. Two-hour lecture and one-hour seminar weekly.

Z. Baross

Cultural Studies 270

History and theory of theatre. An introduction to theatre as a performing art. Examines the evolution of European theatrical practice and dramatic theory from Classical Greek tragedy to late nineteenth century naturalist drama. Topics include acting styles, theatre design and architecture. Two hours weekly. Field trip fee: \$45.

I. McLachlan / V. Hollinger

Cultural Studies 280

History and theory of the cinema. An introduction to critical interest in the cinema: the medium, spectator, ideology, apparatus; reflection upon the question of origin; and relation to other arts; the evolution of cinematic language and narrative strategies from silent film (Griffith, Eisenstein) to classical Hollywood, from (early) experimental to (modern) European film. Weekly films, lectures and seminars.

Z. Baross

Cultural Studies 305

Politics and culture. The relationship between art and critical social practice in the context of self-conscious cultural movements in the twentieth century (e.g., futurism, surrealism, expressionism, existentialism). Examines the relationship between 'avant-garde' and other modernist cultural movements and 'mass' culture; between aesthetic experimentalism and political engagement; between cultural activity and the marketplace. Lecture, seminar weekly.

Staff

Cultural Studies 311

Visual arts studio: form, process, object (and image). Introduction to the relationship between traditional ideas of form and dynamic process-oriented strategies in two and three dimensions. Emphasis on the free exploration of material and concepts; alternative directions and implications of any given problem; questions of scale and 'richness'; the development of active creative strategies. Open to Cultural Studies majors and students with the pre- or co-requisite *Cultural Studies 216, 305, or 315*, or permission of the Chair of the Program. Enrolment limited to 20. Art materials fee: \$65.00.

Staff

Cultural Studies-English 321

Literature and society. (See English Literature.)

Cultural Studies 322

Experimental fiction. A course in the work of some of the major twentieth-century writers of experimental fiction, ranging from Proust, Joyce, and Kafka to Pynchon and Borges. Individual works will be related to various theories of narrative which seek to explain and contextualize them. Weekly lectures and seminars.

I. McLachlan

Cultural Studies 325

Literary and critical theory. A study of ideas about the nature and function of literature, interpretation, and evaluation. The spectacle and background of competing contemporary theoretical models will be considered through such figures as Plato and Aristotle, Sidney, Coleridge and Arnold, Frye and McLuhan, Lukacs and Adorno, Barthes, Derrida and Foucault, Kristeva and Spivak. Two-hour seminar weekly.

J. Fekete

Cultural Studies-English 329

Utopia (Future fiction.) A study of the speculative social imagination in utopian and anti-utopian literature from Plato to contemporary science fiction. Such topics as sexual politics, technology, communication, psychic evolution, and narrative form will be examined from More to Huxley, Orwell, Le Guin, Delany, Brunner, Dick, Lem, Piercy and Russ. Weekly lecture and seminar.

J. Fekete

Cultural Studies-Comparative Development Studies 332

Media and development. Covers different approaches to communication and development especially in the 'Third World'. Topics include debates about cultural imperialism, Third World film-making, community radio, women's media and the role of communication and popular culture in struggles for democracy. Three-hour seminar weekly.

A. O'Connor

Cultural Studies-Sociology-Anthropology 350

Modern cultural theory. Examines, within the context of the "crisis of modern critical discourse," the questions "history" poses for theory at the junction of modernity/postmodernity. Memory/memoires/mourning/testimony in the writings of Arendt, Felman, Foucault and Derrida; the "crisis" of history both as an historical event (of our time) and a narrative predicament in Nietzsche, Benjamin, Lyotard, Nancy, Foucault. Recommended: *Cultural Studies 100 or 250*. Lectures and seminars weekly.

Z. Baross

Cultural Studies-Canadian Studies 356

(Post) modernity and the sublime. An exploration of the idea of the sublime from its early modern and American Renaissance resurgence to (post) modernist refigurings. Philosophical, religious and literary sources will be drawn upon with particular reference to visual art, with special attention to Northern landscape and modern art. A problematics of the wilderness symbolic will draw together the treatment of such concerns as allegory and representation; modern technology, ethics and "limit experience"; art as the transgression of the presentable. Two lectures monthly, one seminar and one study group.

J. Bordo

Cultural Studies 370

Theatre in the twentieth century. Investigates the changing roles of playwright, performer and director in the modern theatre. The innovations and experiments of Stanislavski and Brecht, Artaud and Brook, Beckett and Handke will be explored. Students will be expected to attend a number of theatrical performances.

Seminar weekly. Field trip fee: \$45.

I. McLachlan

Cultural Studies 375

Theatre workshop: staging ideas. A practical course in modern acting with a focus on methods of performance in works that dramatize ideas and the conflicts between them. Pre- or co-requisite: *Cultural Studies 270* or *370* or permission of the Chair of the Program. Workshop fee: \$50. Enrolment limited to 20. Four hours weekly.

I. McLachlan/V. Hollinger

Cultural Studies 381

World Cinema. A study of cinema(s) in historical and aesthetic context. Each year's syllabus will direct critical interest to major works of world cinema or to films from one continent or country.

Focus for 1996-97: *American Cinema*: a critical examination of the Hollywood film from the decline of the studio system. The work of major directors will be studied, and current trends will be scrutinized to consider the popular film as a site of struggle for such contested terrains as the nuclear family, reproductive technologies, gender and sexual identities. The use of cinema for personal pleasures and collective memories will also be explored. It is strongly recommended that students have taken or are currently enrolled in *Cultural Studies 280*. Weekly films, lectures and seminars. Field trip fee. (Interested students who have previously taken *Cultural Studies 381* for credit may contact the Program for special consideration.)

S. Young

Cultural Studies 402

Honours thesis. A double-credit course for which double fee is charged, in which instruction in research methods leads to a thesis of about 15,000 words. The Program deadline for a thesis abstract and bibliography (signed by the thesis supervisor) is May 31 of the year prior to the student's entry to the fourth quarter of the Honours program.

Cultural Studies-English 425

Advanced studies in literary and critical theory. Topic for 1996-97: the nature and function of literature, criticism, and theory, from Greek mimesis to contemporary post-modernism, intertextualism, and pragmatism. A central focus on the emergence and decline of modernist Anglo-American theories of literary and imaginative autonomy. Examination of such theoretical models as Plato and Aristotle, Coleridge, Arnold and Pater, Eliot, Richards, Frye and McLuhan, Fish and Tompkins, Barthes and Foucault, and selected feminist writers. Two-hour lecture-seminar weekly. (Excludes *Cultural Studies-English 325*.)

J. Fekete

Cultural Studies 435

Advanced topics in mass media and popular culture. Urban popular movements and avant-garde media, cultural identity and 'underground' media in the modern metropolis. Includes an overview of various issues in identity politics and explores their expression in forms such as punk and grrl riot, fanzines and non-commercial video. Materials may be from the metropolitan underground in London, New York, Toronto, Los Angeles and Mexico City. Two-hour seminar weekly.

A. O'Connor

Cultural Studies-Sociology 440

Special topics in the sociology of culture and knowledge. (See Sociology.)

Cultural Studies 450

Current issues in cultural theory. Focuses on the concept of postmodernism and how this term has been deployed to characterize contemporary theory, culture, and society. Explores what is meant by a break from the modern. In the light of this question, and by reflecting on key statements by Lyotard, Rorty, Jameson, Baudrillard, Jencks and others, considers such topics as the postmodern turn in architecture, the rise of deconstruction and ironic modes of theorizing, and the cultural centrality of television. Two hour seminars weekly.

Z. Baross

Cultural Studies 470

Advanced studies in theatre and the performing arts. Special topics, which vary from year to year, have included: recent experimental directions taken by traditionally marginalized groups; parody and performance; the work of Bertolt Brecht;

and feminist, gay and lesbian, and (post) colonial theories of subjectivity and narrative. Three-hour seminar weekly.
I. McLachlan/V. Hollinger

Cultural Studies 495

Special topics in cultural studies. Following are examples of special topics courses which may be offered by the Program in any given year:

Cultural Studies 4951

Special Topic: Writing Figuring Art/Theory. Derrida's forcing of the philosophical burden of the trace upon the Saussurean sign has two implications for the work of word and image studies. It opens the way for the ontologizing and historicizing of semiotic processes as historical carriers (memes) while inviting an extended problematizing of signifying marks (brush stroke, figurations, ciphers, writing, voicings). Study takes place in an inter-textual arena between philosophy, the visual arts and literature. Fulfills work initiated in *Cultural Studies 216* and *Cultural Studies 356*; invites students with backgrounds in theory (e.g., *Cultural Studies 250, 260, 350*), poetics and aesthetics. Thrice monthly, field trip fee: \$40.00.

J. Bordo

Cultural Studies 4952

Special Topic: Religion and postmodernity. Focuses on the religious dimension of postmodern culture and theory, with attention to such issues as the "death of God," the deconstructive turn and "atheology," feminist rethinkings, ethics and otherness, sacrifice and the sacred, the apocalyptic imaginary, and the place of transcendental themes in contemporary art and politics. Two-hour seminar weekly.

A. Wernick

Cultural Studies 4953

Special Topic: Theories of Subjectivity. A course in post-structural theories of subjectivity, with a special emphasis on textual processes in subject formation. Works by Barthes, Foucault, de Lauretis, Wittig and Spivak, among others, will be considered. Weekly lecture and seminar.

R. J. Dellamora

Cultural Studies 4954

Special Topic: Creative writing and performance. A workshop exploration of voice and narrative in theory and practice.

Two hours fortnightly. Pre- or co-requisite: *CU 225, 226* or permission of the instructor following submission of a portfolio by May 1 of the previous year.
S. Kane

For more information about these and other special topics courses, students should attend the Honours Information Session scheduled in the Spring or visit the Program Office at that time for an Honours Information Brochure.

Reading Courses

Reading courses are available as *Cultural Studies 390* or *490*. Registration in reading courses is contingent on permission of the instructor and the Chair of the Program in advance of early registration. The deadline for submission of an outline is May 31 of the year previous to undertaking the course.

Economics

Associate Professor and Chair of the Department J. Muldoon, B.Sc. (BROCK), M.A. (GUELPH), PH.D. (MCMASTER)

Professor Emeritus

M.J. Boote, B.A. (WALES), PH.D. (MCGILL)

Professors

D.C.A. Curtis, M.A. (QUEEN'S), PH.D. (MCGILL); H.M. Kitchen, M.A. (MCMASTER) (on leave Winter Term 1997); K.S.R. Murthy, B.Sc. (ANDHRA), M.Sc. (KARNATAK), M.A. (DELHI, WESTERN ONTARIO), PH.D. (WESTERN ONTARIO) (on leave Winter Term 1997)

Associate Professors

M. Arvin, B.Sc. (LONDON), M.Phil. (OXFORD), PH.D. (QUEEN'S); T. Drewes, B.A. (LAKEHEAD), M.A., PH.D. (QUEEN'S); P. Wylie, B.Sc. (QUEEN'S, BELFAST), M.A., PH.D. (QUEEN'S)

Assistant Professors

S. Choudhry, M.A. (MCGILL), PH.D. (MANITOBA); B. Leith, B.A. (WESTERN), M.A., PH.D. (YORK)

Conjunct Professor

D. Auld, B.A. (WESTERN) M.A. (TORONTO), PH.D. (A.N.U.)

Note:

Economics 101a/b and *102a/b* are prerequisites for all other courses in Economics. A standing of C- (60%) or higher is required in *Economics 101a/b* and *102a/b* for registration in upper year Economics courses. With the exception of *Economics-Administration 225a* and *Economics-Administration 220b*, two-hundred series courses in Economics are accepted as three-hundred level courses to meet the University requirements of a minimum number of three-hundred series courses.

It is strongly recommended for single-majors, that *Economics 320a/b* and *Economics 325a/b*, and for joint-majors, that *Economics-Administration 225a* and *Economics-Administration 220b* be completed before students enter their fourth quarter.

Required Courses

The single-major Honours program consists of twenty courses. Minimum ten courses in Economics, including:

Economics	101a/b	102a/b
	200	201
	220b*	225a*
	320a/b	325a/b
	400a/b	401
	405a/b	

plus one other four-hundred series Economics course. Or, one full course equivalent from the three-hundred series, approved by the Department, may be substituted in the fourth quarter of an Honours program.

Joint-major Honours program. Minimum seven and one-half courses in Economics, including:

Economics	101a/b	102a/b
	200	201
	220b*	225a*
	400a/b	401
	405a/b	

plus a further one-half four-hundred series Economics course. Or, one half course equivalent from the three-hundred series, approved by the Department, may be substituted in the fourth quarter of an Honours program.

Single-major General program. Minimum six courses in Economics, including:

Economics	101a/b	102a/b
	200	201
	220b*	225a*

Joint-major General program. Minimum five courses in Economics, including:

Economics	101a/b	102a/b
	200	201

*indicates that courses of equivalent content can be substituted for *Economics-Administration 225a/220b*. This will be determined by the Department Chair.

Note:

In order to be eligible to graduate with a B.Sc. degree, a student must have completed a university level Mathematics course.

For students majoring in Economics, *Economics-Administration 225a* and *Economics-Administration 220b* fulfill the Mathematics requirement for the B.Sc. Degree.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Economics 101a/b

Introductory microeconomics. An introductory treatment of markets, prices and outputs based on the behaviour of consumers, business firms and the structure and organization of industries. Competition policy and tax policy are examined. Selected aspects of international markets, trade and trade policy are also considered. Lectures three hours weekly.

Staff

Economics 102a/b

Introductory Macroeconomics. An introductory treatment of gross domestic product, employment, unemployment, prices and inflation based on current models of national income determination. The Canadian banking system, monetary policy, the role of government and fiscal policy are examined. Selected aspects of international trade, the balance of payments and exchange rates are included. Lectures three hours weekly.

Staff

Economics 200

Microeconomic theory and its applications. An examination of problems of demand and supply, market equilibrium, market structure, income distribution and economic welfare. A comprehensive

treatment of the theoretical techniques used to deal with problems of resource allocation and applications of those techniques. Develops skills necessary for advanced work in economics. Three lectures weekly, seminar fortnightly.

J. Muldoon

Economics 201

Macroeconomic theory and policy. A study of the performance of the total economy in terms of output (GDP), employment and inflation, including the effects of monetary, fiscal and exchange rate policies. Current macroeconomic models and debates about structure, behaviour and policy effectiveness are explored. Three lectures weekly, workshop fortnightly.

D. Curtis

Economics-Administration 220b

Introduction to statistics for economics and management. This course introduces statistical methods and the relationship between numerical conjecture in an applied setting with an emphasis on the development of theory through interactive learning. The material covered includes descriptive statistics, data analysis, inference and estimation techniques. Prerequisites: *Economics-Administration 225a*. Three hours weekly, tutorial fortnightly.

B. Leith

Economics-Administration 225a

Introduction to mathematics for economics and management. Topics include partial and general equilibrium, elementary linear algebra, elementary calculus, basic optimization theory, and comparative static analysis. These tools are integrated with and applied to micro and macroeconomic theory and managerial economics. Three lectures weekly, workshop fortnightly.

J. Muldoon

Economics-Canadian Studies 260a

Canadian economic development. The application of economic analysis to the study of Canadian development to 1929. The Staples thesis, the colonial economies, Confederation, the national policy, prairie settlement, industrialization, regional income disparities, and the development of money, capital and labour markets. Two lectures weekly, seminar fortnightly.

P. Wylie

Economics-Canadian Studies 261b

The Canadian economy. Problems and policies in Canadian economic development since 1929. Models of long-run income growth and short-run depression/recession, government policy on trade, foreign investment, macroeconomic stabilization and social welfare, and the economics of federal-provincial relations. Two lectures weekly, seminar fortnightly.

P. Wylie

Economics 301b

Monetary theory. An examination of the monetary sector of the macro-economy based on theories of the demand for money, the supply of money, and the role of money and monetary policy in different macroeconomic models. Prerequisite: *Economics 201* or permission of the instructor. Two lectures weekly, seminar fortnightly.

D. Curtis

Economics 302 a/b

Monetary institutions and policy. An exploration of money, banking, monetary control, financial intermediation, and financial markets in Canada. Recent Canadian experience with monetary, financial and exchange rate policy is examined. Two lectures weekly, seminar fortnightly.

Economics 311a

International trade. Theories of world trade and the analysis of trade policy and trade relationships in the world economy. The theory and practice of protectionism and preferential trade arrangements (trade blocs). The role of multinational corporations in international trade and investment. Two lectures weekly, seminar fortnightly. (Support course for Comparative Development Studies).

P. Wylie

Economics 312b

International finance. The operation of international money and capital markets and theoretical and policy aspects of exchange rates and the balance of payments. Macroeconomic management of domestic open economies and the world economy, and the evolution, management and reform of the international financial system. Two lectures weekly, seminar fortnightly. (Support course for Co active Development Studies).

P. Wylie

Economics 316a

Government expenditure analysis. Efficiency criteria will be emphasized in the analysis of public goods, externalities, natural monopolies, cost-benefit analysis, voting behaviour and the structure and growth of government expenditures in Canada. Two lectures weekly, seminar fortnightly.

H. Kitchen

Economics 317a

Canadian tax policy. Efficiency and equity criteria will be emphasized in evaluating personal income taxation, corporate income taxation, commodity taxation, local government taxation and income transfers. Two lectures weekly, seminar fortnightly.

H. Kitchen

Economics 320a

Econometrics. Simple and multiple regression models. Problems of estimation and testing of economic relationships under conditions of autocorrelation, errors in variables, etc. Regression diagnostics and introduction to distributed lags and simultaneous equations. Prerequisite: *Economics-Administration 225a, 220b* (or equivalents). Pre- and co-requisites: *Economics 200, 201*, or permission of the instructor. Three lectures weekly, seminar weekly.

K.R. Murthy

Economics 321a/b

Applied econometrics. This course integrates economic theory, econometric technique and practical applications in empirical economics. The emphasis in this course is on the issues which arise in building empirical models. Students will gain practical skill in the development of empirical models of the economy. Prerequisites: *Economics 320a*. Three hours weekly.

Economics 325b

Mathematical economics and economic models. A continuation of *Economics-Administration 225a*. Mathematical techniques used to set and solve problems. Topics include comparative static analysis under specific and general functions, unconstrained optimization, constrained optimization with equality constraints (classical programming), concavity, convexity, quasi-concavity and quasi-convexity, homogeneous functions, integral calculus, exponential and

logarithmic functions, linear programming, eigenvalues and eigenvectors.

Prerequisite: *Economics-Administration 225a, 220b* (or equivalents). Pre- and co-requisites: *Economics 200, 201*, or permission of the instructor. Three lectures weekly.

M. Arvin

Economics-Comparative Development 331a

The economics of developing countries. Alternative models of growth and development, examination of sectoral problems of development such as agriculture, education, health, etc. Cost-benefit assessment of development projects. Planning strategies for economic development and the diversity of the development experience. Two lectures weekly, seminar fortnightly. (Excludes *Economics 330*.)

S. Choudhry

Economics-Comparative Development 333b

The economics of global interdependence. The world economy and the place of less developed nations in an increasingly interdependent global system. Topics include market-oriented policy reform; structural adjustments that move economies to market-based systems; the growing literature on foreign aid, debt and development; the global factory and increasing interdependence in areas such as technology and financial flows. Two lectures weekly, seminar fortnightly. (Excludes *Economics 330*.)

S. Choudhry

Economics 341b

Industrial organization. Study of markets including perfect competition, monopoly, and imperfect competition. Special topics include product differentiation, collusion, measures of market concentration, mergers and vertical integration, predatory pricing, entry deterrence, advertising, vertical restraints, and antitrust policies. Prerequisite: *Economics 200*. Pre- and co-requisites: *Economics-Administration 225a* or equivalent. Two lectures weekly, seminar fortnightly.

M. Arvin

Economics 350a/b

Economics of trade unions. What do unions really do? The application of economic analysis to explain the rise and impact of private and public sector union-

ism in Canada. Topics include: the effects of unions on wages, productivity and unemployment; collective bargaining; and the causes and consequences of strikes. Two lectures weekly, seminar fortnightly.

Economics 351a

Labour economics. The economic theory of labour markets used to understand their outcomes and evaluate policies. Topics include wage differentials, investment in human capital, and structural unemployment problems. Prerequisites: *Economics 200*. Two lectures weekly, seminar fortnightly.

T. Drewes

Economics 361a/b

An economic history of the industrial revolution. Economic and quantitative analyses of European industrialization with special emphasis on the British experience. Topics include the origins of factories, technical change, worker-firm relations, the standard of living debate, and the decline of British industry. Two lectures weekly, seminar fortnightly. (Excludes *Economics 360*).

Economics 362a/b

International economic history, 1850 to present. Seeks to understand alternative paths to industrialization in the context of international capital, labour and goods markets. Topics include the classic gold standard, core-periphery relations, the inter-war years and growth after 1945. Emphasis on the European experience. Two lectures weekly, seminar fortnightly. (Excludes *Economics 360*).

Economics-Environmental and Resource Studies 381a/b

Environmental economics. This course examines the links between economic activity and environmental degradation. The course examines the relationship between private and social incentives for economic activity. Topics include the valuation of environmental amenities, incentive compatible regulation, the economic and environmental effects of market failure and the rationale for government intervention. Two lectures weekly, seminar fortnightly.

B. Leith

Economics-Environmental and Resource Studies-Canadian Studies 382a

Canadian renewable resource policy. Prerequisite: the equivalent of one full two-hundred level Environmental and Resource Studies or Canadian Studies credit and *Economics 101a/b*, *Economics 102a/b*, or permission of instructor. (See Environmental and Resource Studies)

Economics-Canadian Studies 384a/b

Health economics. Economic analysis of the organization, financing and utilization of health services. Patterns of consumer and provider behaviour; the functioning and regulation of markets for health services; policy issues in the provision of health care in Canada. Two lectures weekly, seminar weekly.

J. Muldoon

Economics 398b

Special topics in economic analysis and policy: International monetary relations. The evolution of international monetary relations through four historical periods: the classical gold standard, the inter-war period, the Bretton Woods system, and era of flexible exchange rates. Particular emphasis on the balance of payments adjustment mechanism and distribution of the adjustment burden, the globalization of capital markets and effects on developing countries. Two lectures weekly, seminar fortnightly.

Economics 400b

Topics in advanced microeconomic theory. Development of utility theory from axiomatic preference theory, the structure of utility and production functions; duality in consumer theory; decision-making under uncertainty; general equilibrium models; welfare economics; game theory. Prerequisites: *Economics 200*, *Economics-Administration 225a*, *220b* (or equivalents).

T. Drewes

Economics 401

Research project. This course is designed in such a way that the student must research a topic of individual interest under the close supervision of a faculty adviser. Prerequisite: Open only to single or joint economics majors in the fourth quarter of the Honours program.

J. Muldoon and staff

Economics 405a

Topics in advanced macroeconomics. This course examines the development of macroeconomic models from Classical models through Disequilibrium Keynesian and Rational Expectations. Integrating microfoundations of macroeconomic theory, the course examines the policy implications of implicit contract theory; theories of optimal choice of policy instruments and theories of efficiency wages and unemployment. Prerequisites: *Economics 201*, *Economics-Administration 225a*, *Economics-Administration 220b* (or equivalents). Three hours weekly.

B. Leith

Economics 420b

Topics in econometrics. This course examines theory and practice in the estimation and testing of economic models with an emphasis on alternatives to simple regression, as they relate to particular economic and statistical issues in an applied setting. Students gain experience in evaluating and refining empirical models of the economy. Prerequisites: *Economics 320a* or permission of instructor. Three hours weekly.

B. Leith

Economics 425b

Advanced topics in mathematical economics. Classical and nonlinear programming, comparative static analysis, differential equations, dynamic optimization, optimal control theory, phase diagrams, dynamic stability/instability in systems, economics of risk, and uncertainty. Economic applications will be stressed throughout the course. Prerequisite: *Economics 325a* or permission of the instructor.

M. Arvin

Education

Associate Professor and Director Trent-Queen's Teacher Education Program
Deborah P. Berrill, B.A. (NORTHWESTERN), M.A. (TORONTO), PH.D (EAST ANGLIA)

Adjunct Faculty
To Be Announced

Students contemplating careers in teaching in either elementary or secondary schools are able to undertake a four- or five-year program of studies at Trent and Queen's Universities. The concurrent

teacher education program, co-sponsored by the Faculty of Education, Queen's University, enables students to enrol in programs which qualify them for a Bachelor of Arts or a Bachelor of Science degree from Trent University and a Bachelor of Education degree from Queen's University. The first three or four years of the Concurrent Program are conducted at Trent and the first half of the final year is held at Queen's University. At the same time the student will obtain an Ontario Teacher's Certificate with either Primary-Junior (Grades K to 6) or Junior-Intermediate (Grades 4 to 10) or Intermediate-Senior (Grades 7 to OAC) specialization.

A new Program structure will be implemented in the autumn of 1997. Students should check with the Teacher Education Program for details.

Note:

While responsibility for ensuring that all B.A./B.Sc. and B.Ed. requirements are fulfilled rests with the student, students are strongly encouraged to consult with the Trent-Queen's Teacher Education Program office to ensure that courses selected are acceptable in meeting these Program requirements. A list of acceptable courses is made available to Teacher Education students in the Fall prior to registration at information sessions.

Program requirements are subject to change without notice.

Primary-Junior Program

This option is designed for candidates who intend to begin their teaching careers in elementary schools. Candidates are prepared to teach all subjects in the Primary division (Kindergarten to Grade 3) and the Junior division (Grades 4 to 6).

Candidates admitted to this program are required to include in their overall Arts/Science program:

- 1 course in Psychology
- 1 course in language or linguistics
- 1 course in Mathematics (or OAC Mathematics)
- 1 course in the arts
- 1 course in social studies (History, Geography, Political Studies, Sociology, Anthropology, Native Studies, Canadian Studies, Comparative Development Studies, Environmental and Resource Studies, and Women's Studies)
- 1 course in science (or OAC Science)

Junior-Intermediate Program

(This option will no longer be available commencing autumn of 1997.)

This option prepares candidates to teach in the Junior division (Grades 4 to 6) and the Intermediate division (Grades 7 to 10). In addition to a core program preparing generalist teachers, there is the opportunity for candidates to do further study in one teaching subject of the Intermediate division.

Candidates selecting this option may major in any subject but must include in their total undergraduate degree program three full courses in one teaching subject, i.e. English, Drama, Geography, History, Mathematics, Native Studies, Visual Arts and General Science. Exception is French where five full undergraduate courses are required.

In addition, candidates are required to include in their overall Arts/Science program:

- 1 course in Psychology
- 1 course in language or linguistics
- 1 course in Mathematics
- 1 course in Science

Intermediate-Senior Program

This option prepares candidates to teach in the Intermediate division (Grades 7 to 10) and the Senior division (Grades 11 to OAC). Candidates admitted to this option must select two teaching subjects for the study and development of teaching methods in these divisions. They must include in the undergraduate degree five full courses in one teaching subject and four full courses in the other. Exception is French where five full undergraduate courses must be completed. Also included in the undergraduate degree must be one course in Psychology. In addition to the subject concentrations mentioned above in the Junior-Intermediate program, candidates may also select from Biology, Chemistry, Computer Science and Physics.

Note: Students wishing to have Drama or Visual Arts as teaching subjects may not be able to take the required number of courses at Trent University and may therefore need to take summer courses at other universities.

Program Design

Candidates must have obtained an overall B average (70%) in all Arts/Science courses from a three-year B.A. or B.Sc. program, or an Honours degree, before proceeding to the final year of the program.

The design of the concurrent program is an attempt to make teacher preparation both academic and field centred. The program is spread over a four- or five-year period and places the teacher candidates in contact with schools in each of the years while at the same time allowing the students to pursue academic and professional studies. The students' involvement in the professional program increases from year to year and culminates in a one-half year of internship from January to April of the final year. Candidates elect to specialize in one of three program options upon entry into second year.

The program encourages candidates to do an Honours degree. Candidates for an Honours B.A. or B.Sc. take a full fourth year in arts and science and complete the final year of the education program in their fifth year.

Approximately 110 candidates may be accepted in first year. Candidates will be selected on the following criteria:

1. Academic Profile **50%** (Ontario Grade 13 or 6 OACs or equivalent).
2. Experience Profile **50%** (showing candidate's related experience and stressing responsibility, leadership and initiative). The program is actively seeking candidates with experience with special needs populations and in multicultural settings.
3. The program actively seeks candidates who are interested in teaching science at both elementary and secondary school levels; and/or women interested in science at all levels.

Required Courses 1996-97*Year 1*

Up to five full B.A. or B.Sc. courses. One Educational Studies half course. Equivalent of 10 full days in classrooms.

Year 2

Up to five full B.A. or B.Sc. courses. One Educational Studies course. Equivalent of 10 full days in classrooms.

Year 3

Five full B.A. or B.Sc. courses. One Educational Studies course. Five full days followed by one continuous week of evaluated teaching in classrooms.

Final Year

Fall semester at Queen's University: Curriculum Studies, Educational Studies, Skills, Practicum. Fall teaching round and, during winter semester, a four-month internship in a school in Peterborough, Kingston or other selected areas.

Note:

Students enrolling in the Trent-Queen's Concurrent Teacher Education Program are required to pay Queen's course fees for their Education courses. These are not covered by Trent University arts and science tuition fees.

Also, in Education courses students are expected to pay a nominal course materials fee.

English Literature*Professor and Chair of the Department*

M.A. Peterman, A.B. (PRINCETON), M.A., PH.D. (TORONTO)

Professors Emeriti

R.D. Chambers, B.A. (MCGILL), B.LITT. (OXFORD); E.M. Orsten, M.A. (OXFORD), PH.D. (TORONTO); G. Roper, M.A., PH.D. (CHICAGO)

Professors

L.W. Conolly, B.A. (WALES), M.A. (MCMAS-TER), PH.D. (WALES); R.J. Dellamora, A.B. (DARTMOUTH COLLEGE), B.A. (CAMBRIDGE), M.PHIL., PH.D. (YALE); J.A. Fekete, M.A. (MCGILL), PH.D. (CAMBRIDGE); S.F. Gallagher, B.A., M.A. (WESTERN ONTARIO), PH.D. (IRELAND); G.A. Johnston, B.A. (TORONTO), M.A. (HARVARD); W.I. McLachlan, M.A. (OXFORD); O.S. Mitchell, M.A. (ALBERTA), PH.D. (LONDON); J.E. Neufeld, B.A. (TORONTO), M.A., PH.D. (CHICAGO) (on leave Fall Term 1996); Z.H. Pollock, B.A. (MANITOBA), PH.D. (LONDON) (on leave 1996-97); J.M. Treadwell, B.A. (TORONTO), M.A. (CAMBRIDGE); F.B. Tromly, B.A. (GRINNELL), M.A., PH.D. (CHICAGO)

Associate Professors

S.W. Brown, B.A., M.A. (WINDSOR), B.A., PH.D. (QUEEN'S), F.S.A. (SCOT.); J.A. Buckman, B.A. (MCGILL), M.A. (SUSSEX), PH.D. (MONTREAL) (on leave 1996-97);

K.A. Chittick, B.A., M.A. (TORONTO), PH.D. (EDINBURGH); L.J. Clark, B.A., M.A. (TORONTO), PH.D. (VIRGINIA); G.D. Eathorne, B.A. (NEW ZEALAND), M.A. (CANTERBURY); D.K. Glassco, B.A. (QUEEN'S), M.A. (MELBOURNE); S.L. Keefer, M.A., PH.D. (TORONTO) (on leave Winter term 1997); E.A. Popham, B.A., M.A. (MANITOBA), PH.D. (QUEEN'S)

Assistant Professor

M.C. Eddy, M.A. (WESTERN ONTARIO), PH.D. (TORONTO).

Note:

The curriculum of the department has been designed to accommodate a wide range of approaches to the study of English Literature. With the exception of *English 205* (see below), courses are arranged in six categories. Each of the first five categories (A to E) encompasses a single literary period, and courses within each category provide a variety of approaches to the period. These approaches include literary-historical surveys, studies of outstanding writers in relation to their age, and studies of literary topics or genres associated with a particular literary period. The sixth category (F) consists of courses which are not confined to any particular period, but which provide comprehensive inquiries into genres, literary theory and criticism, and the history of ideas. The department encourages students to explore as many different kinds of study as possible.

A	B	C	D	E	F
800 to 1500	1500 to 1642	1642 to 1790	1790 to 1900	1900 to Present	Genres, etc.
230	220	201	210	105	100
331	253	300	231	229	120
332	420	301	232	265	215
431	433	434	320	266	310
432			321	340	315
			435	345	325
			436	350	329
				365	360
				371	370
				440	375
				450	380
				460	381
				465	425
				466	4951
				475	4953
				4952	4954

Required Courses

English 205: Methods of Literary Analysis is a requirement for all English majors in the second quarter of their program.

The single-major Honours program in English consists of nineteen courses. Minimum of ten English courses, including *English 205*. At least one course must be chosen from each of the six categories listed above, and at least three of the final four must normally be *four-hundred* series English courses.

Joint-major Honours program. Minimum eight English courses, including *English 205*. Five courses are to be chosen from different categories listed above, and at least two of the final four must normally be *four-hundred* series English courses.

Single-major General program. Minimum six English courses, including *English 205*. Four courses are to be chosen from different categories listed above, including at least two from categories A to C, and at least two from categories D to F.

Joint-major General program. Minimum five English courses, including *English 205*. Three courses are to be chosen from different categories listed above, including at least one from categories A to C, and at least one from categories D to F.

Special Provisos

One-hundred series courses: In 1995-96, the department introduced a new first year course, *English 100: Introduction to English Literature*, which took the place of the three existing first year courses. *English 100* excludes *English 120*, but not *English 105* or *English 115*. No more than two first year English courses may be counted towards a degree. First-year students wishing to take a second English course must obtain written permission from the department Chair.

Normally, a student will be required to take a *one-hundred* series English course and obtain a grade of C- (60%) or better in order to major in English.

Two-hundred and *three-hundred* series courses: Any *two-* or *three-hundred* series English course is open to any upper-year student, with the exception of *English 205* which is not open to English majors in their fourth quarter. *Two-hundred* series English courses are considered equivalent to *three-hundred* series courses to satisfy the University degree requirement of four full courses in the *three-hundred* series.

Fourth quarter: The fourth quarter of the Honours program will normally consist of four courses.

Information meetings for students intending to enter the fourth quarter of the Honours program are held during the Winter Term when the details of the next year's *four-hundred* series course offerings and application procedures are outlined. All inquiries should be directed to Professor Elizabeth Popham, Peter Robinson College, (705) 748-1739 (email: epopham@trentu.ca).

Four-hundred series courses are normally limited to students in the fourth quarter of the Honours program. However, students wishing to apply for admission to a *four-hundred* series course before entering the fourth quarter of the Honours program may do so if they have been declared eligible to proceed in Honours and have obtained the permission of the instructor.

Four-hundred level ("Honours-stream") seminars in *two-* and *three-hundred* series courses are provided for students lacking a prerequisite for a *four-hundred* series course in a category which they require, but they are open as well to any fourth-quarter students who have not already taken the related *two-* or *three-hundred* series course. These seminars are equivalent to *four-hundred* series courses in workload and assessment, and will be recorded as *four-hundred* series courses on students' transcripts. (Proposed "Honours-stream" seminars are announced at the fourth-quarter information meeting.)

English majors wishing to enrol in two of *English 4341/4342* or *English 4501/4502* or English-Canadian Studies 4651/4652/466 must first obtain the permission of the Chair of the English Department.

Note:

As one of the "optional" English courses allowed in the General and Honours programs in English, students may count one of the following full-, or two of the following half-courses: *Canadian Studies 355*; *Classical Literature 100, 200*; *Cultural Studies 205, 222, 225, 270, 322, 370*; *German 221a, 222b*; *Spanish 324a, 325b*. However, none of these courses may be used to satisfy the category requirements for English majors.

The department recommends that students considering graduate studies in English literature complete an upper-year course in a second language.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

English 100

Introduction to English Literature. An overview of the development of English literature taught in a series of historically-based units, each focusing on a central issue in a major period of English literary history. One-hour lecture and seminar weekly; several two-hour workshops. (Excludes *English 120*.)

English 201

Milton and his age. An examination of Milton's development as man and artist through the study of his major works (including "Comus," "Lycidas," *Aeropagitica*, *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*) and selected works of contemporary authors. Weekly lecture and seminar.

English 205

Methods of literary analysis. An introduction to methods of literary analysis, and to the assumptions underlying their use. Emphasis will be placed on learning through writing, and a wide range of works, representing a variety of periods, genres, and cultural perspectives, will be explored. Weekly three-hour workshop.

English 210

The Romantics. A study of the major English writers of the Romantic revolution: Burke, Wollstonecraft, Blake, Coleridge, Wordsworth, Austen, Byron, the Shelleys, Keats, and Emily Brontë, with some attention to minor figures and to Romantic theories of the imagination. Weekly lecture and seminar.

English 215

English Drama before the 20th Century. The course traces the development of English drama from its medieval beginnings to the end of the 19th century. The plays will be examined from a literary and theatrical perspective. Writers to be studied include Marlowe, Shakespeare, Jonson, Milton, Wycherley, Behn, Sheridan, Wilde, and Shaw. Weekly lecture and seminar.

English 220

Studies in Shakespeare. An examination of Shakespeare's dramatic career through the study of about a dozen representative

works spanning the period from the early comedies to the last plays. Particular consideration will be given to Shakespeare's imaginative development. Weekly lecture and seminar. Occasional workshops.

English-Cultural Studies 229

Science fiction. (See Cultural Studies)

English 230

The history of the English language. A study of the development and use of the English language from the Old and Middle English periods to modern experimental fiction. The course emphasizes practical philology and the application of language skills to a wide range of prose and verse. Recommended: *Modern Languages 100*. Weekly lecture or language workshop and seminar.

English 231

The American Renaissance. Studies in the literature of the pre-Civil War United States. Attention will focus on the work of Poe, Emerson, Thoreau, Hawthorne, Melville, Whitman, and Dickinson. Weekly lecture and seminar.

English 232

American literature: The Gilded Age. A study of American literature from the Civil War to World War I, and the relation between historical change and culture in the period. Writers to be studied include Twain, James, Howells, Crane, Norris, Bellamy, Dreiser, Wharton, and Adams. Weekly lecture and seminar.

English 253

Elizabethan and Jacobean literature. This course will deal with the poetry, prose and drama of the English Renaissance, a period when new ideas stimulated literary expression and unsettled established assumptions about human nature. Writers to be studied include Sidney, Spenser, Marlowe, Shakespeare, Donne, Jonson, and Bacon. Weekly lecture and seminar.

English-Canadian Studies 265

English Canadian prose. A study of principal Canadian writers of English prose from the 19th century to the present day, including some of Atwood, Bissoondath, Callaghan, Davies, Duncan, Findley, Glassco, Haliburton, King, Kogawa, Kroetsch, Laurence, Leacock, McLeod, MacLennan, Mitchell, Moodie, Ondaatje, Richler, Ross, Watson, Wilson, and Wiseman. Weekly lecture and seminar.

English-Canadian Studies-Women's Studies 266

Canadian women's writing. (See Canadian Studies)

English 300

Literature of Augustan England. Studies in the literature of the English Augustan period, 1660-1740. Writers to be studied include Addison and Steele, Behn, Congreve, Defoe, Fielding, Lady Mary Wortley Montagu, and Wycherley, with particular emphasis on Dryden, Pope, and Swift. Weekly lecture and seminar.

English 301

The age of Johnson. Studies in English literature of the mid and late 18th century, 1740-1795. Writers to be studied include Boswell, Burke, Burney, Burns, Goldsmith, Gray, Richardson, Sheridan, and Sterne, with particular emphasis on the work of Samuel Johnson. Weekly lecture and seminar.

English-Women's Studies 310

Gender and literature. A study of relations between gender and literature in the works of writers, mainly women, in England and the United States. Wollstonecraft, Austen, Brontë, Eliot, Dickinson, Christina Rossetti, Whitman, Forster, Woolf, Plath, Rich, Lessing, and Alice Walker, and some of their important forerunners. Weekly lecture and seminar.

English 315

Commonwealth fiction. A study of prose fiction of the Commonwealth with special emphasis on the West Indies, Africa, and Asia. Writers to be studied include V.S. Naipaul, Jean Rhys, Chinua Achebe, Ngugi wa Thiong'o, J. Coetzee, Nadine Gordimer, N.K. Narayan, Salman Rushdie, and Anita Desai. Weekly lecture and two-hour fortnightly seminar.

English 320

The age of Dickens. A study of Victorian literature and society. Writers to be studied include Carlyle, Dickens, Thackeray, George Eliot, Gaskell, Ruskin, and Arnold. Weekly lecture and seminar.

English-Cultural Studies 321

Literature and society. Studies in the relation between literature and society in a number of 19th-century works that deal with social, cultural and women's issues. Writers to be studied include Arnold,

Charlotte Brontë, Carlyle, Dickens, George Eliot, Engels, Gaskell, Marx, Mill, Morris, and Hardy. Weekly lecture and seminar.

English 325

Critical approaches to literature. This course will examine some of the major critical approaches to literature and interpretation in the 20th century: Formalism, Structuralism and Semiotics, Reader-Response Criticism, New Historicism, Psychoanalytic Criticism, Deconstruction, and Feminism. Weekly lecture and seminar; several workshops.

English-Cultural Studies 329

Utopia (Future fiction). (See Cultural Studies)

English 331

Chaucer and his age. A study of Chaucer's works, especially *The Canterbury Tales*, and of other English writers and literary interests of the 14th century. Lecture and seminar weekly.

English 332

Medieval romance. A study of the romance tradition (particularly the Arthurian) from its beginnings in myth and legend, through the development of courtly love and the chivalric ideal, to the Middle English metrical romances, *Sir Gawain and the Green Knight*, and Malory's *Le Morte d'Arthur*. Weekly lecture and seminar.

English 340

Modern poetry. An introduction to the works of some of the important poets writing in English in the 20th century. Writers to be studied include Yeats, Eliot, Pound, Williams, Stevens, Frost, Thomas, Auden, and Lowell. Weekly lecture and seminar.

English 345

Modern British fiction. A study of the major developments in British fiction in the 20th century, focusing on thematic, technical, and stylistic innovation as a response to unprecedented social change. Writers include Conrad, Ford, Joyce, Lawrence, Woolf, Forster, Waugh, Huxley, Greene, Rhys, Naipaul, and Gordimer. Weekly lecture and seminar.

English 350

Modern drama. Studies in the works of recent English, Irish, American, and Canadian dramatists. Writers to be studied include Shaw, Synge, O'Casey, O'Neill, Williams, Osborne, Pinter, Pollock, and French. Weekly lecture and seminar.

English-Canadian Studies-Native Studies 360

Native peoples in literature. The course considers the images and distortions of native people in a representative series of North American fictions by native and non-native authors. Writers to be studied include Cooper, Longfellow, Lafarge, Mitchell, Momaday, Silko, and King. Weekly lecture and seminar.

English 370

Studies in the novel. A study of the development of the English novel, stressing both its thematic and technical aspects. Writers to be studied include Defoe, Fielding, Austen, Charlotte Brontë, Dickens, Eliot, Hardy, James, Conrad, Bennett, and Woolf. Weekly lecture and seminar.

English 371

Modern American fiction. A study of American fiction from 1920 to the present. Writers to be studied include Hemingway, Fitzgerald, Faulkner, West, and Steinbeck; and some of Bellow, Doctorow, Hurston, Morrison, Salinger, Silko, Walker, and Welty. Weekly lecture and seminar.

English 375

An introduction to creative writing. A workshop course offering students a formal structure within which to pursue their interest in creative writing. Students will submit rough written work ("freefall") weekly and over the year will work towards a finished piece of fiction. Students seeking admission will submit a portfolio of written work to the instructor by August 1, and will be notified if they have been accepted into the course by August 30. Weekly three-hour workshop.

English 381

Literature and psychology. A study of the contributions of certain psychological theories and concepts to an understanding of literary works. Among the major theories to be considered are those of Freud, Jung, and the modern humanistic psychologists. Weekly lecture and seminar.

English 402

Honours thesis. A double-credit course, for which double fee is charged, in which instruction in research methods leads to a thesis of about 15,000 words. The Department deadline for a thesis abstract and bibliography (signed by the thesis supervisor) is May 1 of the student's third year.

English 420

Advanced studies in Shakespeare. Topic for 1996-97: Family and identity in Shakespeare. The course will examine the ways in which family relationships and conceptions of personal identity intersect in Shakespeare. The plays to be studied represent every stage of Shakespeare's development, from *The Comedy of Errors* to *The Tempest*. Various modes of psychoanalytic and historical interpretation will be tested. Prerequisite: *English 220* or *253*. Two-hour seminar weekly. *F.B. Tromly*

English-Cultural Studies 425
(See Cultural Studies)*English 431*

Studies in Old English language and literature. Topic for 1996-97: The impact of Christianity on Germanic pagan culture. We will study the energies and tensions created by the Christianizing of the Germanic invaders of England. A broad background in the history, aesthetics and beliefs of Anglo-Saxon culture, as well as language skills, will provide the context for an exploration of the literature of pre-Conquest England. Prerequisite: *one-hundred* level German or *one-hundred* level Latin or *English 230* or permission of the instructor. Two-hour seminar weekly. *S.L. Keefer*

English 4341

Advanced studies in Restoration and 18th-century literature. Topic for 1996-97: Jane Austen and the sexual sublime: studies in the 18th-century novel. The course traces the 18th-century obsession with the psychological experience of anxiety from the aesthetic theories of Edmund Burke and the literary practice of Samuel Richardson to its expression in the late work of Jane Austen and the gothic novel. Prerequisite: *English 300* or *301* or permission of the instructor. Two-hour seminar weekly. *S.W. Brown*

English 4342

Advanced studies in Restoration and 18th-century literature. Topic for 1996-97: Journalism and popular culture in the 18th century. A study of the development of the critical review in the periodical writing of the long 18th century (1665-1830). Emphasis will be upon the ways in which political issues and cultural criticism come to reside side by side in the form of the critical review. Prerequisite: none. Two-hour seminar weekly.

S.W. Brown

English 435

Advanced studies in the Romantics. Topic for 1996-97: The politics of Romanticism: Wordsworth and Byron. A study of Romantic poetry with attention to the Romantic attempt to find a "natural" poetic language, particularly in the autobiographical epics of Wordsworth and Byron: *The Prelude*, *Childe Harold's Pilgrimage*, and *Don Juan*. These works about the poetic mind reflect the excitement of the period 1789-1832 and the poets' commitment to revolutionary politics. Two-hour seminar weekly.

K. Chittick

English 4501

Advanced studies in modern drama. Topic for 1996-97: The plays of Bernard Shaw. A study of the major plays of Bernard Shaw, with particular emphasis on Shaw's social and political thought. Plays to be studied include *Mrs. Warren's Profession*, *Heartbreak House*, *Saint Joan*, *Arms and the Man*, *Candida*, *Major Barbara*, and *The Doctor's Dilemma*. Prerequisite: None. Two-hour seminar weekly.

L.W. Conolly

English 4502

Advanced studies in modern drama. Topic for 1996-97: Modern Irish drama. A study of drama in Ireland from the foundation of the Abbey Theatre to the present. Playwrights to be studied include Shaw, Yeats, Lady Gregory, Synge, O'Casey, Lennox Robinson, Denis Johnston, Brian Friel, Hugh Leonard, and Thomas Murphy. Prerequisite: none. Two-hour seminar weekly.

S.F. Gallagher

English 460

Advanced studies in modern fiction. Topic for 1996-97: Bloomsbury. The course will focus on the works of many of the

members of the Bloomsbury Group. We will explore the fiction of Virginia Woolf and E.M. Forster and the biographies of Lytton Strachey with their extensive use of fictional techniques. Prerequisite: none. Three-hour seminar fortnightly.

G.D. Eathorne

English-Canadian Studies 4651

Advanced studies in Canadian literature. Topic for 1996-97: The literature of Ontario. A study of the evolution of a distinctive Ontario outlook in Canadian writing from the early 19th Century to the present. Writers studied may include Traill, Moodie, Crawford, Duncan, Leacock, Davies, Findley, Hood, Callaghan, Matt Cohen, Atwood, Munro, Engel, Shields, Ondaatje, Purdy, Lee, Hospital, Keefer, Clarke, etc. Prerequisite: *English-Canadian Studies 265* or *266* or *365* or permission of the instructor. Two-hour seminar weekly.

M.A. Peterman

English-Canadian Studies 4652

Advanced studies in Canadian literature. Topic for 1996-97: Contemporary fiction: the Canadian Post-Modern. The course will explore the emergence of post-modern perspectives in Canadian fiction, from early experiments such as Leonard Cohen's *Beautiful Losers* to recent "mainstream" texts often considered realist rather than post-modern. Writers to be studied include Cohen, Hodgins, Kroetsch, Bowering, Findley, Atwood, Marlatt, van Herk, Ondaatje, King, Davies, Munro, Mistry, Senior. Prerequisite: *English-Canadian Studies 265* or *266* or *365* or permission of the instructor.

English-Canadian Studies 466

(See Canadian Studies)

English-Women's Studies 475

Advanced studies in American literature. Topic for 1996-97: William Faulkner and Toni Morrison. An examination of the representation of gender and race in the fiction of Faulkner (first term) and Morrison (second term), the two major voices engaging with the historical contradictions of the American South in the 20th-century. The fiction will be read in the context of current debates in feminist and African-American literary theory. Prerequisite: *English 231* or *232* or *310* or *325* or *371* or permission of the instructor. Two-hour seminar weekly.

M.C. Eddy

English 490

Reading course. The course allows the student to select, with the approval of the department, an area for research study which is then pursued under the direction of a member of the Department. Students are advised that Calendar deadlines for registration in courses apply to *English 490*.

English 4951

Special topic. Topic for 1996-97 (category F): Children's literature. Students will approach literature for children from two perspectives: first, through a brief historical appreciation of the origins of the genre in 17th- through 19th-century anthologized examples; and second, through an examination of how a proximity to the oral experience of language distinguishes the culture of the child from that of the adult. Prerequisite: none. Two-hour seminar weekly.

S.W. Brown

English 4952

Special topic. Topic for 1996-97 (category E): Literature of the Great War. The course focuses on the memoirs, novels, and poetry that came out of World War I. Writers to be studied include Wells, Ford, Lawrence, Rebecca West, Woolf, Shaw, Remarque, and Graves. Prerequisite: none. Two-hour seminar weekly.

D.K. Glassco

English-Cultural Studies 4953

Special topic. Topic for 1996-97 (category F): Theories of subjectivity. A course in post-structuralist theories of subjectivity, with a special emphasis on textual processes in subject formation. Works by Roland Barthes, Michel Foucault, Teresa de Laurentis, Monique Wittig, and Gayatri Chakravorty Spivak, among others, will be considered. Prerequisite: none. Weekly lecture and seminar.

R.J. Dellamora

English 4954

Special topic. Topic for 1996-97 (category F): The history of the book. An introduction to the rise of print culture in the West, and particularly in the English-speaking world, from the 15th to the 20th centuries. Topics to be studied include the book as physical object; literacy and reading habits; the development of printing, publishing, and bookselling; censorship and freedom of the press; copyright and

piracy; book collecting and the development of libraries. Prerequisite: none. Two-hour seminar weekly.

J.M. Treadwell

Environmental and Resource Studies

Professor and Chair of the Program

C.D. Metcalfe, B.SC. (MANITOBA), M.SC. (NEW BRUNSWICK), PH.D. (MCMASTER)

Professors Emeriti

C. Carter, B.SC., PH.D. (LONDON)

M.L. Rubinoff, B.A. (QUEEN'S), M.A., PH.D. (TORONTO)

Professors

R.D. Evans, B.SC. (TORONTO), PH.D. (MCGILL) (on leave Winter Term 1997); W.F.J. Evans, M.A., PH.D. (SASKATCHEWAN); T.C. Hutchinson, B.SC. (MANCHESTER), PH.D. (SHEFFIELD); R.C. Paehlke, B.A. (LEHIGH), M.A. (NEW SCHOOL FOR SOCIAL RESEARCH), PH.D. (BRITISH COLUMBIA)

Associate Professors

M.G. Fox, B.SC. (PENNSYLVANIA), M.EDS. (CALGARY), PH.D. (QUEEN'S) (on leave Fall Term 1996); M. Havas, B.SC., PH.D. (TORONTO); B. Leith, B.A. (WESTERN), M.A., PH.D. (YORK); D. Torgerson, B.A. (CALIFORNIA-BERKELEY), M.ES. (YORK), M.A., PH.D. (TORONTO) (on leave Winter Term 1997); T.H. Whillans, B.A. (GUELPH), M.SC., PH.D. (TORONTO)

Assistant Professors

S. Bocking, B.SC., M.A., PH.D. (TORONTO); D.G. Holdsworth, B.SC. (WATERLOO), M.SC. (MCMASTER), PH.D. (WESTERN ONTARIO); R. Ponce-Hernandez, B.ENG., M.SC. (CHAPINGO), D.PHIL. (OXFORD)

Conjunct Professor

P. Welbourn, B.SC., PH.D. (BRISTOL)

Demonstrator/Technicians

R.K. Loney, B.SC. (TORONTO); R.C. Williams, B.SC., M.SC. (TRENT)

Associated Faculty

Biology, E. Nol, R. Jones; *Canadian Studies*, J.H. Wadland; *Chemistry*, J.M. Parnis; *Computer Studies*, S. Regoczei; *Geography*, J.M. Buttle, P.M. Lafleur, J.S. Marsh; *Physics*, J.W. Earnshaw; *Sociology*, F. Nutch; *Women's Studies*, M. Hobbs

The Environmental and Resource Studies Program is an interdisciplinary program offered by Environmental and Resource Studies (ERS) in cooperation with twenty-three other University departments and programs. It provides an opportunity to take a single or joint major Honours or a single or joint major General B.A. (Environmental Studies, ER) or B.Sc. (Environmental Science, ES) degree, consisting of ERS core courses and support courses from other academic units. Students should note carefully the course descriptions to ensure that they have the necessary prerequisites for any support courses they may wish to take for ERS credit. Students who have not obtained prior written permission from instructors when prerequisites are not met will not be allowed to register in these courses. Enrolment limits will apply to many ERS courses in 1996-97. Note also the indication of which courses are available in alternate years. Course descriptions for courses not offered in 1996-97 are available on GOPHER.

Degree Requirements

Please read the section of the Calendar that describes the university-wide requirements for B.A. and B.Sc. degrees. Note also that a B.Sc. degree requires completion of a university-level Mathematics course. For a B.A. one of *Economics 101(a/b)/102(a/b)*, *Geography 101*, *Philosophy 105* or *Mathematics-Statistics 150* must be taken. Another course with quantitative content may be substituted with permission of the ERS Chair.

The Environmental and Resource Studies Program offers the student the opportunity to specialize in one of seven themes, each of which represents an informal stream of courses:

1. Environmental Thought and Communication (B.A.)
2. Environmental Policy and Planning (B.A.)
3. Community Economic and Resource Development (B.A.)
4. Natural Resource Management (B.Sc.)
5. Ecological Systems (B.Sc.)
6. Physical-Chemical Problems (B.Sc.)
7. Ecological Toxicology (B.Sc.)

A summary of the streams of specific core and support courses that are recommended for each theme is available from the ERS Program Office.

Honours Degree Programs

Single and joint major Honours programs consist of twenty full course equivalents, including a minimum of ten ERS courses for a single major and eight for a joint major. Students who have taken Grade 12 Environmental Science in Ontario or the equivalent elsewhere may opt to write a test during introductory week, a grade of at least 60% on which will exempt them from taking *Environmental and Resource Science 100*, but will not alter the required minimum number of ERS courses. Additional requirements include:

Bachelor of Science

ES 100

one full course from *ES-BI 202*, *ES 221a*, *ER 210b*, *ES 220*, *ES 230*, *ES 240*

ES-GO-BI 208a or a Mathematics half-course

five *three-hundred* and *four-hundred* level ERS courses (single major)

three *three-hundred* and *four-hundred* level ERS courses (joint major)

one *two-hundred* level or higher ER arts course

Note:

A total of 14 science courses is required for an Honours B.Sc.

Bachelor of Arts

ES 100

ER 251a and *210b* or one of *ER 200*, *250*

five *three-hundred* and *four-hundred* level ERS courses (single major)

three *three-hundred* and *four-hundred* level ERS courses (joint major)

one *two-hundred* level or higher

science course or two *one-hundred* level science courses excluding *ES 100*

The thesis course, *ER 402* or *ES 402*, is equivalent to two full courses, but requires permission of the ERS Chair and a minimum average in ERS credit courses of 75%. It is anticipated that most honours students will not do a thesis. Candidates for the thesis course that begins in September should apply for entry during pre-registration. Acceptance for the thesis course is dependent upon the candidate having made arrangements with a suitable ERS supervisor.

One listed support course may be taken for ERS credit in either the single or joint major honours program. Occasionally a second of these courses may be approved by the ERS Chair for single majors.

General Degree Programs

Single and joint major General programs consist of fifteen full course equivalents, including a minimum of six ERS courses for a single major and five for a joint major. Additional requirements include:

Bachelor of Science

ES 100

one full course from *ES-BI 202*, *ES 221a*, *ER 210b*, *ES 220*, *ES 230*, *ES 240*

ES-GO-BI 208a or a Mathematics half-course

three *three-* and *four-hundred* level ERS courses (single major)

two *three-* and *four-hundred* level ERS courses (joint major)

Note:

A total of 11 science courses are required for a B.Sc. General degree.

Bachelor of Arts

ES 100

ER 251a and *210b* or one of *ER 200*, *250*

three *three-hundred* level ERS courses (single major)

two *three-* and *four-hundred* level ERS courses (joint major)

One listed support course may be taken for ERS credit in either the single or joint major General program.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996–97.

Core Courses

Environmental and Resource Science 100

Scientific bases of environmental problems. Interdisciplinary environmental science stressing the physical, biological, socioeconomic and technological foundations of environmental problems. Focus is on air and water pollution, energy and solid waste management and global warming.

Environmental and Resource Studies-Canadian Studies 200

Canada: The land. (See Canadian Studies)

Environmental and Resource Science-Biology 202

Ecology. (See Biology)

Environmental and Resource Science-Geography-Biology 208a

Natural science statistics. The course covers commonly used statistical tools in Biology, Geography and Environmental and Resource Science. Lectures will address basic statistical methods and background theory. Workshops will provide practical experience in the context of each discipline. Prerequisite: *Geography 101* or *Environmental and Resource Science 100* or *Biology 101*. *Mathematics-Statistics 150* and *one-hundred* level computing experience are highly recommended.

Environmental and Resource Science-Geography 209b

Introduction to geographical information systems. (See Geography)

Environmental and Resource Studies 210b

Scientific expertise and environmental policy. This course focuses on the role of science in policy formulation and implementation. Issues to be considered include: the communication of scientific results, the setting of research priorities, and the relationship between science and other forms of knowledge. Prerequisite: *Environmental and Resource Science 100*.

Environmental and Resource Science 221a

Methods in environmental science. An interdisciplinary course which will familiarize students with a wide range of laboratory and field methods directly applicable to the study of environmental problems. Prerequisite: two of *Chemistry 103a*, *113a*, *123b*, *133b* or *Chemistry 100*. (Excludes *ES 220*.)

Environmental and Resource Science 230

Energy science and technology. A discussion of the scientific principles of energy and thermodynamics, and the current and future prospects for energy production, conversion, storage and transmission. Prerequisite: *Physics 100* or one full first year Chemistry credit.

Environmental and Resource Science-Biology 240

Environmental microbiology. The first section lays the foundations of microbiology with an overview of essential biological chemistry, ecosystem science, cell biology, microscopy and cultivation techniques. Application is to bioremediation and site reclamation. Prerequisite: *Environmental and Resource Science 100* or

OAC Biology. (Offered only in Oshawa on occasion. Interested students should consult the Part-Time Studies brochure.)

Environmental and Resource Studies-Canadian Studies 250

Canadian natural resource theory and management. This course considers theories of renewable and non-renewable resource management, and examines these practices with respect to specific Canadian resources. Prerequisite: *Environmental and Resource Science 100*.

Environmental and Resource Studies 251a

Methods in environmental studies. This course will focus on methods used in both professional and academic contexts. Methods examined in the course include surveys, content analysis, depth interviews, ethnography, focus groups and action research. Emphasis will be on application of the methods to environmental problem-solving and environmental research contexts, particularly at the local/regional level. Prerequisite: *Environmental and Resource Science 100*.

Environmental and Resource Studies 308

Waste management. This course examines current and leading edge methods and systems for waste management and for diversion of used resources from disposal. Related social, economic, health, political and ecological matters are considered within a policy and planning framework. Prerequisite: *Environmental and Resource Studies-Canadian Studies 250*.

Environmental and Resource Studies-Canadian Studies 310

Public policy and the Canadian environment. A comparative study of Canadian environmental policy and the history of the Canadian environmental movement with an emphasis on policies relating to environmental health, energy and materials use, biodiversity, waste management and land use. Prerequisites: one two-hundred level Environmental and Resource Studies/Canadian Studies/Political Studies or Administrative Studies credit.

Environmental and Resource Studies 311b

Environmental impact assessment: a case study approach. Environmental impact assessment brings together scientific, economic, social and political perspectives in an attempt to anticipate and manage the consequences of human actions for the environment. This course will examine

different approaches to environmental impact assessment, contrasting provincial with federal and social with biophysical. Case studies will be used to illustrate particular theoretical and practical approaches. Prerequisite: the equivalent of one full two-hundred level ERS course and a minimum of 10 university credits. (Excludes *ER 306*.)

Environmental and Resource Science 313a

Introduction to nuclear science. Radioactivity, ionizing radiations, dosimetry concepts and calculations, health effects of ionizing radiations, sources and levels of environmental radiation. Particular attention will be focused on the nuclear power industry and production of nuclear weapons, and health and environmental risks associated with these activities. Prerequisites: ten university credits including at least one full laboratory-based science course.

Environmental and Resource Science 314b

Tracer techniques in the environment. This course will present practical approaches to tracing environmental processes and pathways. It examines techniques for the use of various radioactive and stable isotopic tracers. Instruction in the use of these tracers will be included and practical applications of relevance to current environmental issues will be discussed. Prerequisites: ten university credits including at least one full laboratory-based credit. *Environmental and Resource Science 313a* is recommended but not required.

Environmental and Resource Science 315b

Product life cycle analysis. This course will introduce students to the concepts and applications of Life Cycle Analysis. LCA is a process to evaluate the environmental burdens associated with product, process or activity by quantifying energy and materials used and wastes released to the environment; to assess the impact of these activities and to identify opportunities to affect environmental improvements. Prerequisites: either *Environmental and Resource Science-Geography-Biology 208a* and *Environmental and Resource Studies 210b* or *Environmental and Resource Science 221a* and *Environmental and Resource Studies 210b*.

Environmental and Resource Science 316b
Community resource management. Community natural resource management. The course examines critically and constructively community-based experiences in the management of natural resources. It explores the topic of self-regulation by resource interest groups, drawing on cases from fisheries, forestry, wildlife and integrated sectors. Traditional and developmental approaches are contrasted. Prerequisite: the equivalent of one full two-hundred level ERS course.

Environmental and Resource Science 320
Management of forest ecosystems. This course offers an appreciation of the problems in managing forest ecosystems. It looks at the ecological processes which create and maintain forests and at how foresters attempt to manage them, and the environmental consequences of forestry practices. It then examines case studies, drawn from Ontario and other parts of the world. Prerequisite: either *Environmental and Resource Science-Biology 202* or *Environmental and Resource Science 221a* (ES 220).

Environmental and Resource Studies 330
Environmental ethics. A critical examination of issues arising from the impact of industrial and development policies on the natural environment. The focus will be on such themes as: the domination of nature, the ethics of scarcity, animal and environmental rights, social benefit and technological risk, and the debate among deep ecologists, social ecologists and ecofeminists over the care of the earth. Prerequisite: one two-hundred level Philosophy course, or the equivalent of one full two-hundred level Environmental and Resource Studies course.

Environmental and Resource Studies-Canadian Studies-Geography 333a
Wilderness resources. (See Geography)

Environmental and Resource Science 335a
Ecological agriculture. An exploration of the theory, scientific basis and practice of ecological agriculture, agroforestry, permaculture and related subjects. The course is both critical and prescriptive. Prerequisites: *Environmental and Resource Science-Biology 202* or *Environmental and Resource Studies-Canadian Studies 250* or *Environmental and Resource Science-Geography-Biology 208a* and *Environmental and Resource Studies 210b*.

Environmental and Resource Science-Chemistry 341b
Instrumental analysis. (See Chemistry)

Environmental and Resource Science 345a
Air pollution chemistry. The sources, distribution and impacts of atmospheric pollutants are examined. The course addresses alternative scientific approaches in investigating atmospheric pollution and modelling systemic responses. Emphasis will be on questions other than climatic change such as tropospheric ozone and acid rain. Prerequisite: *Chemistry 113a/123b* or 100. (Excludes ES 397a.)

Environmental and Resource Science 351a
Ecology and management of wetland systems. This course involves intensive first-hand study of one type of ecosystem in natural and culturally degraded states. Wetlands occur at the interface of both terrestrial and aquatic ecosystems. Wetland management, thus requires understanding of ecological processes and management practices common to most of Canada. Prerequisite: *Environmental and Resource Science-Biology 202* or *Environmental and Resource Science 221a* (ES 220) or *Environmental and Resource Studies-Canadian Studies 250*. (Excludes ES 350.)

Environmental and Resource Science 355
Pollution ecology. This course will familiarize students with ecological and human health effects of selected environmental pollution problems; particularly those related to chemical contaminants and physical changes to water, air and soil. Prerequisites: *Environmental and Resource Science 221a* (ES 220) or *Environmental and Resource Science 230* or *Environmental and Resource Science-Biology 202*.

Environmental and Resource Studies-Comparative Development Studies 360
Environment and development. The integration of environment and development in theory and practice. The course contrasts internationally expressed intentions on "environmentally sustainable development" with the realities in developing countries. Prerequisite: *Comparative Development 200* or *Environmental and Resource Studies-Canadian Studies 250*.

Environmental and Resource Science 365a
Soil management and conservation. Soils represent one of the most important natural resources from the point of view of sustainable agriculture and forestry, and protection of habitat. This course explores the scientific basis and management options for conservation of soil resources. Prerequisite: *Environmental and Resource Science 221a (ES 220)*. Recommended co-requisite or prerequisite: *Geography 356a*.

Environmental and Resource Science 370
Environmental toxicology. This course introduces students to the chemical, physical and toxicological properties of organic and inorganic toxicants in aquatic and terrestrial environments. All students taking *Environmental and Resource Science 370* are required to take the Animal Care course. Prerequisites: *Biology 101*, *Environmental and Resource Science-Geography-Biology 208a* and *221a* or *Environmental and Resource Science 220*. Previous completion of *Biology 203*, *Biology-Chemistry 230b* and *Chemistry 210a* is recommended.

Environmental and Resource Studies-Economics 381a
Environmental economics. (See Economics)

Environmental and Resource Studies-Canadian Studies-Economics 382a
Canadian renewable resource policy. This course is designed to introduce students to the economic theory of renewable resources in a Canadian context. It focuses on analyzing renewable resources in a Canadian political, social, cultural and regulatory framework and is designed to be accessible to students from a variety of disciplines with minimal exposure to economic theory. Prerequisite: the equivalent of one full two-hundred level Environmental and Resource Studies or Canadian Studies credit and *EC 101a/b* and *EC 102a/b*, or permission of instructor credit.

Environmental and Resource Studies/Science 385, 386a, 387b, 388c
Field course. Courses are offered through the Ontario Universities Program in Field Biology.

Environmental and Resource Studies-Science 390, 391a, 392b, 393c
Reading course. This is a research course on a specific topic. The course is only open to ERS majors or joint majors with two B credits (or better) in ERS courses.

Written permission must be obtained from the appropriate instructor and ERS Program Chair prior to early registration.

Environmental and Resource Studies 3951
Environmental Decisions and Evaluation. This course critically explores modes of decision-making in contemporary institutions with special emphasis on methods of evaluation in environmental management. Decision analysis, risk assessment and other techniques of 'scientific' decision/evaluation are studied using both theoretical and case-study approaches. Prerequisite: *Environmental and Resource-Canadian Studies 250*.

Environmental and Resource Studies 399a
Introduction to environmental law. Students will be provided with a comprehensive overview of environmental law in Canada. In particular, the course will examine the key environmental laws and policies at the provincial, federal and international level. Prerequisites: *Environmental and Resource Science 100*, and minimum of ten university credits.

Environmental and Resource Studies-Science 401/402
Thesis: this is a major research project combining one credit for Environmental and Resource Studies/Science and one for the other discipline in a joint major (*ER/ES 401*), or counting as two credits for Environmental and Resource Studies/Science (*ER/ES 402*). This project course requires permission of the ERS Chair and a minimum average in ERS credit courses of 75%. It is anticipated that most honours students will not do a thesis. Candidates for the thesis course that begins in September should apply for entry during Early Registration. Acceptance for the thesis course is dependent upon the candidate having made arrangements with a suitable ERS supervisor. Students are required to attend a regularly scheduled two-hour workshop in which techniques and approaches to thesis research are presented and discussed.

Environmental and Resource Science-Biology 403a/b
Research design and data analysis. (See Biology)

Environmental and Resource Science-Geography 404a/b
Hydrochemical fluxes in the hydrosphere. (See Geography)

Environmental and Resource Science-Biology-Geography 406a
The geochemistry of natural waters. This course is a graduate level course open to a limited number of fourth-quarter students with appropriate qualifications. The course will examine the chemical and physical properties of water, snow and ice with an emphasis on those parameters which influence the distribution of biota, nutrients and contaminants in the aquatic environment. Topics will include the hydrologic cycle, the carbonate system and pH control, weathering and water chemistry, redox equilibria, hydrologic transport, and the properties of snow and ice. Prerequisites: students contemplating taking this course should have at least two Chemistry courses. *Biology 305* or *Geography 353a* are recommended as co- or prerequisites.

Environmental and Resource Science-Biology-Geography 407b
The fate of contaminants in the aquatic environment. This course is a graduate level course open to a limited number of fourth-quarter students with appropriate qualifications. The course will emphasize the mathematical modelling of the fate and distribution of aquatic contaminants, including models for toxic metals, organic xenobiotics and groundwater contaminants. Basic algorithms and assumptions of contaminants models will be discussed and students will get hands-on experience in applying existing models (e.g. MINTEQ, QWASI). An emphasis will be placed on using models to determine the dominant pathways influencing the fate of inorganic and organic contaminants in the aquatic environment. Prerequisite: *Environmental and Resource Science-Geography-Biology 406a*.

Environmental and Resource Science-Biology 412a
Environmental health. This course introduces students to the epidemiological, toxicological and molecular basis of environmental disease in humans, with an emphasis on environmental carcinogenesis. Prerequisites: *Biology 101* and *Environmental and Resource Science-Geography-Biology 208a* and *221a* (ES 220). *Biology 203* is highly recommended.

Environmental and Resource Science-Biology 423a
Aquaculture. The culture of fish, aquatic invertebrates and other organisms is a major and growing source of food in the world. This course examines techniques used in Canadian and worldwide aquaculture, their biological basis, current research to improve production, and environmental issues related to aquacultural practices. Excursions to aquacultural facilities are planned. Prerequisite: *Environmental and Resource Science-Biology 202* or *Environmental and Resource Science-Geography-Biology 208a* and *221a* (ES 220). Preference will be given to students with one of *Environmental and Resource Science 351a* (ES 350), *Biology 305* or *Biology 314a*. There will be a total charge of \$10 for field trips. (Excludes *ES-BI 304* and *ES-BI 413*).

Environmental and Resource Science-Biology 424b
Fisheries assessment and management. Biological and socioeconomic techniques and general approaches to fisheries assessment and management. Part of the focus will be on case studies where these techniques/approaches have been successfully or unsuccessfully applied. Prerequisite: *Environmental and Resource Science-Biology 202* or *Environmental and Resource Science-Geography-Biology 208a* and *Environmental and Resource Studies 210b*. Preference will be given to students with *Environmental and Resource Science 423a* (Aquaculture) or *Biology 314a*. (Excludes *ES-BI 304* and *ES-BI 413*).

Environmental and Resource Science 430a
Ecosystem response to changes in the hydrosphere. The course will examine the responses of biological communities to stress in the biological, physical and chemical components of aquatic ecosystems. Seminars and readings in the first part of the course will provide a general background for considering a case study of a specific problem. Socioeconomic aspects of development will also be addressed, as they affect the specific case study. No prerequisites. (Excludes *ES 496b*)

Environmental and Resource Science 435b
Climatic change. This course will examine the meteorological principles, measurements and models that are the basis of current understanding of climatic change. It addresses in particular, the biological

impacts of climatic changes and the ways in which these biological changes might affect human resources and the process of climatic change itself. Prerequisite: *Environmental and Resource Science 100* or *Geography 101* or *Physics 100* or *Biology 150*; minimum of 10 university credits. (Excludes *ES 498b*)

Environmental and Resource Science-Biology 439a/b
Conservation biology. (See *Biology*)

Environmental and Resource Science-Geography 445a
Spatial modelling and geographical information systems. (See *Geography*)

Environmental and Resource Science 451
Applied ecology project. The course will introduce students to the investigative scientific methods by which impacts of pollutants on ecosystems can be investigated. In the second term, this will lead to students carrying out independent investigations of situations they select, both in terrestrial and aquatic ecosystems. A field trip to Sudbury is included. Prerequisites: *Environmental and Resource Science 355* and *Environmental and Resource Science-Biology 202*, plus either *Environmental and Resource Science 370* or *Biology 305*.

Environmental and Resource Science 452b
Restoration ecology. This course is about the science of restoring and rehabilitating ecosystems. Principles, applications and practical case studies are covered. No regular field or laboratory work is scheduled but some required field site visits are planned. Prerequisite: *Environmental and Resource Science-Biology 202* or *Environmental and Resource Studies-Canadian Studies 250*.

Environmental and Resource Studies-Politics 460
Public policy in comparative perspective. (See *Political Studies*).

Environmental and Resource Studies 465a
History of environmental science and policy. Ecologists and other scientists have studied the natural environment for many decades; their ideas and research practices have both reflected, and influenced, public values and priorities. This course examines this history, providing essential background to contemporary discussions about science and its political relevance. Prereq-

uisite: *Environmental and Resource Studies 250* or *210b*.

Environmental and Resource Studies-Canadian Studies 470

Bioregionalism: a research course focused on ecological and community-based planning and development, applied to the Haliburton Highlands. The literature on bioregionalism is examined critically and then used constructively, if loosely, to frame primary research. Students undertake relatively intensive independent projects, often in co-operation with members of communities in Haliburton. (Excludes *ERCA 4901*)

Environmental and Resource Studies 475
Group problem solving. This course focuses on group decision-making, problem recognition and problem resolution with respect to environmental matters. Concepts to be explored include communication, co-operation, shared vision, negotiation and group bias. Prerequisites: *Environmental and Resource Science 100* and a minimum of eight university credits. (Excludes *ES 390*)

Environmental and Resource Studies 480a
Introduction to planning law. An examination of the principles of planning law and regulation and their application in Ontario to land-use issues. The process of administrative law will be explored with practical reference to tribunals, the Ontario Municipal Board and the Environmental Assessment Board. Prerequisite: *Environmental and Resource Studies-Canadian Studies 200* or *250*. *Environmental and Resource Studies 399a* (Introduction to environmental law) is recommended.

Environmental and Resource Studies-Science 485, 486a, 487b, 488c
Field course. Courses are offered through the Ontario Universities Program in Field Biology.

Environmental and Resource Studies-Science 490, 491a, 492b, 493c
Reading course. This is a research course on a specific topic. The course is only open to ES majors or joint majors with a B average (or better) in ERS courses. Written permission must be obtained from the appropriate instructor and ERS Chair prior to pre-registration.

Environmental and Resource Studies 499b
Environmental law and regulation. This course is intended to provide students with a practical and detailed examination of the enactment, enforcement and limitations of environmental law and policy. The course will emphasize Ontario's environmental regime, and will focus on a recent case study. Prerequisites: students must have ten university credits. *Environmental and Resource Studies 399a* (Introduction to environmental law) is recommended.

Support Courses

Arts

Administration 410: Management theory
Administration 420: Professional ethics
Comparative Development 400:
Modernity and development
Computer Studies 100, 101a/102b/150b,
or *202a/203b*
Economics 101a/b, 102a/b: Introductory
microeconomics/macroeconomics
Economics 260a: Canadian economic
growth and development I: up to 1929
Economics 261b: Canadian economic
growth and development II: after 1929
Economics-Comparative Development
331a: Economics of developing countries
Economics-Comparative Development
333b: Economics of global interdependence
Geography 101: Human and physical
environments
Geography 303a: Statistical applications
in geography
Mathematic-Statistics 150: Introduction
Native Studies 150a, 151b: Community
development
Philosophy 105: Practical reasoning
Political Studies-Comparative
Development 450: Democracy and
democratization

Science

Biology 100, 150 or 101
Biology 306a: Limnology
Biology 314a/b: Fish biology
Biology 321a/b: Plant ecology
Biology 328a/b: Stress ecology of plants
Biology 350a/b: Biogeography
Chemistry 100, 103a/113a or 113a/133b
Chemistry 210a/230b: Organic,
Biochemistry
Chemistry 240a/b: Analytical chemistry
Chemistry 341a/b: Instrumental analysis
Computer Studies 100, 101a/102b/150b or
202a/203b: Introduction
Geography 245: Climatology

Geography 341a/b: Climatic change
Geography 356a/b: Pedology
Mathematics 110: Calculus
Mathematics-Statistics 150: Elementary
statistics
Mathematics-Computer Studies 351:
Linear statistical models
Physics 100: Elementary physics
Science 350: Communicating science

Four-hundred Series

Approval may be given for other courses, not in the above lists, to be taken as support courses in a single or joint major Honours program.

Geography

Professor and Chair of the Department
G.A. Nader, B.A. (LONDON), PH.D. (DURHAM)

Professors

W.P. Adams, B.A. (SHEFFIELD), M.SC., PH.D. (MCGILL) (on leave); A.G. Brunger, B.SC. (SOUTHAMPTON), M.SC. (ALBERTA), PH.D. (WESTERN ONTARIO); J.M. Buttle, B.A. (TORONTO), PH.D. (SOUTHAMPTON) (on leave Winter Term 1997); J.G. Cogley, M.A. (OXFORD), PH.D. (MCMASTER); F.M. Helleiner, M.A., PH.D. (WESTERN ONTARIO); J.S. Marsh, B.A. (READING), M.SC. (ALBERTA), PH.D. (CALGARY); C.H. Taylor, M.A. (CANTERBURY), PH.D. (MCGILL)

Associate Professors

P.M. Lafleur, B.SC. (BRANDON), M.SC. (TRENT), PH.D. (MCMASTER); C.L. McKenna Neuman, M.SC. (GUELPH), PH.D. (QUEEN'S) (on leave Winter Term 1997)

Assistant Professor

R. Ponce-Hernandez, B.ENG., M.SC. (CHAPINGO), D.PHIL. (OXFORD)

Technicians/Demonstrators

M.A. Ecclestone, B.SC. (TRENT), M.SC. (GUELPH); A.L. Crechiolo, B.A. (WILFRID LAURIER)

Conjunct Professor

K. Beesley, B.E.S., PH.D. (WATERLOO)

Required Courses

The single-major Honours program consists of 20 courses. Minimum 10 courses in Geography including: *Geography 101, 208a, 211b, 303a/b, 411a/b* - the equivalent of one full course from among: *231a/b, 245, 250, 263a/b, and 271a/b*

- and one of 401, 402, 440, 470
- highly recommended: *Geography-Environmental and Resource Studies 209b, Geography 386a*

Joint-major Honours program. Minimum eight courses in Geography. Same required and recommended courses as for single-major Honours program.

Single-major General program. Minimum six courses in Geography, including: *Geography 101, 208a, 211b*
 - the equivalent of one full course from among 231a/b, 245, 250, 263a/b, and 271a/b
 - highly recommended: *Geography-Environmental and Resource Studies 209b, Geography 411a/b and Geography 303a/b and Geography 386a*

Joint-major General program. Minimum five courses in Geography. Same required and recommended courses as for single major General program.

Students should note that, because most *three-hundred* series courses are offered only in alternate years, they should plan their courses well in advance, **paying particular attention to prerequisites for required four-hundred series courses when deciding on two-hundred and three-hundred series courses.** It is possible to take certain *three-hundred* series courses after *Geography 101* and most *four-hundred* series courses after *Geography 208a* and *Geography 211b*.

In order to be eligible to graduate with a B.Sc. degree, a student must have completed a university level mathematics course.

Recommended Courses

The attention of students in Geography is drawn to *Mathematics 100, Mathematics-Statistics 150, Science 350, and Computer Studies 101a, 102b, 202a.*

Students intending to teach are advised to include a regional course. Geography of Canada (*Geography 361*) and Geography of the Polar regions (*Geography 364a/b*) are particularly useful. The Biology, Canadian Studies, Computer Studies, Environmental and Resource Studies, and Comparative Development Studies programs can complement a Geography program.

Note:

Students with an interest in Applied Geography are urged to consider the following Diploma programs offered by the School of Natural Resources, Sir Sandford Fleming College (Lindsay): Geographic Information Systems Technology and Cartography Technology. Students wishing to complete an Emphasis in Geographical Information Systems (GIS) are advised to consult the appropriate section of the Calendar (Joint Programs) for information about incorporating the GIS Applications Specialist Certificate from Sir Sandford Fleming College into the Honours Program at Trent.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Geography 101

Human and physical environments. Serves to indicate the scope and methods of geography. A survey of environmental systems, human interactions with them, and the use of distinctive areas on Earth. Emphasis on concepts, problems, research methods, and Canadian examples. Approximately four hours weekly, lecture, films, laboratory exercises, field project.

Geography-Environmental and Resource Science-Biology 208a

Natural science statistics. The course covers commonly used statistical tools in Biology, Geography, and Environmental and Resource Science. Lectures will address basic statistical methods and background theory. Laboratories will provide practical experience in the context of each discipline. (Excludes *Geography 201*.) Prerequisite: *Geography 101* or *Environmental and Resource Science 100* or *Biology 101*. *Mathematics-Statistics 150* and *one-hundred* level computing experience are recommended. Two-hour lecture weekly and three-hour laboratory bi-weekly.

Geography-Environmental and Resource Science 209b

Introduction to Geographical Information Systems. The course provides an introductory level exposure to the fundamentals of GIS technology and applications. The components of a GIS are described and its capabilities and related operations reviewed. The essentials of spatial data structures and data storage, and the retrieval and manipulation of data are examined. The

course has laboratory exercises with different data structures to illustrate concepts and operations. Prerequisite: *Geography-Environmental and Resource Science-Biology 208a*. Elementary or intermediate-level experience with microcomputers and their operating systems is desirable. Lectures and laboratory work weekly.

Geography 211b

Methods of geographical analysis. This course describes techniques of investigation in geography, building on concepts encountered in *Geography 101*. Data retrieval methods include remote sensing, and forms of terrestrial survey. Cartographic and other representational techniques are presented. (Excludes *Geography 201*.) Prerequisite: *Geography 101* and *Geography 208a*. Four hours weekly, lecture and laboratory classes. Field work.

Geography-Anthropology-Classical Civilization 223a

The ancient city. The developments, innovations, and achievements of the city in the Greek and Roman world from the Bronze Age to the late Empire. Open to students in the second quarter and beyond. (See Classical Civilization.)

Geography 231a

Recreation geography methods. Examines methods for determining the historical geography of recreation, the demand for recreation, the supply of land, facilities and services for recreation, and the economic, environmental and social impacts of tourism. Prerequisite: *Geography 101*. Lecture and seminar weekly.

Geography-Science 240

Geology. Principles of mineralogy, petrology and sedimentology, palaeontology and structural geology; geophysics of the Earth's interior, and recent developments in geomagnetism, seismology, and global tectonics. Open to students in second year and above, and to first-year students with permission of the instructor. Two hours of lectures and a two-hour laboratory session weekly, and field work.

Geography 245

Climatology. Study of the elements of weather and climate; global and local energy and water balance regimes; climate change and classification. Prerequisite: *Geography 101* or *Environmental and*

Resource Studies 100. Three hours of lectures, laboratories and seminars per week, and field work.

Geography 250

Geomorphology. Geomorphic processes and landscape evolution. Running water, ice, and other landforming agents. Geometrical and mechanical explanation of forms and processes. The imprint of the Ice Ages. The physical landscape and its interaction with the human environment. Prerequisite: *Geography 101* or *Environmental and Resource Studies 100*. Three hours weekly; lectures, laboratories, and field work.

Geography-Canadian Studies 263a

Historical geography. Geography of North America before 1800, emphasizing early Canada. Themes pursued include exploration, environmental perception, resource exploitation, colonial settlement, urbanization, and regional development. Particular attention is paid to the geography of the northern imperial possessions of France and England in what is now Canada. (Excludes *Geography 330*) Prerequisite: *Geography 101*. Lecture and tutorial weekly, field work.

Geography 271a

Urban systems. The nature of urban geography; the historical development of urban systems, emphasizing Canada; the location, size, function, and spacing of cities at national and regional levels. (Excludes *Geography 270*) Prerequisite: *Geography 101*, or *Economics 101a/b* and *Economics 102a/b*, or *Sociology 100*. Lecture and seminar weekly.

Geography 303a

Statistical applications in geography. A survey of some of the more important statistical techniques used in geography with particular emphasis on computer-based analysis. Computer packages such as SPSS and SAS will be used in the application of these techniques to geographical data. Prerequisite: *Geography 201* or *208a* or *Mathematics-Statistics 150*. Two-hour lecture weekly and occasional tutorial. *Geography 303a/b* is a prerequisite for *Geography 401/402* and is required for honours graduation.

Geography-Canadian Studies 332b

Settlement geography. Process, patterns, and forms of human settlement, with

special reference to North America and Europe; explanation and interpretation of the evolution and geographical location of rural settlement at continental, regional, and local scales. Prerequisite: *Geography 263a*. Lecture and tutorial weekly.

Geography-Canadian Studies-Environmental and Resource Studies 333a
Wilderness resources. An examination of the wilderness concept and the history, planning, and management of wilderness resources with special reference to national parks and Canada. Prerequisite: *Geography 231a/b* or *Environmental and Resource Studies 200* or *Environmental and Resource Studies 250*.

Geography 337b
Recreation geography issues. Examines the characteristics of, and issues pertaining to, recreation, tourism, and parks in various environments from the city to the wilderness and abroad. Prerequisite: *Geography 231a/b*. Lecture and seminar weekly.

Geography 341b
Climatic change. Mechanisms and patterns of changes in weather and climate, both natural and anthropogenic. An understanding of the principles of general circulation, global and local energy balance models, and basic meteorological processes is assumed. Prerequisite: *Geography 245*. Lectures, tutorials and exercises.

Geography 342b
Hydrometeorology - snow and ice. Study of geographical aspects of ice with particular reference to its role in hydrometeorological processes. Treatment of falling snow, snowcover, lake ice, glacier ice. Pre- or co-requisite: *Geography 245*.

Geography 351a
Glacial and Quaternary geomorphology. The principles of glaciology. Glacial landforms and landscapes, particularly those of southern Ontario. Quaternary history with illustrations of the principles and uses of radiocarbon dating, isotope ratio analysis, and pollen analysis. The causes of Ice Ages, including the next one. Prerequisite: *Geography 250* or *Geography-Science 240*.

Geography 353b
Hydrology. Study of the movement of water through the environment with emphasis on terrestrial aspects including

interception, infiltration, soil moisture, groundwater, surface runoff, and stream-flow, also covering human impact on hydrological processes. Prerequisite: *Geography 245*. Lecture and tutorial weekly, field work.

Geography 354a
Fluvial geomorphology. Morphology of rivers and river systems; relationships between process and form. Erosion, transportation and deposition of sediments; channel morphology, the drainage basin as a geomorphic unit; human impact on river morphology. Prerequisite: *Geography 250* or *Geography-Science 240* or permission of instructor. Two hours of lectures weekly, one hour lab in alternating weeks, field work.

Geography 355a
Introduction to groundwater movement. Study of the movement of water through porous, permeable media. Hydraulic head and potential; permeability; storage coefficient; confined and unconfined aquifers; recharge and discharge; analysis of data from waterwell production tests; elementary groundwater flow systems, the 'prairie profile'. Prerequisite: *Geography 353a/b* and *Mathematics 100* or equivalent. Two lecture hours and two laboratory hours weekly.

Geography 356a
Pedology. The course will concentrate on the techniques employed in the analysis of the physical, hydrological, chemical, and biological properties of soils, as well as those processes which control the development of the soil. Prerequisite: *Geography 250* or *Geography-Science 240* or permission of instructor.

Geography 357b
Modelling applications in physical geography. The course will emphasize the use of modelling techniques in various aspects of physical geography. Topics to be covered include: conceptual, analogue, and mathematical models; problems of scaling and indeterminacy; parameter estimation; optimization techniques; sensitivity analysis; model evaluation. Examples of modelling techniques and applications will be drawn from a variety of aspects of physical geography. Prerequisite: *Geography 201* or *208a* and either *245* or *250* and either *Mathematics 100* or *OAC Calculus*; highly recommended *Computer Studies 101a, 150b*. Three hours of lectures and laboratories per week.

Geography-Canadian Studies 361

Geography of Canada. A problem-oriented course with a strong concentration for a short period on background knowledge, followed by a variety of themes and issues treated from a geographical perspective. Prerequisite: *Geography 101* or permission of instructor. Three hours or more weekly; lectures, seminars, tutorials, occasional field trips.

Geography-Canadian Studies 363b

Historical geography of Canada before 1900. Geography of late-eighteenth and nineteenth century Canada. Themes pursued include environmental perception and transformation, immigration, settlement, cultural and ethnic patterns, social institutions, industrialization, transportation, urbanization, and regional emergence within Confederation. Individual student research projects are encouraged on aspects of early Canada, particularly within the local setting of southern Ontario, using primary sources such as early maps, surveys, diaries, sketches, and photographs. Prerequisite: *Geography 263a/b*. (Excludes *Geography 330*.) Lecture and tutorial weekly, field work.

Geography-Canadian Studies 364b

Geography of the Polar regions. Study of selected aspects of the Polar regions with considerable reference to northern Canada but with the deliberate intention of developing comparisons between it and other parts of the Polar regions. Prerequisite: *Geography 101* or permission of instructor. Two lecture hours, one seminar per week.

Geography-Canadian Studies 371b

Urban planning. The main planning principles which govern the economic, social, and physical development of cities. National, provincial, and municipal policies and their impact on the urban system. Historical development of planning. Comparative analysis of planning in North America and Europe. Prerequisite: *Geography 271a*. Lectures and tutorials.

Geography 373b

Internal city structure. The city as a system; historical perspectives on urban change; the internal organization of cities; social and economic patterns and processes within cities; contemporary urban geographic problems. Prerequisite: *Geography 271a*. Lecture and seminar weekly.

Geography-Canadian Studies 376a

The urban-rural fringe. Urban-rural land conflicts occurring in the areas surrounding major cities, the problems arising from these conflicts, and the types of policy required to resolve them. A particular focus will be the impact of urbanization on the countryside in Canada. Prerequisite: *Geography 101*, or *Economics 101a/b* and *Economics 102a/b*, or *Sociology 100*. Lecture and seminar weekly.

Geography 380a

Regional economic development. Analysis of how a region grows; regional responses to national economic development; the land use structure of regions; regional planning principles; review of Canadian regional planning policies. Prerequisite: *Geography 101* or *Economics 101a* and *102b*. One lecture and one laboratory per week.

Geography 386a

Field research in geography. This course is highly recommended, especially for those pursuing the honours thesis option. Students will learn the skills of research proposal writing, project design and field management and will design and carry out a research project in a geographical specialization of their own choosing. The course centers on a field trip during the Fall Reading Week, when the research projects will be conducted. Prerequisite: *Geography 201* or *211b*. One lecture and seminar per week. Minimum of six days in the field at cost to the student.

Geography 390, 391a, 392b, 393c

Reading course. Prerequisite: *Geography 101*. (Offered only if instructor is available.)

Geography 395, 396a, 397b, 398a

Special topic in geography. (Offered only occasionally.)

Geography-Women's Studies 396b

Special topic: Gender and Geography. Selected themes and topics examining the relationship between gender and spatial organization. Themes to be examined include the nature of domestic space; the gendered use of public, private and urban space; and the relationship between gender, racism and cultural difference. Prerequisite: *Geography 101* or *Women's Studies 100* or permission of the instructor. Lecture and seminar weekly. Local field trips.

Geography 401, 402

Honours thesis. Students will engage in a major research project entailing periodic meetings with faculty. Seminar presentations in Fall and Winter terms on research. Students taking this course are strongly encouraged to obtain full details of it and begin preparation prior to registering for the course. *Geography 402* is double-credit in Geography. *Geography 401* is single-credit involving the same thesis as submitted to the other department/program in a joint-major. Prerequisite: For single-majors, *Geography 303a/b*, two other *three-hundred* level Geography course equivalents, and a 70% average in Geography courses. For joint majors, two *three-hundred* level Geography course equivalents, including *Geography 303a/b* and a 70% average in Geography courses. Students must obtain the approval of the Department before March 31, 1996.

Geography 404a

Hydrochemical fluxes in the hydrosphere. The course will examine techniques for monitoring hydrochemical fluxes within the hydrological cycle. The curriculum will cover problems relating to the measurement of variables such as discharge, soil moisture, organic and inorganic constituents in the saturated and unsaturated zones, atmospheric vapour fluxes, precipitation, and snowcover. The focus of the lectures and labs will be on measurement, sampling techniques, and instrumentation. Prerequisite: *Geography 201* or *Geography 211b* and permission of instructor.

Environmental and Resource Science-Biology-Geography 406a

The geochemistry of natural waters. This course is a graduate level course open to a limited number of fourth-quarter students with appropriate qualifications. (See Environmental and Resource Studies.)

Environmental and Resource Science-Biology-Geography 407b

The fate of contaminants in the aquatic environment. This course is a graduate level course open to a limited number of fourth-quarter students with appropriate qualifications. (See Environmental and Resource Studies.)

Geography 411b

Philosophy of geography. The evolution of geographical ideas, particularly concepts of place, region, environment, or organiza-

tion of space by nature and by society; philosophy of science and history; ethical issues, academic and social prejudice in geographical studies, radical geography. Prerequisite: *Geography 201* or *Geography 208a* and *Geography 211b*. Lecture and tutorial weekly. Note: Open to students in third quarter. *Geography 411a/b* is required for honours graduation.

Geography 440

Research in physical geography. A seminar course on themes, methodologies and approaches of current major interest. Individual presentations based on directed readings and study. Prerequisite: two of *Geography 341a/b*, *342a/b*, *351a/b*, *353a/b*, *354a/b*, *355a/b*, *356a/b*, *357a/b*, *386a/b*. Three hours fortnightly.

Geography-Environmental and Resource Science 445a

Spatial Modelling and Geographical Information Systems. This advanced level course will focus on quantitative techniques used in conjunction with Geographical Information Systems (GIS) to model spatial phenomena. There will be instruction on spatial, geostatistical and mathematical techniques and their interface with GIS. This course is open to graduates of the Trent-Fleming joint program in GIS. Prerequisites: GIS Applications Specialist Certificate (or equivalent) and basic knowledge of Statistics (*Geography-Environmental and Resource Science 208a* or *Mathematics-Statistics 150*). Knowledge of a high-level computer programming language is recommended.

Geography 470

Research in human geography. A seminar course on themes, methodologies and approaches of current major interest. Individual presentations based on directed readings and study. Prerequisite: two of *Geography 332a/b*, *333a/b*, *337a/b*, *363a/b*, *371a/b*, *373a/b*, *376a/b*, *380a/b*, *386a/b*. Three hours fortnightly.

Geography 495, 496a, 498c

Special topic in Honours Geography. Systematic and/or regional geography on themes, problems and questions of interest to individual faculty. Prerequisite: fourth quarter standing and permission of the instructor. (Offered only if instructor is available.)

History

Associate Professor and Chair of the Department

J. Sangster, B.A. (TRENT), M.A., PH.D. (MCMASTER)

Professors Emeriti

F.A. Hagar, A.B. (HARVARD), M.A., PH.D. (CALIFORNIA-BERKELEY), M.LITT. (CAMBRIDGE); B.W. Hodgins, B.A. (WESTERN ONTARIO), M.A. (QUEEN'S), PH.D. (DUKE); A. Wilson, M.A. (DALHOUSIE), PH.D. (TORONTO)

Professors

J.C. Barker, M.A. (CAMBRIDGE, TORONTO), M.DIV. (YALE), PH.D. (TORONTO); C.M. Greene, A.B. (AMHERST), A.M. (COLUMBIA), PH.D. (HARVARD); E.H. Jones, B.A. (SASKATCHEWAN), M.A. (WESTERN ONTARIO), PH.D. (QUEEN'S) (on leave 1996-97); D. McCalla, B.A. (QUEEN'S), M.A. (TORONTO), D.PHIL. (OXFORD); J.S. Milloy, B.A. (ST. PATRICK'S), M.A. (CARLETON), D.PHIL. (OXFORD); P.M. Morton, M.A., PH.D. (TORONTO); S.T. Robson, B.A. (BRITISH COLUMBIA), D.PHIL. (OXFORD); S.D. Standen, B.A. (BRITISH COLUMBIA), M.A. (OREGON), PH.D. (TORONTO); J.E. Struthers, M.A. (CARLETON), PH.D. (TORONTO); J. Syrett, B.A. (COLUMBIA), M.A., PH.D. (WISCONSIN); K. Walden, M.A., PH.D. (QUEEN'S)

Associate Professors

O. Andriewsky, B.A. (BROWN), M.A., PH.D. (HARVARD); I. Elbl, M.A. (CHARLES), M.A., PH.D. (TORONTO); J. Jennings, B.A. (TORONTO), M.A. (CALGARY), PH.D. (TORONTO) (on leave 1996-97); D. Sheinin, B.SC. (TORONTO), M.A., PH.D. (CONNECTICUT)

Assistant Professors

C. Kay, B.A. (TORONTO), M.PHIL. (OXFORD), M.A., PH.D. (YALE);

Lecturer

F. Harris Stoertz, B.A. (CALGARY), M.A. (UCALIF)

University Librarian

M.W. Genoe, M.A. (WATERLOO), M.L.S. (WESTERN ONTARIO), M.PHIL. (WATERLOO)

Adjunct Faculty

M. Elbl, M.A. (CHARLES), M.A. (TORONTO); L. MacKay, B.A., M.A., PH.D. (YORK); A. McDonald, B.A. (TRENT), M.A. (MCMASTER), PH.D. (GUELPH); M. McIntyre, B.A., B.ED., M.A. (ALBERTA); S.D. Grant, M.A. (TRENT); N. Thornton, B.A. (TRENT), B.ED. (OTTAWA), PH.D. (ADELAIDE); R.A. Wright, B.A. (TRENT), M.A., PH.D. (QUEEN'S)

Associated Faculty

Ancient History, K.H. Kinzl, D.PHIL. (VIENNA); D.F.R. Page, B.A. (SHEFFIELD)

Required Courses

The single-major Honours program consists of nineteen courses. Minimum nine History courses: *History 100, 120 or 170*, two *two-hundred* series courses, three *three-hundred* series courses, plus four courses in the fourth quarter of the program, of which at least three must be *four-hundred* series courses. One course in the fourth quarter may be in a field other than History.

Joint-major Honours program. Minimum seven History courses: *History 100, 120 or 170*, two *two-hundred* series courses, two *three-hundred* series courses, plus at least two *four-hundred* series courses.

Single-major General program. Minimum six History courses: *History 100, 120 or 170*, two *two-hundred* series courses, and three *three-hundred* series courses.

Joint-major General program: Minimum five History courses: *History 100, 120 or 170*, two *two-hundred* series courses, and two *three-hundred* series courses.

Special Provisos

- Departures from patterns above must be authorized by the Department through the Chair.
- *One-hundred* series courses: Only one *one-hundred* series History course may be taken by first quarter students, and no more than two may be counted towards a degree. First quarter students wishing to take a second History course must obtain written permission from the Department Chair.
- There are no prerequisites for any History courses but History majors or joint majors normally are required to take *two-hundred* series courses before taking *three-hundred* series history courses.

- Students seeking admission to *four-hundred* series courses before entering the fourth quarter must apply to the instructor and their application must then be approved by the Chair.
- In order to gain admission to *four-hundred* level courses, students must have completed a minimum of thirteen credits, including five History courses, or have special permission of the instructor.
- History majors and joint majors must complete, in addition to either *History 100, 120 or 170*, one course from each of the three lists below. Some courses appear in two lists and fulfil two requirements. Students considering a third-year abroad will simplify their program planning if they satisfy this requirement in their second year.

I	II	III
200	211	200
205	221	205
303	235	220
311	254	320
347	255	330
350	270	335
360	300	336
375	301	340
380	302	350
	303	351
	307	360
	308	370
	310	375
	311	380
	312	399
	316	
	324	
	345	
	347	

- in individual cases, with the approval of the Department, certain courses in Canadian Studies may be counted as History credits.
- a student may count one *two-hundred, three-hundred* or *four hundred* level Classical History course, except *Classical History 201*, as a History credit. A second Classical History may be counted as a History credit, with special permission of the Chair.

Enrolment limits

Allocation of places in restricted enrolment courses will be by departmental preregistration, held before the deadline for submission of university CPS forms.

Details of the procedure may be obtained from the Office of the Chair, History instructors, and College Offices after the Winter Reading Week. Information regarding the availability of places in all courses with enrolment limitations will be published in the Calendar Supplement in September.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

History 100

Canada: selected problems critically examined. Not a survey, the course examines issues in Canada's social, political, intellectual, regional and economic history, with an emphasis on new interpretations. Weekly lectures and weekly tutorial.

Staff

History 120

Western European history from the Middle Ages to the present. Subjects covered include feudalism, the Renaissance, the Enlightenment, the French Revolution, the 19th-century women's movement, the industrial revolution, the world wars, Nazism, the Russian Revolution, the Holocaust, and Europe since 1945. Weekly lectures and tutorials.

C.Kay and staff

History 170

World history. The world's history since 1500, survey and analysis. The course focuses on how different continents and civilizations have shaped the global community and emphasizes the richness and diversity of the human experience. Weekly lectures and weekly tutorial.

I Elbl and staff

History 200

The expansion of Europe from 1450-1825. This course explores the origins of the European overseas expansion; the participating European powers; the relationship between explorations, trade, colonization; the relative impact of the expansion on the societies of the Americas, Africa and Asia; and its repercussions in European politics, economy, lifestyle and intellectual life. Weekly lectures and fortnightly tutorials.

I. Elbl

History 205

The Medieval panorama: Western Europe from the birth of the Christian religion and the collapse of the Roman Empire in the West to the calamities and innovations of the fourteenth and fifteenth centuries. Special attention will be paid to the experiences, expectations, and values of women and men. Lecture and tutorial weekly.

F. Harris Stoertz

History 211

Forging the Nation: The United States from the Revolution to the 1920s. Social, economic, cultural and political analysis that includes a consideration of industrial expansion, women and work, the Civil War, the westward expansion and conquest of Native societies, racism in the South, and the First World War. Lecture and tutorial weekly.

Staff

History 220

Europe from the Enlightenment through World War II. A study of problems in the development of modern Western society from various perspectives, using a variety of modern and contemporary sources. One and one-half hour lecture weekly; two-hour tutorial fortnightly.

C. Greene

History 230

The Making of Canada, 1760-1873. War, politics and society in British North America from the Conquest to Confederation. Weekly lecture and tutorial.

D. McCalla

History-Canadian Studies 235

Canada since 1914. This course examines the main currents in the development of Canada since 1914. The main theme is Canada's coming of age in such areas as foreign relations, Canadian-American relations, culture, an acceptance of multiculturalism and the profound effects of the two World Wars. Other important topics include immigration, regionalism, the development of the North, the Americanization of Canada and the role of women in our society. Weekly lecture and tutorial.

History-Canadian Studies 254

Canada and the modern experience. The course explores some characteristics of modernity since 1890, with Canada as an example. Among the topics examined will

be photography, travel, crime, new styles of business, government and educational organization, and changing attitudes toward sex, death and religion. Lecture and tutorial weekly.

K. Walden

History-Native Studies-Canadian Studies 255

History of Indians of Canada. (See Native Studies.)

History-Native Studies-Canadian Studies 270

History and politics of the Metis. (See Native Studies.)

History-Canadian Studies 300

Canada: communities and identities. (See Canadian Studies.)

History-Canadian Studies-Politics 301

Canadian political culture, 1864 to the present. The history and politics of Canadian federalism are examined in the light of the sectionalism and biculturalism so evident in a country with the geographic size, diversity and historic duality of Canada. Occasional lectures and weekly tutorial.

History-Canadian Studies 302

Quebec since 1867. Economic, social and political development from a regional perspective. Industrial and urban growth; war, prosperity and depression; institutional change; the Quiet Revolution; nationalism; minorities; recent issues. Lecture and tutorial weekly.

History-Canadian Studies 303

Early French Canada. Selected topics in pre-industrial Quebec from Amerindian contact in New France to the birth of modern nationalism early in the nineteenth century. Lecture weekly, regular seminars and tutorials.

D. Standen

History-Canadian Studies 308

Business history: The Canadian experience in international perspective. Financial, technological, marketing, organizational and managerial strategies and structures which shaped the emergence of the modern corporation. The relationship of Canadian companies with the changing international business system. Lecture weekly and tutorial weekly.

History 311

Colonial and Revolutionary America, 1630-1800. An exploration of the social, economic, religious and intellectual aspects of political change in the thirteen colonies. Lecture weekly and tutorial fortnightly.

History 312

Contemporary United States. Social, intellectual, political and foreign policy developments from the 1929 Crash to the present. Lecture weekly and tutorial fortnightly.

Staff

History-Canadian Studies-Women's Studies 316

Women in North America. Selected themes and topics about women from the seventeenth century to the present, with emphasis on the Canadian experience. Lecture weekly and tutorial fortnightly.

J. Sangster

History 320

Modern British history, from the Industrial Revolution to the era of Margaret Thatcher. Special emphasis on the Victorians, culture, class and gender, and the making of modern British society. Lecture weekly and tutorial fortnightly.

Staff

History-Canadian Studies 324

Canada: The North. The historical and contemporary Canadian North in both its arctic and sub-arctic contexts. Emphasis will be intellectual and social. Two-hour seminar and occasional lectures.

History 330

Modern German history, 1815 to the present. The cultural, social, economic and political history of the modern German nation, from the Restoration Era to Germany's reunification in 1990. Lecture weekly and tutorial fortnightly.

C. Kay

History 335

The era of the First World War. Pairs of students meet the instructor every third week for a 90-minute class, to present and discuss brief research papers on topics of their choice concerning the war experience. Lecture weekly.

S. Robson

History 336

The era of the Second World War. Pairs of students meet the instructor every third week for a 90-minute class, to present and discuss brief research papers on topics of their choice concerning the war experience. Lecture weekly.

History-Comparative Development 340

The emergence of modern Africa. Political, economic and social changes since 1800, with emphasis on internal and external factors. Lecture weekly and seminar fortnightly.

Staff

History-Comparative Development 347

Survey of Latin American history from native communities in the generation before the Spanish Conquest to Central American revolutionary struggles in the 1980s. Topics will include native resistance, methods of colonial domination, slavery and other labour systems, the independence struggles, neo-colonialism, the formation of modern nation states, militarism, the roots of modern social unrest, and revolutionary change. Lecture and tutorial weekly.

D. Sheinin

History 350

Studies in the history of France, 1750-1914. Tutorials will emphasize the use of literature as an historical source. Weekly one-and-one half hour lecture and two-hour tutorial fortnightly.

C. Greene

History-French 351

La civilisation française. Offered in Nantes only. (See Modern Languages, French Section.)

History 370

Russian history from the thirteenth century to the present. Special emphasis on the evolution of autocracy, the nature of the historic challenges to political authority, Russian attitudes towards the "West", and the paradox of great power ambitions and economic backwardness. Lecture weekly, tutorial fortnightly.

O. Andriewsky

History-Women's Studies 375

Women in Britain and Europe. A survey of British/European women's history with special emphasis on the medieval, Renaissance and early modern periods. Lecture and tutorial weekly.

Staff

History 395

Special topic. Public History. Confronting history in real life. Issues in the practice of history outside the academy: museums, sites, documentaries, films. The Canadian experience in wider context. Lectures, seminars, workshops, fieldtrips.

D. Standen

History 399

Historians and history. A critical study of how historians have aimed to understand the past and found differing interpretations. The impact of new disciplines and social interests on history-writing today. Lecture and tutorial weekly.

J. Barker

History-Native Studies 400

Research seminar in Aboriginal history. (See Native Studies.)

History-Canadian Studies 403

History of Night. An introduction to contemporary approaches to cultural history through an investigation of witchcraft, crime, sexuality, entertainment and other themes related to nighttime.

K. Walden

History-Canadian Studies 406

Upper Canada, 1784-1867. The foundations of Ontario society; selected studies in cultural, social, and intellectual history. Seminar weekly.

D. McCalla

History-Canadian Studies 407

The Canadian-American frontier. The Canadian West from first contact between Europeans and Native People to the end of the settlement period in the early twentieth century. Special emphasis on Indian-White relations, exploration, the fur trade, the two rebellions, government policies for the West, the ranching and farming frontiers and the influx at the end of the nineteenth century of many new immigrant groups. Comparisons in a number of areas are made with the American West. Weekly seminars.

History 415

The American South; from the slavery era to the present. Society, culture and conflicts. Special attention to the shaping and dynamics of the region's distinctive identity. Two-hour seminars fortnightly.

P. Morton

History 418

The United States and the Vietnam War. Military, diplomatic, political and social developments from 1945 to 1975, including involvement of the Commonwealth countries. Seminar weekly.

J. Syrett

History-Canadian Studies-Native Studies 425

The evolution of the Settlement Commonwealth. A comparative study of Canada, Australia, and New Zealand, with special emphasis on the relationship between the 'settlers' and the aboriginal peoples.

History 440

Aspects of modern history. A combination seminar-reading course.

C. Greene

History 444

African labour history. This course is concerned with the development of the labour process in African societies, and examines the nature of work and its transformation, the changing division of labour, the development of wage and non-wage labour, working class organization, conditions of employment and unemployment, and the relations between labour, capital and the state.

History 447

Topics in Latin American History. Constructing Dominance: United States Imperialism in Latin America, 1850-1990. "So far from God and so close to the United States," a Mexican President once lamented. This course will address the US rise to empire, Latin American nation-building under US dominance, ideology of US expansionism, cultural imperialism and resistance to it, US and Latin American foreign policies, business imperialism. Weekly seminar.

D. Sheinin

History 450

The World, 1350-1750. An examination of the patterns of continuity and change in a period of world history marked, among other developments, by the rise of Europe and emergence of capitalism. The focus is the relationship between political power, economy, social structures, culture, values and attitudes in various world societies. Orientation period, individual research projects, and presentations.

I. Elbl

History 451

The Enlightenment in Britain, France and America. An advanced study of intellectual development in the seventeenth and eighteenth centuries, reviewing the course of scientific discovery and the new outlook's effect on areas of social and cultural importance.

J. Barker

History-Canadian Studies 475

History of everyday life: a course in applied history. Theory, method and technique in research and interpretation of ordinary life in the past, with emphasis on Canadian themes. Weekly seminars/group project meetings. Occasional field trips, one of which will be for two or three days during the Fall Reading Week. Field trip fee of \$85.

History-Canadian Studies 477

Studies in Canadian social policy. (See Canadian Studies.)

History 490

Reading course. Individual courses designed to provide opportunities for more intensive study of particular topics in areas of history offered by the Department. Open to undergraduates in the fourth quarter of the Honours program in History or by special permission. Prior consultation with relevant tutors is essential. Regular consultation during the year.

History 4901

Reading course. World Wars I & II, German History. Students will meet the instructor every third week for an hour, to present and discuss research papers on topics concerning World War I, World War II or modern Germany. Year essay follows from class papers.

S. Robson

History 4902

German cultural history, 1871-1945. Reading seminar on the cultural history of modern Germany, with special attention paid to developments in visual art, literature, theater, film, and music from Imperial Germany to the Third Reich. This course investigates the strong links between German culture and German politics & society. Fortnightly seminar.

C. Kay

History 4903

Topics in Russian and East European History. From De-Stalinization to Disintegration: the Soviet Union, 1956-1991. A reading course on the Soviet state, society, and economy from Khrushchev to Gorbachev with special emphasis on the attempts and limits of liberalization and reform.

O. Andriewsky

History-Women's Studies 4905

Medieval Women and the Family, 300-1500. Weekly reading seminar with emphasis on analysis of primary source documents.

F. Harris Stoertz

History 4906

Portugal and the Overseas Expansion, 1415-1580. Independent research on issues relating to the impact of the overseas expansion on Portuguese society, government, culture, attitudes and values. Students should have taken *History 200* and need permission of the instructor.

I. Eibl

History 495

Special topic. The Department expects to offer some special topics courses in 1996-97. For details of offerings, consult the Department and the Supplement to the Calendar.

Mathematics
Chair of the Department
(To be named)**Professors Emeriti**

C. Carter, B.SC., PH.D. (LONDON); T.E.W. Nind, M.A. (CAMBRIDGE), P.ENG.

Professors

I.C. Chakravarty, M.SC. (GAUHATI), PH.D. (SASKATCHEWAN); E.A. Maxwell, M.SC., PH.D. (TORONTO); T.N. Murphy, B.SC. (LIVERPOOL) (on leave 1996-1997).

Associate Professors

G.F. Hamilton, B.A.SC., M.A., PH.D. (TORONTO), P.ENG.; J.P. Henniger, M.SC., PH.D. (MCGILL); D.G. Poole, B.SC. (ACADIA), M.SC., PH.D. (MCMASTER); B. Zhou, B.S. (SHANGHAI), PH.D. (SOUTH CAROLINA)

Assistant Professor

S. Bilaniuk, B.SC. (TORONTO), A.M., PH.D. (DARTMOUTH)

Required Courses

The single-major Honours program consists of twenty courses. Minimum eleven courses in Mathematics including:

Mathematics 110 and 130

200, 205a and 206b

260, or both 251a and 252b

330, both 306a and 310b

two *four-hundred* series Mathematics courses, and two additional *three-hundred* or *four-hundred* series Mathematics courses.

Joint-major Honours program. Minimum seven and one-half courses in Mathematics including:

Mathematics 110 and 130

200, 205a or 206b

305b or 306a or 310b

330 or 260 or both 251a and 252b

one *four-hundred* series Mathematics course, and one and one-half additional *three-hundred* or *four-hundred* series Mathematics courses.

Single-major General program. Minimum six courses in Mathematics, including:

Mathematics 110 and 130

200, 205a and 206b

305b or 306a or 310b

one and one-half additional Mathematics courses at the *two-hundred* level or higher.

Joint-major General program. Minimum five courses in Mathematics, including:

Mathematics 110 and 130

200, 205a or 206b

305b or 306a or 310b

one additional Mathematics course at the *two-hundred* level or higher.

Special Notes

For the purposes of the regulation controlling entry into a major program, the specified introductory course in Mathematics will normally be taken to be *Mathematics 110*.

For the purposes of degree regulations, *Mathematics 206b* may be counted as a third-year half course.

Students with D standing in any prerequisite for a course must have departmental permission before they may enrol in the course.

An information meeting concerning upper-year courses in Mathematics will be arranged in the Winter Term.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Mathematics 100

Introductory calculus. A first course in calculus for those lacking a Grade 13/OAC calculus credit. Functions, limits and continuity, differentiation and integration and related applications. Not to be credited towards a major in Mathematics. Prerequisite: Grade 12 Advanced Mathematics. Not available to students with 60% or better in Grade 13/OAC calculus or with credit for *Mathematics 110*. Three lectures weekly, tutorial weekly.

Mathematics 110

Calculus of one variable. An examination of the concepts and techniques of calculus, with applications to other areas of mathematics and the physical and social sciences. Prerequisite: Grade 13/OAC calculus with at least 60% or equivalent, or *Mathematics 100*. Three lectures and one seminar weekly.

Mathematics 130

Introduction to linear algebra. Vectors, systems of linear equations, matrices, vector spaces, linear transformations, eigenvalues. Selected applications. Prerequisite: A Grade 13/OAC Mathematics credit with at least 60%. Three lectures and one tutorial weekly.

Mathematics-Statistics 150

A non-calculus-based introduction to probability and statistical methods. Data summary, elementary probability, estimation, hypothesis testing, comparative methods, analysis of variance, regression, nonparametric methods, introduction to elementary applications of statistical computing. Not credited toward Mathematics major requirements, nor available to students enrolled in, or with credit for *Mathematics-Statistics 251a* or *Mathematics 110*. (See *Mathematics-Statistics 251a*.) Three lectures weekly, two-hour problems session fortnightly.

Mathematics 200

Calculus in several dimensions. Vector geometry, curves, surfaces in three dimensions. Partial differentiation and applications, multiple integrals. Vector Calculus. Prerequisite: *Mathematics 110*. Three lectures and one tutorial weekly.

Mathematics-Physics 205a

First order equations; qualitative and numerical methods. Second order linear equations. Applications to physical and biological models. Power series solutions. Prerequisite: *Mathematics 110*. Corequisite: *Mathematics 200*. Recommended: *Mathematics 130*. Four hours weekly.

Mathematics 206b

Analysis. The real number system. Limits. Continuity. Differentiability. Mean-value theorem. Convergence of sequences and series. Uniform convergence. Prerequisite: *Mathematics 110*. Corequisite: *Mathematics 200*. Three hours weekly.

Mathematics-Physics 211b

Classical mechanics. (See Physics.)

Mathematics 225

Introduction to geometry. Elements of Euclidean and non-Euclidean geometries stressing links to modern mathematical methods. Axiomatic systems. Geometric transformations and symmetry. Projective geometry. Prerequisite: Either *Mathematics 110* or *Mathematics 130*. Two lectures and one tutorial weekly.

Mathematics-Statistics 251a

Probability and Statistics I: A calculus-based introduction to probability and statistics. Probability, expectation, probability functions and density functions. Reliability. Summarizing and presenting data. Introduction to linear regression. Estimation and hypothesis testing for means and proportions. Introduction to elementary applications of statistical computing software. Prerequisite: *Mathematics 100* or equivalent. Three hours weekly.

Mathematics-Statistics 252b

Probability and Statistics II: A continuation of *Mathematics-Statistics 251a*. Functions of random variables. Moment generating functions. Joint, marginal and conditional probability functions and densities. Further estimation and hypothesis testing. Comparative methods, analysis

of variance, normal regression, nonparametric tests. Applications of statistical computing software. Prerequisites: *Mathematics 110* or equivalent. *Mathematics-Statistics 251a* or equivalent. Three hours weekly.

Mathematics-Computer Studies 260

Discrete structures. Mathematics related to computer science including propositional logic, recursive functions, combinatorics, graphs and networks, Boolean algebras. Applications to languages, analysis of algorithms, optimization problems, coding theory, and circuit design. Prerequisite: *Mathematics 110* or *130*; or *Computer Studies 102b* together with one Grade 13/OAC credit in Mathematics. Three hours weekly.

Mathematics 280

Mathematics for the Contemporary Classroom. A course in mathematics and mathematical thinking for prospective school teachers. Number systems and counting, graphs and networks, probability and statistics, measurement and growth, symmetry, computers and mathematics. Three hours weekly. Not available to students enrolled in or with credit for any of *Mathematics 110*, *Mathematics 130* or *Mathematics-Computer Science 260* or their equivalents. Not for credit towards any major in Mathematics.

Mathematics-Physics 305b

Partial Differential Equations. An introduction to methods for the solution of partial differential equations. Fourier analysis. Prerequisite: *Mathematics 205a*. Corequisite: *Mathematics 200*. Two lectures and one tutorial weekly.

Mathematics 306a

Complex Analysis. Functions of a complex variable, analytic functions, complex integrals, Cauchy integral theorems, Taylor series, Laurent series, residue calculus. Prerequisite: *Mathematics 200*. Two lectures and one tutorial weekly.

Mathematics 310b

Metric Spaces. The Dedekind definition of the real numbers. Cardinality of sets of numbers. Completeness, compactness, the Heine-Borel theorem and connectedness in the context of metric spaces. Prerequisite: *Mathematics 206b*. Two lectures and one tutorial weekly.

Mathematics-Physics 311b

Advanced classical mechanics.

(See Physics.)

Mathematics 322

Number theory and related topics in algebra and analysis. Prerequisites: *Mathematics 110* and *130*. Three hours weekly.

Mathematics 330

Algebra. An introduction to abstract algebraic structures. Groups, rings, integral domains, fields, lattices and Boolean algebras. Prerequisite: *Mathematics 130*. Two lectures and one tutorial weekly.

Mathematics-Computer Studies 341

Linear and discrete optimization. Introduction to the concepts, techniques and applications of linear programming and discrete optimization. Topics include the simplex method, duality, game theory, shortest path problems, matchings in graphs, network flow theory, and combinatorial optimization with emphasis on integer programming. Prerequisites: *Mathematics 130* and *Mathematics-Computer Studies 260*.

Mathematics-Computer Studies-Statistics 351

Regression analysis, analysis of variance and design of experiments. Computer solutions for multiple regression and analysis of variance problems with computer software such as MINITAB, SAS, SPSS-X. Prerequisite: *Computer Studies 102b* or *150b*, *Mathematics 110* or *130*, *Mathematics-Statistics 251a* (or *Mathematics-Statistics 150* with permission of instructor.) Two hours weekly.

Mathematics-Science 380

A study of the major currents of mathematical thought from ancient to modern times. Emphasis on the relationships between mathematics, science and society. History of mathematics. Prerequisites: *Mathematics 110* and *130* or *Mathematics 110* and permission of the instructor. Second-year students wishing to take the course must have permission of the instructor. Three hours weekly.

Mathematics 390

Reading-seminar course. Details may be obtained by consulting the Department.

Four-hundred Series Courses

Prior to enrolling in any *four-hundred* series Mathematics course, a student must have completed either *Mathematics 306a*, *305b* or *310b*.

Mathematics 400

Analysis. Prerequisites: *Mathematics 130*, *200*, *306a*, *310b*.

Mathematics-Computer Studies 405

Logic and Computability. Prerequisites: *Mathematics 260*, *330*, or permission of the instructor.

Mathematics 411

Introduction to mathematical modelling. Differential equations, ordinary and partial. Prerequisite: *Mathematics 305b*. Two to three hours weekly.

Mathematics 425

Differential Geometry. Prerequisite: *Mathematics 206b*. Recommended: *Mathematics 310b*.

Mathematics 430

Algebra. Prerequisite: *Mathematics 330*.

Mathematics 435

Topology. Prerequisite: *Mathematics 310b*.

Mathematics-Statistics 451a

Sampling theory. Prerequisites: *Mathematics 251a*, *252b*.

Mathematics-Statistics 452b

Theory of inference. Prerequisites: *Mathematics 251a*, *252b*.

Mathematics 460

Combinatorics and graph theory. Prerequisite: *Mathematics 260*. Recommended: *Mathematics 330*.

Mathematics 470

Dynamical systems, chaos and fractals. Prerequisites: *Mathematics 130*, *205a*, *206b*. Recommended: *Mathematics 310b*.

Mathematics 490

Reading-seminar course. Details may be obtained by consulting the Department.

Modern Languages and Literatures

Chair of the Department

J.-P. Lapointe, B.A. (R.M.C.), M.A. (MCGILL)

Associate Chair of French

J.-P. Lapointe, B.A. (R.M.C.), M.A. (MCGILL)

Associate Chair of German

A.A. Krüger, STAATSEXAMEN (MÜNCHEN)

Associate Chair of Spanish

G. Aitken, B.A. (TRENT), M.A. (STANFORD)

Modern Languages 100

An introduction to the fundamental concepts of language.

French Studies Section

Professor Emeritus

P. Royle, M.A. (OXFORD), PH.D. (NATAL)

Associate Professors

A. Germain-Rutherford, MAÎTRISE, D.E.A. (PROVENCE-AIX-MARSEILLE I), DOCTORAT (SORBONNE); H.B. Lapointe, B.A. (BALDWIN-WALLACE), M.A. (MCGILL); J.-P. Lapointe, B.A. (R.M.C.), M.A. (MCGILL); Y. Thomas, B.A. (UQAM), M.A., PH.D. (MONTREAL)

Notes on transition to the new program

Beginning in September 1995, the Section of French Studies introduced a revised program of courses described in the following pages. Some regulations and requirements for the new program differ from those which applied to the old program. Students who entered Trent in 1995-96 or after are subject to the regulations governing the new program.

1. Required courses (new program)

Single-major Honours program consists of twenty courses. Minimum 11 courses in French, including:

- French 110, 215, 245*
- one of *French 317, 318, 319, 320*
- one of *French 325, 383*
- four four-hundred series courses

Joint-major Honours program. Minimum of eight courses in French, including:

- French 110, 215, 245*
- one of *French 317, 318, 319, 320*
- one of *French 325, 383*
- two four-hundred series courses

Single-major General program. Minimum six courses in French including:

- French 110, 215, 245*
- one of *French 317, 318, 319, 320*
- one of *French 325, 383*

Joint-major General program. Minimum five courses in French including:

- French 110, 215, 245*
- one of *French 317, 318, 319, 320*
- one of *French 325, 383*

2. Required courses (old program)

Students who have begun a major in French before 1995-96 are expected to abide by the new regulations where possible but may elect to fulfil the requirements described in the old program by choosing courses deemed to be equivalent.

Single-major Honours program. Minimum 19 courses, of which, 10 courses in French, including:

- French 110*
- one of *French 317, 318* or the old *211*
- one of *French 319, 320*, or the old *361*, or a combination of any two of the following half-courses: *233a, 234b, 312a, 313b*
- one of *French 325, 383* or the old *250*
- four four-hundred series courses

Joint-major Honours program. Minimum of eight courses in French, including:

- French 110*
- one of *French 317, 318* or the old *211*
- one of *French 319, 320*, or the old *361*, or a combination of any two of the following half-courses: *233a, 234b, 312a, 313b*
- one of *French 325, 383* or the old *250*
- two four-hundred series courses

Single-major General program. Minimum of six courses in French, including:

- French 110*
- one of *French 317, 318* or the old *211*
- one of *French 319, 320*, or the old *361*, or a combination of any two of the following half-courses: *233a, 234b, 312a, 313b*
- one of *French 325, 383* or the old *250*

Joint-major General program. Minimum of five courses in French.

French 110

- one of *French 317, 318* or the old *211*
- one of *French 319, 320*, or the old *361*, or a combination of any two of the following half-courses: *French 233a, 234b, 312a, 313b*
- one of *French 325, 383* or the old *250*

Québec Studies Emphasis

Students who, in satisfying all of the current requirements for a degree, elect to take a total of three or more Québec courses, will be granted a B.A. in French (Québec Studies Emphasis). *French 245* counts as a Québec course.

Note:

In order to register in *two-hundred* and *three-hundred* series courses, students must have attained a minimum of C- (60% or better) in the prerequisite indicated or its equivalent.

Students who do not have the prerequisite for a course must obtain the Chair's written permission to enrol in the course.

Four-hundred series courses are not normally open to students in their third year.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

French 100

Elementary French. An intensive course in oral and written French for students who do not have Ontario OAC French or its equivalent. Four hours weekly. Not credited toward French Major requirements. (May not be taken concurrently with or subsequent to any other French course.)

French 101a/b

Oral French - Level 1. This course will focus on developing functional oral skills through the integrative use of authentic audiovisual resources and different types of communicative situations. Two seminars, one conversation hour and one lab weekly. Prerequisite: one OAC French or equivalent and completion of a placement test, or a mark of C- 60% or better in Trent *French 100*. Not credited towards French major requirements. (May not be taken concurrently with or following *French 110*).

French 103a/b

French composition - Level 1. This course will explore different types of writing and review grammatical concepts in order to develop skills in composition through writing exercises. Two seminars and one computer-assisted grammar period weekly. Prerequisite: one OAC French or equivalent and completion of a placement test; or a mark of C- 60% or better in Trent *French 100*. Not credited towards French major requirements. (May not be taken concurrently with or following *French 110*).

French 110

Introduction à l'étude des littératures de langue française. Initiation to the methods of critical analysis; review of grammar through writing workshops. A required course for all students intending to major in French. Three hours weekly. Prerequisite: OAC French or equivalent, or a mark of C- 60% or better in *French 101a/b* and *French 103a/b*.

French 201a/b

Oral French - Level 2. This course will develop: 1) advanced functional oral skills in French; 2) an understanding of socio-cultural aspects of oral French; 3) an awareness of national and regional varieties in spoken French. Three hours weekly. Credited towards French major requirements. Prerequisite: placement test or a mark of C- 60% or better in *French 101a/b* or *French 110*.

French 203a/b

French composition - Level 2. Exploring the conventions of style and form in written French (reports, argumentative writing, fiction) through writing and rewriting exercises. Complete review of grammar. Two seminars weekly. Credited towards French major requirements. Prerequisite: completion of a placement test or a mark of C- 60% or better in *French 103a/b* or *French 110*.

French 215

Introduction à la linguistique structurale du français contemporain. Introduction to the fundamental elements of Linguistics. Two hours weekly. This course is required of all students majoring in French. Prerequisite: *French 110*.

French 245

Civilisations française et québécoise. A survey of the social and cultural histories of France and Québec from the sixteenth century to the present. Two hours weekly. This course is required of all students majoring in French. Prerequisite: *French 110* or equivalent. (Excludes *French 250*, *French 351*.)

French 305

Traduction. An introduction to the techniques of translation (theory and practice). Two hours weekly. Prerequisite: *French 110* or *French 201a/b* and *203a/b* or permission of the instructor.

French 317

La vie littéraire française au XVII^e siècle. Baroque and Classicism. Poetry, theatre, novels, correspondence. Two hours weekly. Pre- or co-requisite: *French 245*. (Excludes *French 211*, *French 361*.)

French 318

La vie littéraire française au XVIII^e siècle. Philosophical writings, theatre, novels. Two hours weekly. Pre- or co-requirement: *French 245*. (Excludes *French 211*, and *361*.)

French 319

La vie littéraire française au XIX^e siècle. From Romanticism to Symbolism. Novels, poetry, theatre. Two hours weekly. Pre- or co-requisite: *French 245*. (Excludes *French 312a*, *French 232a*, *French 361*.)

French 320

La vie littéraire française au XX^e siècle. Modern and contemporary trends in literature. Poetry, novels, theatre. Pre- or co-requirement: *French 245*. (Excludes *French 234b*, *313b* and *361*.)

French 325

Théâtre et poésie du Québec. A survey of the beginnings and evolution of Québec theatre and poetry, concentrating on modern and contemporary works. Two hours weekly. Pre- or co-requisite: *French 245*.

French 331

La pensée française. (Offered only in Nantes.)

French 351

La civilisation française. (Offered only in Nantes.)

French 383

Le roman québécois. A survey of the Québec novel, from the "roman de la terre" to the Quiet Revolution and the many facets of contemporary fiction. Two hours weekly. Pre- or co-requisite: *French 245*.

French 401

Initiation à la recherche littéraire. Supervised research. Single credit course. 8,000 words thesis. Two hours weekly. Candidates must submit a written proposal to the Chair before May 1. (Excludes *French 402*.)

French 402

Recherche littéraire avancée. Supervised research. Double credit course. 15,000 - word thesis. Three hours weekly. Candidates must submit a written proposal to the Chair before May 1. (Excludes *French 401*.)

French 405

Didactique du français langue seconde. This course is intended primarily for future teachers of French as a second language. Areas covered will include: the parameters of didactology, language and culture, oral techniques in the classroom, teaching grammar, self-directed learning and evaluation. Two hours weekly. Prerequisite: *French 215* or permission of the instructor.

French 420

La critique littéraire.

French 450

Etudes avancées en histoire littéraire. Topic to be announced.

French 460

Tendances littéraires et culturelles modernes. Topic to be announced.

French 495

Sujet spécial. Topic to be announced.

Year Abroad Program

Normally, in order to be eligible to study for a year at the University of Nantes, for Trent credits with a Trent/Waterloo professor, a student must achieve a minimum of a C average on all Trent courses (or equivalent courses) and a B- standing in *French 110* or equivalent. Enrolment is limited to 15 students from Trent. Honours candidates are especially encouraged to spend a year at Nantes.

For further details, please consult the Section Chair.

German Studies Section

Professors Emeriti

G. Baumgaertel, M.A. (BROWN), DR. PHIL. (TÜBINGEN); D.D. Stewart, M.A., PH.D. (TORONTO)

Associate Professors

J.C. Fewster, M.A. (MANCHESTER); A.A. Krüger, STAATSEXAMEN (MÜNCHEN)

Note: A joint-major Honours degree in German may be possible for students who successfully complete an approved course of study in the Year Abroad Program in Freiburg. For further details consult the Associate Chair of German Studies.

Required Courses

Single-major General program. Minimum six courses in German, including: *German 105, 205a, 310a, 316b, 360a*

Joint-major General program. Minimum five courses in German, including: *German 105, 205a, and two of 310a, 316b, 360a.*

Year Abroad Program

Courses offered at Freiburg in the Year Abroad Program are listed at the end of this section.

Special Provisos

- More advanced students may enrol in *German 205a* after passing a placement test.
- Two out of three half courses taught in English (*German 232a, 233b, 240b*) may be counted towards a major in German.
- To achieve a coherent combination, majors are urged to co-ordinate their studies in German with studies in related disciplines.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

German 100

Designed for students with little or no knowledge of German. This course provides an introduction to spoken and written German with an integrated computer-assisted language learning program, language laboratory as well as an introduction to present-day Germany. Three lecture/seminars, one laboratory hour weekly. Not open to students with OAC German or equivalent standing. Not credited toward a major in German. A.A. Krüger

German 105

Intermediate German language course with comprehensive grammar review, intensive language practice and computer-assisted language learning program. Introduction to German literature and culture in the Winter Term. Prerequisite: *German 100*, Grade 12 German, OAC German or equivalent. Four lecture-seminars, one laboratory weekly.

A.A. Krüger and Staff

German 205a

Advanced Language Practice I. Written and oral German with a special emphasis on business German. Prerequisite: *German 105* or permission of the Department. Three lectures/seminars weekly.

A.A. Krüger

German 206b

German literature and thought from Nietzsche to Brecht. Modern writers and events. Prerequisite: *German 205a* or permission of the Department. One lecture, two seminars weekly.

Staff

German 221a

Modern German literature in English translation Part I. The study of representative works of Romanticism, Realism, Naturalism and the early 20th century, by writers such as Hoffmann, Buechner, Fontane, Hauptmann, Thomas Mann and Hesse. Prerequisite: None. One lecture and one seminar weekly. (An optional credit for English majors.) (Excludes *German 220.*)

Staff

German 222b

Modern German literature in English translation Part II. The 20th century: An introduction to the aesthetic, moral, existential, social and political issues advanced by writers such as Kafka, Brecht, Dürrenmatt and Grass. Prerequisite: None. One lecture and one seminar weekly. (An 'optional' credit for English majors.) (Excludes *German 220.*)

Staff

German 231

German civilization. (see *German 232a/233b*, offered in German only in Freiburg.)

German 232a

German Civilization I. Taught in English. A survey of culture and society of German-speaking countries from their origins

to the French Revolution, including literature, music, art, architecture, and political and scientific history, with the use of films, slides and music tapes. Prerequisites: None. May be counted towards a major in German (see Special Provisos). Two lectures, one seminar weekly.

A.A. Krüger

German 233b

German Civilization II. Taught in English. A survey of culture and society of German-speaking countries from the French Revolution to the present, including literature, music, art, architecture, and political and scientific history, with the use of films, slides and music tapes. Prerequisites: *German 232a* desirable. May be counted towards a major in German (see Special Provisos). Two lectures, one seminar weekly.

A. A. Krüger

German 234a

German Civilization I. Offered only in Freiburg in German (see *German 232a*). Credited towards a major in German.

J.C.Fewster

German 240b

Freud's Vienna from the Habsburgs to Hitler. Taught in English. An examination of a society in decline and its important contributions in its music, painting, architecture and intellectual life to the shaping of the modern mind, with the use of films, slides and music tapes. Open to all students. May be counted towards a major in German (see Special Provisos). Two lectures, one seminar weekly.

Staff

German 305b

Advanced language practice II. Special emphasis on business German, conversational skills and instant translations. Prerequisite: *German 205a* or permission of Department. Three lectures/seminars weekly.

A.A. Krüger

German 310a

The Age of Enlightenment and "Sturm and Drang". A study of the beginnings of modern German literature, with special attention to Lessing, Goethe and Schiller. Prerequisite: *German 205* or permission. Two lectures, one seminar weekly.

Staff

German 316b

Studies in German Romanticism in the European context. Prerequisite: *German 205a* or permission. One lecture, two seminars weekly.

Staff

German 330a

The German Novelle and Erzählung of the nineteenth and twentieth centuries. Prerequisite: *German 205* or permission of Department. One lecture, two seminars weekly.

Staff

German 340a

The German drama from Classicism to Modernism: Realism, naturalism, expressionism, epic theatre, documentary theatre. Prerequisite: *German 205a* or permission of Department. One lecture, two tutorials weekly.

Staff

German 360b

Studies in German literature and cultural developments of the period 1780-1832 with special attention to Goethe, Schiller and Kleist. Prerequisite: *German 205a* or permission of the Department. Two lectures, one seminar weekly.

A.A. Krüger

Year Abroad Program

Normally, in order to be eligible to study for a year at the University of Freiburg, Germany, for Trent credits with a Trent/Brock/McMaster professor, a student must achieve a minimum of a B- average on all Trent courses (or equivalent courses) and a B- standing in *German 105* or equivalent. For further details please consult the Chair of the Section.

Two and a half full courses at the second and third year level will be offered in 1996-97 at Freiburg by Professor J.C. Fewster, Trent University.

Hispanic Studies Section

Professors Emeriti

J.P. González-Martin, LIC.DER. (OVIEDO),
DR.DER. (ZARAGOZA); D.L. Smith, M.A.,
D.PHIL. (OXFORD)

Professors

R.M. Garrido, LIC.DER., DR.DER., DR.
FILOLOGIA (SEVILLA), M.A. (TORONTO) (on
leave 1996-97); T.A. Noriega, LIC. EN
FILOLOGIA (COLOMBIA), M.A., PH.D.
(ALBERTA)

Associate Professors

G.D. Aitken, B.A. (TRENT), M.A.
(STANFORD); F.B. García-Sánchez, B.A.
(HAVANA), M.A., PH.D. (LAVAL)

Required Courses

The single-major Honours program
consists of twenty courses. Minimum ten
courses in Spanish, including:

Spanish 100 or 200

201

211

300

- six additional courses at the *three-hundred or four-hundred* series level (excluding *Spanish 326*)

Joint-major Honours program. Minimum
seven courses in Spanish, including:

Spanish 100 or 200

201

211

300

- three additional courses at the *three-hundred or four-hundred* series level (excluding *Spanish 326*)

Intending students are advised to consult
the two departments involved as early in
their university career as possible.

In exceptional cases students may take
civilization and literature courses exclu-
sively but will be expected to comply with
the minimum number of courses required
for the completion of each program.

Single-major General program. Minimum
six courses in Spanish, including:

Spanish 100 or 200

201

211

300

- two additional courses at the *three-hundred or four-hundred* series level (excluding *Spanish 326*)

Joint-major General program. Minimum
five courses in Spanish, including:

Spanish 100 or 200

201

211

300

- one additional course at the *three-hundred or four-hundred* series level (excluding *Spanish 326*)

Special Provisos

- Students intending to major in Hispanic Studies are strongly recommended to take courses in at least one other modern language.
- Other related courses especially recommended are *Anthropology 230 and 304*; *Classical Literature 100 and 200*; *Comparative Development Studies 400*; *Cultural Studies 222, 270, 325, 450*; *Cultural Studies-CDS 332*; *Cultural Studies-English 425*; *English 205 and 325*; *History 347 and 447*; *Latin 100*.
- Students with sufficient knowledge of Spanish may be admitted directly to *Spanish 200, 201 or 211*, at the discretion of the Section.
- *Spanish 200 and 201* may not be taken concurrently.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Spanish 100

Beginners' course in Spanish. An intro-
duction to Spanish conversation, pronun-
ciation, composition and reading as a pre-
paration for *Spanish 201* (required course
for Spanish majors) and *Spanish 200*.
Three seminars, and one laboratory hour
weekly.

G. Aitken and Staff

Spanish 200

Continuing Spanish. A language course
with comprehensive review and practice,
designed for students with high-school
credits or other previous exposure to the
language. An alternative course in prepa-
ration for *Spanish 201*. Two seminars, one
conversation hour and one laboratory hour
weekly. Prerequisite: *Spanish 100* or equi-
valent, or the successful completion of a
diagnostic test.

G. Aitken and Staff

Spanish 201

Intermediate Spanish. A comprehensive and more intensive course designed to help students attain significantly better control of their skills in listening, speaking, reading and writing Spanish. Two seminars, one conversation hour and one laboratory hour weekly. Prerequisite: *Spanish 100* (with 70% or better), *Spanish 200* or permission of the instructor. *T.A. Noriega and Staff*

Spanish 211

Introduction to Spanish and Spanish-American literatures. One lecture and one seminar weekly with fortnightly cultural workshops conducted in Spanish. Students enrolled in this course are also normally required to register in Spanish 201. *T.A. Noriega and F.B. García-Sánchez*

Spanish 300

Advanced oral Spanish and composition. An analytical study of the elements required in the use of Spanish, especially in writing. One lecture, one seminar, one conversation hour and one laboratory hour weekly. *R.M. Garrido and staff*

Spanish 310

Spanish and Spanish-American civilization. A study of civilization in the Hispanic world: history, political and economical issues, social development, artistic and cultural manifestations including architecture, literature, painting, film, music and folklore. Conducted in Spanish. One lecture, one seminar weekly. Prerequisite: *Spanish 201* or equivalent, or permission of the instructor. *F.B. García-Sánchez and T. A. Noriega*

Spanish 311a

Spanish contemporary literature. Prose from the generation of 1898 to our times. Lecture and seminar weekly. Prerequisite: *Spanish 211* or equivalent, or permission of the instructor. *F. García-Sánchez*

Spanish 312b

Spanish contemporary literature since the generation of 1898. Theatre from Valle Inclán to Arrabal and poetry, with special emphasis on the generation of 1927. Lecture and seminar weekly. Prerequisite: *Spanish 211* or equivalent, or permission of the instructor. *F. García-Sánchez*

Spanish 322a

Spanish-American poetry. A survey of Spanish-American poetry with special emphasis on the contemporary period. Lecture and seminar weekly. Prerequisite: *Spanish 211* or equivalent, or permission of the instructor. *T.A. Noriega*

Spanish 323b

Spanish-American prose. A survey of Spanish-American prose with special emphasis on the contemporary period. Lecture and seminar weekly. Prerequisite: *Spanish 211* or equivalent, or permission of the instructor. *T.A. Noriega*

Spanish 326

The contemporary Latin-American novel: adventure and commitment. Conducted in English, this course involves a detailed socio-literary study of selected works by prominent Latin-American writers. Not for credit toward a Spanish major. Lecture and seminar weekly. (See Comparative Development Studies.) *T. A. Noriega*

Spanish 330

Spanish literature of the Golden Age. An introduction to the literature and thought of the Renaissance and Baroque periods based on selected authors and topics. Lecture and seminar weekly. Prerequisite: *Spanish 211* or equivalent, or permission of the instructor. *F. García-Sánchez and R.M. Garrido*

Spanish 401

Honours seminar leading to the completion of an undergraduate thesis, with emphasis on research methods and literary criticism. Subject to be chosen in consultation with the Chair of the section and instructor. *Staff*

Spanish 415a

History of the Spanish language. An historical survey of the formation and development of the Spanish language from pre-literary times to the present day. Lecture and seminar weekly. *R.M. Garrido*

Spanish 416b

Medieval Spanish literature. Studies of the Spanish literature from *El Cid* (twelfth century) to *La Celestina* (end of the fifteenth century). Lecture and seminar weekly.

R.M. Garrido

Spanish 420

Contemporary Spanish-American novel: narrative structure and world view. Structural analysis of selected texts and a study of the intertextual relationships between these texts and the socio-cultural discourses which generate them. Lecture and seminar weekly. Prerequisite: *Spanish 323b* or equivalent, or permission of the instructor.

T. A. Noriega

Spanish 495

Special topics in Hispanic Studies. The following special topics will be offered in 1996-97:

Spanish 4951

Fantasy in contemporary Spanish fiction (1978-1995). Study of a selected number of works representative of the element of fantasy in Spanish fiction. The marvellous, the fantastic, and magic realism will be specifically considered. Authors represented will include Carmen Martín Gaité, Eduardo Mendoza, Juan Pedro Aparicio, Rosa Montero and José María Merino. Lecture and seminar weekly. Prerequisite: *Spanish 311a* or permission of the instructor.

F. García-Sánchez

Spanish 4952

Special topics in Hispanic Studies. Prerequisite: permission of the Chair of the section and the instructor concerned. Staff

Spanish 496a, 497b

Special topics in Hispanic Studies. Prerequisite: permission of the Chair of the section and the instructor concerned. Staff

Native Management and Economic Development Program

This Program provides an interdisciplinary and integrated approach to the development of management, community and economic development knowledge and skills appropriate for working within an aboriginal environment. The Program is offered by the Department of Native Studies and the Administrative Studies Program, thus blending a study of native culture with management and economic development skills.

The Program offers:

- a. A two-year Diploma for students who have the equivalent of Ontario Grade 12 or qualify as mature students. Students are required to complete a summer pre-session course (*Communications 91*) plus a minimum of 7.5 university credits. Students are required to complete the courses listed below.

Native Studies 100

Introduction to Native Studies.

Native Studies 150a

Introduction to community development.

Native Studies 151b

Introduction to economic development.

Administration Studies-Native Studies 190

Introduction to management decision-making.

- one other *one-hundred* level course: *Administration 105*, *Anthropology 100*, *Comparative Development Studies 100*, *Philosophy 105*, *Politics 100* are recommended.
- one of *Native Studies 200* (Native Politics), *Native Studies 290* (Native Economic Development), *Native Studies 300* (Aboriginal Governance).

Administrative Studies 201a

Financial accounting.

Administrative Studies-Native Studies 272

Organizational behaviour in contemporary aboriginal organizations.

- one further course in Administrative Studies or Native Studies.

Students are required to include *Communications 92c* in their first quarter of studies.

- b. a Bachelor of Arts in Native Studies (NMED emphasis). Fifteen courses. Students are required to take at least six courses in Native Studies and at least four courses in Administrative Studies. This course of study must include the core courses listed above plus:

Administrative Studies 202b
Fundamentals of management accounting.

Administrative Studies 250
Organization theory.

Administrative Studies 350
Planning, budgeting and control.

Economics 101a/102b is highly recommended.

- c. an Honours (4 year) Degree Program.

Option 1:
Bachelor of Arts (Honours) in Native Studies (NMED emphasis). As in b. above plus an additional academic year and successful completion of a minimum of four additional credits of which three must be four-hundred series. *Administration 400* is highly recommended.

Option 2:
Bachelor of Administrative Studies (NMED emphasis). Students are required to take the courses listed above at some time over the four years of the program. Students intending to complete the B.A.S. degree should consult with the Director of the Program or designate prior to the start of the second quarter.

Native Studies

Chair of the Department
D. Newhouse, (Onondaga), B.SC., M.B.A.
(WESTERN ONTARIO)

Professors Emeriti
M J. Castellano, (Mohawk), B.A.
(QUEEN'S), M.S.W. (TORONTO)
J. Thomas, (Condoled Cayuga Chief)

Professors
D.N. McCaskill, B.A. (WINNIPEG), M.A.

(CARLETON), PH.D. (YORK) (on leave Fall Term 1996); J.S. Milloy, B.A. (ST. PATRICK'S), M.A. (CARLETON), D.PHIL. (OXFORD)

Associate Professor
P. Kulchyski, B.A. (WINNIPEG), M.A., PH.D. (YORK)

Assistant Professors
E. Manitowabi, (Anishinabe), MIDE.III (3-FIRES); S.I. Williams, (Anishinabe), B.A. (TRENT)

Adjunct Faculty
S. Brascoupe, (Algonkian/Mohawk), B.A., M.A. (NEW YORK STATE, BUFFALO); J. Davison, B.A. (WESTERN), M.A. (TRENT); W. Fournier; D. Lazore, (Mohawk), B.ED. (MONTREAL); D. Williams, (Mississauga/Ojibway), B.A. (TRENT)

Cultural Advisor
P. Bourgeois, (Anishinabe), MIDE.II (3-FIRES), B.A. (TRENT)

Required Courses

The single-major Honours program consists of nineteen courses. Minimum nine courses in Native Studies including:

Native Studies 100
200
- one of 280 or 310
- 381a/b and 383a/b
- and three four-hundred series courses.

Joint-major Honours program. Minimum seven courses in Native Studies including:

Native Studies 100
200
- one of 280 or 310
- 381a/b and 383a/b
- and two four-hundred series courses.

Single-major General program. Minimum six courses in Native Studies, including:

Native Studies 100
200
- one of 280 or 310

Joint-major General program. Minimum five courses in Native Studies. Same required courses as for single-major.

Special Proviso

Students will not normally be permitted to count more than two selections from *Native Studies 280, 380, 225 and 325* in the minimum five or six courses required for a major.

Year Abroad Program

The Native Studies Thailand Year Abroad Program is offered in Chiang Mai, Thailand, every second academic year. The program is designed to afford students the opportunity to study the culture and development of indigenous peoples of South East Asia and apply their learning in a practical situation. It is an integrated five course program for third and fourth year students. To be eligible students must achieve a minimum of a B- average in their academic program the year prior to going to Thailand. The program consists of the following courses:

Native Studies 180: Introduction to Thai Language

Native Studies 311: Hill Tribes and Thai Culture

Native Studies/Comparative Development 305 OR Native Studies/Comparative Development 482: Native Community Development

Native Studies 386 and Native Studies 390 OR Native Studies 402: Practicum field placement

Please consult the academic timetable to determine which of the following courses will be offered in 1996-97.

Native Studies 100

Introduction to Native Studies. The course examines the contemporary situation of Aboriginal people in Canada in the context of their cultural traditions and the historical interactions between Aboriginal and non-Aboriginal societies. Seminar and two lectures weekly.

D. Newhouse and staff

Native Studies 150a

Introduction to Aboriginal community development. An overview and examination of the concepts of "community" and "development" in an Aboriginal context. The course will examine traditional and contemporary Aboriginal communities and the utilization of human and natural resources to improve life in the community. Lecture and seminar weekly.

Native Studies 151b

Introduction to Aboriginal community-based economic development. An overview of the formal and informal, traditional and modern, economies of Aboriginal

communities. Factors affecting the location and viability of economic activities, as well as the roles played by women and elders in their communities, will be examined. Lecture and seminar weekly.

Native Studies-Administration 190

Introduction to management and decision-making in contemporary aboriginal organizations. (See Administrative Studies.)

Native Studies 200

Politics and Aboriginal communities. The course will focus both on the traditional political culture of Aboriginal peoples and on the political structures of colonialism (Indian Acts, Treaties, etc.) viewed from legal and historical perspectives. Contemporary analysis will treat Aboriginal self-government including models of development, cultural and ideological foundations, government policy and implementation strategies. Lecture and seminar weekly.

P. Kulychiski

Native Studies 210

The Algonkian identity. A study of Aboriginal values, culture and tradition. The course will concentrate on the Algonkian-Anishinabe speaking peoples which include the Ojibway, Cree, Saulteaux, Ojibwa and Potawatomie in the exploration of topics such as religion, spirituality, humour, men and women's roles and problems of contemporary life. Lecture and seminar weekly.

Native Studies 211

Aboriginal identity development. This course examines the processes of Aboriginal identity development in various life stages. Emphasis is placed on the self in historical and contemporary time periods, and the problems of self identity in a post-modern world. Aboriginal religion and spiritual philosophies and world view is examined. Lecture and seminar weekly.

Native Studies 220

Iroquois culture and traditions. A study of the political, economic, kinship and religious institutions of traditional Iroquois society including prehistoric background, establishment of the Six Nations Confederacy, the longhouse religion, and contemporary situation. Lecture and tutorial weekly.

Native Studies 225

Oral Mohawk. An introduction to Mohawk designed for students with little or no knowledge of the language. This is a conversational course, emphasizing the use and understanding of Mohawk through the learning of the basic vocabulary and sentence patterns in class and in language laboratory. Three hours weekly.

Native Studies-Anthropology-Canadian Studies 253

Aboriginal Art of North America. (See Anthropology.)

Native Studies-Canadian Studies-History 255

History of the Indians of Canada. Emphasis will be placed on Aboriginal involvement in the fur trade and imperial politics of the eighteenth century, the development of European "civilizing" policies, and the growth and ideology of the modern Aboriginal political movement. Seminar and lecture weekly.

J.S. Milloy

Native Studies 260

Social services and Aboriginal people. A study of tribal and contemporary approaches to meeting common human needs. The structure and impact of health, welfare, family and correctional services are examined, along with contemporary initiatives to establish community control of programs. Prerequisite: *Native Studies 100*. Lecture and seminar weekly.

Native Studies-Canadian Studies-History 270

History and politics of the Métis. An examination of the historical development of the Métis nation and survey of selected issues facing the Métis today.

J.S. Milloy

Native Studies-Administration 272

Organizational behaviour in contemporary aboriginal organizations. (See Administrative Studies.)

Native Studies 280

Oral Ojibway. An introduction to Ojibway designed for students with little or no knowledge of the language. This is a conversational course, emphasizing the use and understanding of Ojibway through the learning of the basic vocabulary and sentence patterns in class and in the language laboratory. Three hours weekly.

S.I. Williams

Native Studies-Canadian Studies 285

Aboriginal people and the North. A study of political, economic, social and cultural factors which affect the Aboriginal peoples of Northern Canada. The course will closely examine each of the Northern comprehensive land claims, as well as the development of the new Nunavut territory. Lecture and seminar weekly.

P. Kulchyski

Native Studies 290

Aboriginal economic development. Provides an overview of the economic development process with specific reference to Aboriginal communities. The course examines types of economic activities, where they locate and why. Planning for community economic development as well as business feasibility studies will be covered. Prerequisite: *Economics 101a/b* and *102a/b* or *Native Studies 150a* and *151b*.

Native Studies 300

Aboriginal governance. This course examines and analyses the development of Aboriginal forms of governance in Canada with a particular emphasis upon cultural, philosophical and political foundations. Prerequisites: *Native Studies 100* and *200*.

D. Newhouse

Native Studies-Comparative Development 305

Aboriginal community development. A study of various approaches to community development in Aboriginal and Third World communities. The course will examine current initiatives in human resource, political and economic development, and critical issues relating to local control, values, gender, government policies, and roles in social change processes. Prerequisite: *NS100* and/or *CDS100*. Lecture and seminar weekly.

Native Studies 310

Culture and community. A study of cultural continuity, change and revitalization in Aboriginal communities in Canada. The dynamic nature of cultural adaption and the significance of tribal language, spirituality and social responsibilities will be emphasized. Prerequisite: *Native Studies 100* and one other Native Studies course. Lecture and seminar weekly.

E. Manitowabi

Native Studies 320

Urbanization and the Aboriginal peoples. An analysis of migration, adjustment and integration of Aboriginal people into urban areas, examining various assimilation and acculturation models as well as cultural interaction between Aboriginal and white society in rural Aboriginal communities. *Native Studies 100*. Lecture and seminar weekly

Native Studies 330

Education and Aboriginal peoples. The course will examine issues pertaining to the development of an appropriate educational system for Aboriginal people including Aboriginal control of Aboriginal education, learning theories, Aboriginal culture, values and identity, teaching and learning styles, pedagogy and curriculum planning. *Native Studies 100*. Lecture and seminar weekly.

Native Studies 340

Aboriginal law. This course will review the legal history of Aboriginal rights and Aboriginal title, focusing on significant court decisions that have interpreted key legal documents. Special topics to be discussed will include traditional justice and the administration of justice. Prerequisites: *Native Studies 100* and *200*. Lecture and seminar weekly.

P. Kulchyski

Native Studies 350

First Nations women. This course examines the experience of First Nations women in Canada today with respect to cultural expression in the arts, education, work, family, health, politics and the law. Contemporary issues facing First Nations women will be examined. Prerequisite: *Native Studies 100*.

E. Manitowabi

Native Studies-Canadian Studies-English 360

Native peoples in literature. (See English.)

Native Studies 380

Intermediate oral Ojibway. A general course in conversation and pronunciation using language laboratory and classroom participation. Four hours weekly. Enrolment may be limited. Prerequisite: *Native Studies 280* or permission of instructor.

S.I. Williams

Native Studies 381a/b

Theory of community-based research. A practical introduction to research methods in the social sciences, including a critique of those methods in the context of Native studies. The ideological base of participatory and action research is examined along with case studies exemplifying alternative methodologies. Prerequisites: *Native Studies 100* and *200*. *Native Studies 383a/b* recommended. Lecture and seminar weekly.

D. McCaskill

Native Studies 383a/b

Community-based oral history methods. Emphasis is upon the cultural and strategic approaches which enhance oral history methods in Aboriginal communities. Topics include research design, community rapport, administration, community-based data collection and analysis. A small-scale field project will be developed. Prerequisites: *Native Studies 100* and *200*. *Native Studies 381a/b* recommended. Weekly lecture and seminar.

J.S. Milloy

Native Studies 390, 391a, 392b

Reading course. Intended for third-year majors and for second-year students, by application to the department, who wish to carry out independent research. Details must be arranged with the Department Chair before the end of the preceding academic year. Prerequisite: B average in Native Studies courses.

Native Studies 395

Special topic: Introduction to Indigenous theatre. This course introduces students to the study of contemporary Aboriginal theatre through an examination of works by contemporary artists including playwrights, actors and writers. Assignments will be based on a variety of creative projects. Prerequisite: *Native Studies 100*. Lecture and seminar weekly.

E. Manitowabi

Native Studies-History 400

Research seminar in Aboriginal history. The seminar will focus on ethnohistorical methods and Aboriginal historiography. Prerequisites: *Native Studies 381a/b* and *383a/b*.

J.S. Milloy

Native Studies 402

Thesis. A double credit in-depth study course in library or field-oriented research, supervised by a Research Project Committee for which a double fee is charged. Students are to arrange all details with the Department Chair before the end of the preceding academic year. Prerequisites: *Native Studies 381a/b* and *383a/b* and B+ average in Native Studies courses.

Native Studies-Canadian Studies-History 425

The evolution of the settlement commonwealth. (See History.)

Native Studies 430

Critical theory and native studies. A seminar on the relevance of contemporary western social and political thought to Aboriginal issues. The course will apply a broad range of theoretical approaches to develop understandings and insights of Aboriginal and western societies and the specific character of the interactions between them. Prerequisite: *Native Studies 200* or *310* or *Native Studies 381a/b* and *383a/b*.

P. Kulchyski

Native Studies 481

Selected topics. Aboriginal people of the Arctic. This course will examine the political, social, economic, and cultural development of the Indigenous people of Siberia, Alaska, Canada and Greenland. Prerequisite: *Native Studies 200* or *285* or *Native Studies 381a/b* and *383a/b*.

P. Kulchyski

Native Studies-Comparative Development 482

Aboriginal responses to cultural interaction. Focus will be on social and psychological processes involved when cultures meet, examining acculturation and conflict models, culture and personality, interaction perspectives and ethnic identity studies. Prerequisite: *Native Studies 100* or *310* or *NS 381a/b* and *383a/b*.

D.N. McCaskill

Native Studies 490

Reading course. Students may select an area of study under the direction of an adviser. Details are to be arranged through the Department Chair before the end of the preceding academic year. Prerequisites: *Native Studies 381a/b* and *383a/b* and B+ average in Native Studies courses.

Native Studies 4951

Special topic: Advanced Ojibwa/Odawa First Nations Language. This fourth year course will be a continuation of further studies of the First Nation's language. Prerequisites: *Native Studies 280* and *380* or permission of instructor.

S.I. Williams

Native Studies 4952

Special topic: Plains History and Culture. An ethnohistorical approach to the culture of Northern Plains Indian people focusing on such issues as plains ontology and cultural formation, oral narrative as historical documentation, gender roles, popular culture and post-classical economic, social and political development. Prerequisites: *Native Studies 381a/b* and *383a/b*.

J.S. Milloy

Native Studies 4953

Special topic: Native Studies Honours Collegium. This seminar concentrates upon a reading of texts considered basic to the definition of contemporary aboriginal realities. It will explore issues surrounding history, identity, development, epistemology, ontology, using a multi-disciplinary model of inquiry and analysis. Prerequisites: *Native Studies 381a/b* and *383a/b*.

J.S. Milloy and D. Newhouse

Diploma Program in Native Studies

This program is open to students who have the equivalent of Grade 12, or who qualify as mature students. Students of Aboriginal ancestry are encouraged to enrol. Over a two-year period students are required to complete seven undergraduate courses four of which must be drawn from Native Studies course offerings.

Students must enrol in *Communications 91*, a three-week summer pre-session prior to their first year. In their first year, students will also take *Communications 92c*. Both courses are required. For description of Native Studies course options see Native Studies.

On completion of the diploma requirements, students may apply for admission to the B.A. program. Undergraduate course credits earned in the Diploma program are transferable to meet requirements for a degree.

Application for admission to the program should be made to the Office of the Registrar.

Inquiries should be directed to the Academic Programs Co-ordinator, Department of Native Studies.

Required Courses

Summer prior to Year 1

Communications 91 (Pre-session)

Year 1

Communications 92c, *Native Studies 100*, and two additional courses, one of which may be a *one-hundred* series course in a discipline other than Native Studies. Some *two-hundred* series Native Studies courses are available with permission of the instructor.

Year 2

Four courses selected from *two-* or *three-hundred* series Native Studies courses exclusive of *Native Studies 390*. A *one-hundred* series course from a discipline other than Native Studies may be substituted for any of these courses.

Communications 91 (Pre-session)

An intensive three-week summer course providing skill-development in study skills, writing, reading, speaking and listening. Focus is on Aboriginal content. Successful completion leads to admission to the Diploma Program in the fall.

Communications 92

A course to provide specific research skills for both Native Studies and Native Management and Economic Development streams. Class instruction, seminars and individual tutoring focus on content relevant to undergraduate course work of participants.

Northern and Polar Studies

Program Coordinator

P.M. Lafleur, B.Sc. (BRANDON), M.Sc. (TRENT), Ph.D. (MCMASTER), Department of Geography

The Emphasis in Northern and Polar Studies is designed to stimulate interest in the higher latitudes in all academic departments and programs at Trent. It is also designed to give students from the North an opportunity to extend and deepen knowledge of their home regions.

The Emphasis takes the form of an annotation on the transcript of students graduating in the General or Honours programs at Trent. It reads "... with an Emphasis in Northern and Polar Studies."

It can be earned in the following manner:

- Students must have completed at least one month of formal post-secondary study in the north or south polar regions. Such study may take the form of course work or independent or supervised research. As an alternative, students may have lived in the north or south polar regions for more than one year during their teens or later years. Proof of polar experience must be submitted to the Program Coordinator at least six months prior to graduation. The definition of "North polar regions" used here is that of the Northern Scientific Training Grants Program of Indian and Northern Affairs Canada. This definition includes northern parts of most provinces. In the South, the continent of Antarctica and the sub-Antarctic islands qualify. The Committee on Northern and Polar Studies shall rule where eligibility is in doubt.
- Credits from Yukon and Arctic Colleges, acceptable to Trent University, may be counted towards this emphasis to a maximum of 2.5 courses. Students are encouraged to consult the Program Coordinator about their selection of courses for the Emphasis at the start of their second year. They must do so at least six months prior to graduation. Early contact with the Coordinator has the advantage of putting the student in touch with others, students and faculty, with like interests.

Students must have successfully completed five full course equivalents selected, as indicated, from the following, before they graduate.

(a) Two or more of the following: with the exception of those courses marked with an asterisk, consent of the instructor must be obtained, before the course begins. This is to ensure that a northern emphasis for the student in question will be provided.

Anthropology 311
Anthropology-Canadian Studies-Native Studies 253
Anthropology 495
Canadian Studies-Environmental and Resource Studies 200
Canadian Studies/History 300
Environmental and Resource Studies-Canadian Studies 250
Environmental and Resource Studies-Comparative Development 360
Geography 342b
Geography/Canadian Studies 361
**Geography/Canadian Studies 364a/b*
History 370
History-Canadian Studies 407
History-Canadian Studies-Native Studies 425
Native Studies 200
**Native Studies 285*
Native Studies-Comparative Development Studies 305
Native Studies 340
**Native Studies 481*
Politics-Comparative Development Studies 440
Politics 425

(b) No more than three of the following: all reading, special topic, thesis courses for which acceptable subject matter can be arranged. In all courses permission of the instructor and the Program Coordinator must be obtained. Permission forms are available from the Coordinator.

Philosophy

Professor and Chair of the Department
 C.V. Boundas, M.A., PH.D. (PURDUE)

Professors Emeriti

D. Gallop, M.A. (OXFORD); J.I. MacAdam, B.A. (NEW BRUNSWICK), M.A. (QUEEN'S), PH.D. (LONDON); M.L. Rubinoff, B.A. (QUEEN'S), M.A., PH.D. (TORONTO)

Professors

J.W. Burbidge, M.A. (YALE), B.D., PH.D. (TORONTO); R.E. Carter, A.B. (TUFTS), M.DIV. (HARVARD), M.A., PH.D. (TORONTO)

Associate Professors

B.J. Hodgson, M.A. (TORONTO), PH.D. (WESTERN ONTARIO); F.C. McKinnon, B.A. (MCGILL), B.PHIL., D.PHIL. (OXFORD) (on leave 1996-97); R.M. Neumann, B.A. (COLUMBIA), M.A., PH.D. (TORONTO); C.W. Tindale, B.A. (WILFRID LAURIER), M.A., PH.D. (WATERLOO)

Required Courses

The single-major Honours program consists of twenty courses. Minimum nine courses in Philosophy, (*Philosophy 101* or *105* strongly recommended) including: *Philosophy 210, 310, 105* or *240a*, and two four-hundred series courses.

Joint-major Honours program. Minimum seven courses in Philosophy, (*Philosophy 101* or *105* strongly recommended) including: *Philosophy 210, 310*, and one four-hundred series course.

Single-major General program. Minimum six courses in Philosophy, (*Philosophy 101* or *105* strongly recommended) including: *Philosophy 210, 310*.

Joint-major General program. Minimum five courses in Philosophy, (*Philosophy 101* or *105* strongly recommended) including: *Philosophy 210, 310*.

Special Provisos

- *Philosophy 101* and *Philosophy 105*, although not formal prerequisites, offer a preparation for all other courses in the subject.
- Four upper-year courses in Philosophy as a minimum are required for all degrees.
- First quarter students will occasionally be permitted to enrol in two-hundred series courses after consultation with the chair of the department.

- All two-hundred series courses in Philosophy may be counted as fulfilling the university requirements for three-hundred series courses.
- *Philosophy 240a* is strongly recommended; students wishing to do graduate work in Philosophy are advised to include *Philosophy 240a* in their programme.
- The Logic requirement for a single-major Honours degree shall normally be completed prior to commencement of the fourth quarter of an Honours program.
- The fourth quarter of the Honours program will normally consist of four courses, some of which may be three-hundred series courses.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Philosophy 101

An introduction to philosophy through a study of fundamental problems, such as the nature of moral right and wrong, the freedom of the will, the relation between mind and matter, and the existence of God, as presented in contemporary writings and classical texts such as Plato, Descartes, Kant and Nietzsche.

C.V. Boundas, J. Burbidge, and B.J. Hodgson.

Philosophy 102a

An introduction to philosophy through a study of fundamental problems, such as the nature of moral right and wrong, the freedom of the will, the relation between mind and matter, and the existence of God, as presented in contemporary writings and the classical texts of Descartes, Spinoza, and Leibniz. (Excludes *Philosophy 101*. It may be taken without *Philosophy 103b*.)

R.M. Neumann

Philosophy 103b

An introduction to philosophy through a study of fundamental problems, such as the nature of moral right and wrong, the freedom of the will, the relation between mind and matter, and the existence of God, as presented in contemporary writings and the classical texts of Berkeley, Hume, Hobbes, and Rousseau. (Excludes *Philosophy 101*. It may be taken without *Philosophy 102a*.)

R.M. Neumann

Philosophy 105

Practical reasoning. The study of the uses of statements and arguments in reasoning, as they occur in a variety of contexts. Emphasis will be placed on developing skills in recognizing, constructing and critically evaluating arguments. Lecture and tutorial weekly.

C. Tindale

Philosophy 210

Ancient philosophy. The development of philosophical thought from the Pre-Socratic to Neo-Platonist and Christian thinkers of late antiquity. Special emphasis will be placed upon selected works of Plato and Aristotle. Two hours weekly.

C. Tindale

Philosophy 214

Introduction to existential philosophy. Themes will include consciousness as a source of meaning and interpretation, individuality, intersubjectivity and community, freedom, choice and responsibility, difference and repetition, and nihilism and creation. Texts will be selected from the writings of Nietzsche, Kierkegaard, Camus, Sartre, de Beauvoir, Merleau-Ponty and Heidegger. Two hours weekly.

C.V. Boundas

Philosophy 230

Moral issues. An application of basic principles of moral philosophy to some ethical problems of contemporary society. Topics might include: abortion and euthanasia, animal rights and species preservation, world hunger and population control, censorship and pornography, women's rights and minority rights, ethical issues arising out of technological innovations. Two hours weekly.

Staff

Philosophy 232

Philosophy of law, justice and the state. A systematic study of relationships amongst notions of the state and theories of justice and law. Special attention will be given to the relevant writings of major political and legal philosophers, such as Hobbes, Rousseau, Hart and Rawls. Weekly two-hour seminar.

Staff

Philosophy-Computer Studies 240a

Symbolic logic. An introductory study of formal logical systems, together with their use in the analysis of various types of arguments. Two hours weekly. (Excludes *Philosophy-Computer Studies 240*.)

R.M. Neumann

Philosophy 275

Philosophy of religion. An inquiry into the nature of religion and religious belief, the relations among faith, reason, knowledge and revelation, the analysis of religious language, the mystical claim to direct knowledge of God, the nature of evil, and religion and ethics. Two hours weekly.

R.E. Carter

Philosophy-Psychology 277

Philosophy of mind. An introduction to some of the central themes in philosophy of mind. Answers to ontological questions (what kinds of things are minds?) and epistemological questions (can we know that we and others have minds?) will be used to focus discussions concerning personal identity, responsibility for action, animal minds, artificial intelligence, the nature of machines. Two hours weekly. (Excludes *PI/PS 377a*.)

Staff

Philosophy 279

Philosophy of art. The philosophy of art has traditionally concerned itself with questions surrounding the nature of art and the work of art, with the creativity involved in the production and in the interpretation of works, with beauty and aesthetic experience, and with the place art does or perhaps should have in society. Two hours weekly.

Staff

Philosophy 282

East Asian philosophy: China and Japan. A study of major Chinese and Japanese philosophers, including Confucius, Lao Tzu/Chuang Tzu, Dogen, Nishida and Suzuki. A focus of the course will be the relation between human nature and nature. The relation between knowledge and experience as a means to understanding the primacy of the aesthetic in Japanese culture. Two hours weekly.

R.E. Carter

Philosophy 310

Early modern philosophy. A study of the important philosophies of the seventeenth and eighteenth centuries, including those of Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume and Kant. Two hours weekly. (Excludes *Philosophy 212*.)

J.W. Burbidge

Philosophy 315

Descriptive and existential phenomenology. Themes and texts will be selected from the writings of Husserl, Heidegger, Merleau-Ponty, Ricoeur and others. Two hours weekly. Prerequisite: *Philosophy 214* or permission of instructor.

Staff

Philosophy 316

Hermeneutics and deconstruction. Themes and texts will be selected from the writings of Heidegger, Gadamer, Ricoeur, Derrida, Deleuze, Foucault, Lyotard, Lacan and Nancy. Two hours weekly. Prerequisite: *Philosophy 214* or permission of the instructor.

C.V. Boundas

Philosophy 330

Moral and political philosophy. A study of some of the following: the relation between morality and rationality, the notion of freedom in morals and politics, the limits of utilitarianism, and the limits to rights. Weekly two-hour seminar.

B.J. Hodgson

Philosophy-Computer Studies 341b

Logics and logical theories. A look at selected topics in logic, including some of: modal and 3-valued logics, the foundations of arithmetic, formal semantics, the theory of rational choice, completeness, soundness, and truth. Prerequisite: *Philosophy-Computer Studies 240a* or permission of the instructor. Two hours weekly.

R.M. Neumann

Philosophy 382

Indian philosophy. An introduction to Indian intellectual culture; a discussion of a selected set of philosophical issues; and an examination of the association of philosophy with religion and science. Prerequisite: At least one previous philosophy course.

Staff

Philosophy 390

Reading course. Students will be encouraged to pursue a special interest, largely through independent study, for full-course credit. Details must be arranged in consultation with the staff in Philosophy between April 15-30 of the preceding academic year.

Philosophy 395

Special topics: Cybermorality. A course which enables students to develop their own positions about the most important social and moral problems raised by computers. These include such concerns as whether computers can become moral persons with moral rights, the fragmentation of society into computer 'haves' and 'have-nots', Internet censorship, and software piracy. No formal background is required, but students must be prepared to tackle the formal presentation of certain topics. Two hours weekly.

M. Neumann

Philosophy 410

Major texts. This course will consist of an in-depth study of one or more of the works of a major philosopher or philosophers. Two hours weekly. Prerequisites: *Philosophy 210* and *310* or permission of the instructor.

R. Carter

Philosophy 411

Medieval philosophy. The development, range and variety of philosophical thought in the Middle Ages, with special emphasis upon selected writings of St. Augustine and St. Thomas Aquinas. Weekly two-hour seminar. Prerequisite: *Philosophy 210* or permission of instructor. (Excludes *Philosophy 311*)

Staff

Philosophy 412

Nineteenth century philosophy. The main movements of thought as found in selected writings of Fichte, Hegel, James, J.S. Mill, Marx, Nietzsche, C.S. Pierce, and others. Prerequisite: *Philosophy 310* or permission of the instructor. Two hours weekly. (Excludes *Philosophy 312*.)

J.W. Burbidge

Philosophy 420

Advanced metaphysics and epistemology. A study of such problems as the nature of existence, space and time, determinism, universals, knowledge and belief, percep-

tion, personal identity, meaning and truth. Two hours weekly. Prerequisite: *Philosophy 210* and *310*, or permission of the instructor. Open only to students with a 70% average in their philosophy courses.

B.J. Hodgson

Philosophy 490

Reading course. Students will be encouraged to pursue a special interest, through independent study, for full-course credit. Details to be arranged in consultation with the staff in Philosophy between April 15-30 of the preceding academic year.

Philosophy 495

Special Topics: Argumentation and the Critiques of Reason. A study of critiques of 'rationality' that have arisen from postmodernist, feminist, and alternative logic camps, and a consideration of the way recent developments in argumentation theory respond to such critiques. Two hours weekly. Prerequisites: *Philosophy 210* and *310* or permission of the instructor.

C. Tindale

Philosophy 4951

Special Topics: Theories of intersubjectivity and community. A detailed study of the writings of Husserl, Sartre, Merleau-Ponty, Levinas, Deleuze, Irigaray and Nancy as they pertain to intersubjectivity and community. One hour weekly. Open to fourth year students attending *Philosophy 316*. Prerequisites: *Philosophy 214* or permission of the instructor. Excludes *Philosophy 316*.

C.V. Boundas

Physics

Professor and Chair of the Department

P.C. Dawson, M.Sc. (TRENT), Ph.D. (VICTORIA)

Professors Emeriti

L.C.R. Alfred, M.Sc. (BOMBAY), Ph.D. (SHEFFIELD); J.I. Lodge, M.A. (QUEEN'S), Ph.D. (VIRGINIA)

Professors

K. De' Bell, M.Sc., Ph.D. (LONDON); W.F.J. Evans, M.A., Ph.D. (SASKATCHEWAN); R.G. Johnson, M.Sc. (QUEEN'S), Ph.D. (LIVERPOOL); J.W. Jury, M.Sc., Ph.D. (TORONTO); A.J. Slavin, M.Sc. (TORONTO), Ph.D. (CAMBRIDGE)

Associate Professors

J.W. Earnshaw, B.A.Sc. (TORONTO), Ph.D. (CAMBRIDGE)

Senior Demonstrator

J. Breukelaar, B.Sc. (YORK), M.Sc. (TRENT)

Demonstrator

D. Marshall, B.Sc. (WATERLOO)

Required Courses

The single-major Honours program consists of twenty courses. Minimum ten courses in Physics, including: *Physics 100, 202a, 203b, 205a, 270b, 311b, 312a, 321, 355a, 380b, 400, 420, 461c**, and one other four-hundred series Physics course.

*A student may substitute *Physics 460* for *461c* under exceptional circumstances and with approval of the department.

Joint-major Honours program. Minimum seven courses in Physics, including: *Physics 100, 202a, 203b, 205a, 270b, 312a, 321, 400*, and one other four-hundred series Physics course.

Single-major General program. Minimum six courses in Physics, including: *Physics 100, 202a, 203b, 205a, 270b, 312a, 321, 380b*.

Joint-major General program. Minimum five courses in Physics including: *Physics 100, 202a, 203b, 205a, 270b, 312a, 321, 380b*.

Special Provisos

- First quarter students may take *Physics 100* and *Physics 150* as courses counting as two different disciplines.
- Students electing no more than two courses in Physics will normally elect *Physics 100* and *Physics 202a*, or *Physics 150* and *Physics 250*.
- Students wishing to deviate from programs outlined above, or to obtain exemption from course prerequisites, should consult the chair.

Notes:

- Course prerequisites should be carefully noted by the student.
- See also under Chemical Physics, Science.
- *Mathematics 110* and *200* are required for Physics majors, and *Physics-Mathematics 301* or *Physics-Mathematics 205a/305b* for Honours Physics. *Mathematics 130* is strongly recommended for the Honours programs.

- *Physics 355a* may be counted as a four-hundred level course.
- The word "course" under "Required Courses" means one full-course or two half-courses.
- Courses may be entered in any quarter, provided that all pre- and co-requisites have been completed for credit.
- *Physics 470a* and *Physics 430* are mutually exclusive.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Physics 100

Elementary physics. Particle dynamics translational and rotational motion, electricity, magnetism, optics, special relativity. Prerequisite: OAC Calculus or Algebra, or equivalent, or permission of the department. OAC credits in Physics and Calculus are recommended, and concurrent enrolment in first-year calculus is strongly recommended. *Mathematics 110* is required for upper-level Physics courses. Three class meetings and three-hour laboratory weekly, tutorial fortnightly.

Physics 150

Introductory astronomy: a non-mathematical treatment. The solar system, sun, and stars. Stellar evolution, supernovae, neutron stars, black holes. Galaxies, quasars, introductory cosmology. The Big Bang. No prerequisite. Not to be counted toward a major in Physics. Two lectures weekly plus periodic workshops for observations.

Physics 202a

Introductory quantum physics. Special relativity, particle-like aspects of radiation, atomic structure, wave-like properties of matter, Schrodinger equation and applications to one-dimensional systems. Prerequisites: *Physics 100* and *Mathematics 110*. Pre- or co-requisite: *Physics-Mathematics 205a*. Three lectures and three-hour laboratory weekly, tutorial fortnightly.

Physics 203b

Quantum physics. Quantum mechanics of one-electron atoms, magnetic dipole moments and spin, transitions and selection rules, identical particles, excited states of atoms, molecules, nuclear and particle physics. Prerequisites: *Physics 202a* and *Physics-Mathematics 205a*. Co-requisite: *Mathematics 200*. Three lectures and tutorial weekly, three-hour laboratory weekly.

Physics-Mathematics 205a

Differential equations. (See Mathematics, and under Notes.)

Physics-Science 209

Introduction to physics. (See Science.)

Physics 250

Special topics in astronomy and cosmology: a course for nonscientists. Subjects to be discussed include Olbers' Paradox, the Fermi-Hart Paradox, the Cosmic Anthropic Principle, and the fate of the Universe. Prerequisite: *Physics 150* or permission. Not to be counted toward a major in Physics. Two lectures weekly, periodic workshops.

Physics 270a

Thermal physics. First and second laws of thermodynamics and applications, heat transfer, blackbody radiation, kinetic theory of gases, statistical thermodynamics. Prerequisite: *Physics 100*. Corequisite: *Mathematics 200*. Three lectures weekly, tutorial fortnightly.

Physics-Mathematics 305b

Partial differential equations. (See Mathematics, and under Notes.)

Physics-Mathematics 311b

Advanced classical mechanics. Applied mathematics as found in the classical mechanics of particles, rigid bodies and continuous media. Motion of rigid bodies, Lagrangian mechanics, Hamiltonian mechanics, dynamics of oscillating systems. Prerequisites: *Mathematics 200* and *Physics-Mathematics 312a*. Three class meetings weekly.

Physics-Mathematics 312a

Classical mechanics. Applied mathematics as found in the classical mechanics of particles. One-dimensional motion, vector differential operators, three-dimensional motion, moving and rotating coordinate systems, central forces, systems of particles. Prerequisites: *Mathematics 110* and *Physics 100* or permission of the instructor. Corequisite: *Mathematics 200*. Three lectures and tutorial weekly.

Physics 321

Electricity and magnetism. Electrostatics, magnetostatics, electric and magnetic properties of matter, Maxwell's equations, electromagnetic wave propagation. Prerequisites: *Physics 100* and *Mathematics 200*. Three class meetings, laboratory or problems session weekly.

Physics 325a

Electronics. A basic applied course in the electronic circuits most commonly used in laboratory sciences. Circuit theory, test instruments, operational amplifiers, semiconductor theory, measurement sensors, power control, digital circuits, AC circuit theory, filters, DC power supplies, RC timing circuits. Prerequisite: *Physics 100* and OAC Calculus or equivalent. Three class meetings weekly, three-hour laboratory weekly.

Physics 355a

Relativity and tensor analysis. Special relativity-kinematics: events and spacetime, Minkowski geometry, four vectors, tensors in spacetime. Dynamics: conservation of momentum and energy, covariant equations of motion. General relativity: geometry and space, the curvature tensor, equivalence principle and curved spacetime, principle of general relativity, metric form of spacetime, tests of Einstein's theory of gravitation. Prerequisites: *Physics 202a* and *Mathematics 200*. Three lectures and tutorial weekly.

Physics 380b

Wave theory. Simple oscillating systems, waves in solids and membranes, acoustic waves in gases, reflection and transmission at a boundary, electromagnetic waves in free space and at surfaces, waves in optical systems. Prerequisites: *Physics 100*, *Mathematics 200*. Three lectures weekly and tutorial fortnightly, three-hour laboratory weekly.

Physics 400

Quantum mechanics. Review of elementary quantum mechanics. States and operators in Hilbert space, Dirac notation, interpretative postulates, representations, symmetry transformations, angular momentum theory, spherically symmetric potentials, approximation methods, scattering theory, identical particles. Selected special topics as time permits. Prerequisites: *Physics 203b*, *Physics-Mathematics 305b*. Three lectures and tutorial weekly.

Physics 420

Electromagnetic theory. Maxwell's equations, the interactions of electromagnetic fields with matter, the relativistic formulation of electromagnetism and its applications. Prerequisites: *Physics 321, Physics-Mathematics 305b*.

Physics-Chemistry 422a

Principles and applications of group theory. (See Chemistry.)

Physics 430

Solid state physics and thermal physics. Review of essential thermodynamics, ensembles: microcanonical, canonical, grand canonical; derivation of occupation numbers, equilibrium considerations, phase space, Liouville's theorem, Boltzmann transport equation. Lattice vibrations and thermal properties of solids, band theory, electron transport, crystallography, crystal binding, semiconductors, magnetism. Prerequisites: *Physics 270b, Physics 203b (or Physics 302b), Physics-Mathematics 205a, Mathematics 200*. Pre- or co-requisites: *Physics 321, Physics-Mathematics 305b*. Excludes *Physics 470a*.

Physics 440

Nuclear and Particle physics. Nuclear properties, forces, models and reactions; accelerators, detectors; high energy physics including elementary particles and their composition and interactions; quarks and gluons; electroweak unification; grand unified theories. May be taken in the third or fourth quarter. Prerequisite: *Physics 203b*, Pre- or co-requisite: *Physics-Mathematics 305b*.

Physics 460

Project course. An experimental or theoretical project on some topic of advanced physics. Past projects have included construction of a laser, field emission electron microscopy, atomic potential theory, wind turbine testing, surface physics, high temperature super-conductivity, etc. Projects are selected in consultation with members of the department; students must obtain approval for the project on the form provided, by the preceding March. An overall average of at least 80% in physics and mathematics will normally be required.

Physics 461c

Advanced laboratory. This course provides the opportunity for advanced

laboratory work in several areas of physics. Prerequisite: All required courses at the *one-hundred, two-hundred and three-hundred levels*.

Physics 470a

Statistical and thermal physics. Review of essential thermodynamics, ensembles: microcanonical, canonical, grand canonical; derivation of occupation numbers, equilibrium considerations. Phase space, Liouville's theorem and the Boltzmann transport equation. Applications from the thermal properties of solids. Prerequisites: *Physics 270b, Physics 203b (or Physics 302b), Physics-Mathematics 205a, Mathematics 200*. Pre- or co-requisites: *Physics 321, Physics-Mathematics 305b*. Excludes *Physics 430*.

Physics 490

Reading course. A course designed to allow advanced students in Physics to pursue independent study under the direction of departmental faculty. This course will be available only in exceptional circumstances, and with the approval of the Department of Physics.

Political Studies

Professor and Chair of the Department
J. Wearing, B.A. (WESTERN ONTARIO),
M.A. (TORONTO, OXFORD), D. PHIL. (OXFORD)

Professors Emeriti

M.P. Doxey, B.S.C., PH.D. (LONDON); D.
Kettler, M.A., PH.D. (COLUMBIA)
K.R.V. Lyon, PH.D. (BRITISH COLUMBIA)

Professors

R. Campbell, B.A. (TRENT), M.A. (TORONTO),
PH.D. (LONDON); M. Gunther, B.A. (WITWATERSRAND), PH.D. (NORTH CAROLINA); D.R. Morrison, M.A. (SASKATCHEWAN),
D. PHIL. (SUSSEX); R.C. Paehlke, B.A. (LEHIGH), M.A. (NEW SCHOOL FOR SOCIAL RESEARCH), PH.D. (BRITISH COLUMBIA)

Associate Professors

J.D. Driscoll, M.A., PH.D. (QUEEN'S);
E. Helleiner, B.A. (TORONTO), M.A.,
PH.D. (LONDON); M. Neufeld, B.A. (WATERLOO), M.A., PH.D. (CARLETON); A. Pickel, M.A. (GUELPH), DIPL. POL. (BERLIN), PH.D. (YORK); D. Torgerson, A.B. (CALIFORNIA-BERKELEY), M.E.S. (YORK), M.A., PH.D. (TORONTO)

Assistant Professor

E. Stavro-Pearce, M.A., PH.D.(TORONTO)

Conjunct Professor

S.G.D. Smith, B.A. (MCGILL), M.A., B.LITT (OXFORD), D.LITT.(TRENT)

Required Courses

The department provides for general study and concentration in one or more fields - political theory, Canadian politics, comparative politics, international relations, and public policy. Political theory is important for every field because all political analysis is theoretically informed. Students of politics are thus strongly advised to plan their studies in a way that will advance their theoretical development. The requirements for honours (see below) indicate the minimum a student needs to develop the theoretical understanding necessary for work at an advanced undergraduate level. A theory course is a prerequisite for entry to the fourth quarter.

The single-major Honours program consists of nineteen courses. Minimum nine courses in Politics, including *Politics 100*, at least two courses at the *three-hundred* level, and at least three courses at the *four-hundred* level, and two political theory courses chosen from 233, 333, 334, 335, 430, 435. Alternatively, the requirement for a second political theory course may be fulfilled by taking two *four-hundred* level courses for which a prior course in political theory is recommended.

Joint-major Honours program. Minimum seven courses in Politics, including *Politics 100* at least two courses at the *three-hundred* level, at least two courses at the *four-hundred* level, and two political theory courses chosen from 233, 333, 334, 335, 430, 435. Alternatively, the requirement for a second political theory course may be fulfilled by taking one *four-hundred* level course for which a prior course in political theory is recommended.

Single-major General program. Minimum six courses in Politics, including *Politics 100* and at least two courses at the *three-hundred* level.

Joint-major General program. Minimum five courses in Politics including *Politics 100* and at least two courses at the *three-hundred* level.

Special Provisos

Politics 100 or permission of the department is a prerequisite for all *two-hundred* to *four-hundred* series courses.

In exceptional circumstances, students may submit written proposals for reading courses (*Politics 390* or *490*) and the Honours thesis (*Politics 402*) to the departmental curriculum committee. Proposals must also be approved by the instructor concerned before departmental permission is recorded on the registration form.

Students may make special arrangements with a course instructor of a *three-hundred* level course to assume an extra workload in the course and have their participation in it be considered a *four-hundred* level course given the name *Politics 480*. Such arrangements are subject to the approval of the course instructor and notification must be made to the departmental curriculum committee. Students are allowed to enrol in *Politics 480* only once during the course of pursuing their degree.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Politics 100

Introduction. The democratic challenge. The course employs literature, film and political writings to examine the ways in which questions of power, people and politicians are dealt with in the continuing effort to resolve conflicts within a democratic framework of government. Two lectures and one tutorial weekly.

Politics-Canadian Studies 201

Canadian politics. An introduction to political institutions and practices, with emphasis on the constitution, parliament and cabinet, political parties and elections, the Charter and the courts and the national political economy. Regular lectures. The course may be taken either with regular tutorials or as a lecture course.

J.Wearing

Politics 210

American politics. A general introduction to American representative institutions (parties, elections, interest groups and the media) and governmental institutions (the Presidency, Congress and Courts). How the interests of Americans are defined and responded to in this system of pluralist

democracy are analyzed. Proposals for reforming the system are considered. Weekly lectures and tutorials.

Politics 220

International politics. In this course, students study the evolution of the global system, survey the variety of approaches which scholars and practitioners have developed for analyzing international politics, and examine contemporary issues within that historical and theoretical context. Attention is paid to both security issues and international political economy. Regular lectures and tutorials. (Support course for Comparative Development Studies.)

M. Neufeld

Politics 233

Political theory. A survey of some classic texts in the history of western political thought with an emphasis on problems of interpretation and the ways in which a tradition of political discourse determines our conceptions of the political and legitimates political activity. Lecture and tutorial weekly.

J. Driscoll

Politics 240

Comparative Politics and Modern Revolution. Introduction to "normal" political processes/policy making in traditional societies-Kung bushpeople and Aztecs; bureaucratic authoritarian societies-Meiji Japan; reconciliation systems-Sweden; and mobilisation systems-modern China and the former USSR. Why revolutionary change? Can social theory explain the Russian, Cuban, Iranian and Vietnamese revolutions? Two lectures weekly, no tutorials.

M. Gunther

Politics 260

An introduction to political analysis and public policy. A comparison and evaluation of competing approaches to the study of public policy with special emphasis on problems of analysis and applications to Canadian politics. Lecture and tutorial or seminar weekly.

Politics-Canadian Studies-History 301
Canadian political culture, 1864 to the present. (See History.)

Politics-Canadian Studies-Sociology 305
Politics and society in Quebec. A survey of social, economic and political developments since the Second World War and a review of competing models of political change in Quebec. Prerequisite: at least one social science course or permission of the Instructor. Lecture and tutorial weekly.
J. Driscoll

Politics-Canadian Studies 309

Ontario politics. An analysis of the political culture, representative and governmental institutions of Ontario. The policy outputs of the government are analyzed. Proposals for strengthening the political system of the province are considered. Weekly lectures and tutorials.

Politics-Canadian Studies-Environmental and Resource Studies 310

Public Policy and the Canadian Environment (see Environmental and Resource Studies)

Politics 320

Ordering World Politics: American and Canadian Foreign Policy in the 20th Century. This course aims to provide a critical perspective on the efforts to construct and regulate the global order represented by the foreign policies of the United States and Canada. A theoretically informed review of the historical record is used to achieve an understanding of current trends. Regular lectures and tutorials. Prerequisite: None. *Politics 220* recommended. (Support course for Comparative Development Studies)

M. Neufeld

Politics 322

The Politics of North American economic integration. An overview of Canadian-American relations with special focus on the emergence of a North American economic region. The course examines key relationships within the region (including Mexico) as well as the region's interactions with the broader international system. Regular lectures and tutorials. (Offered Summer 1996)

E. Helleiner

Politics 333

Political theory. Theorizing political change. Through a careful examination of texts we will look at differing conceptions of truth, ideology, human agency, the state and the possibilities of political change.

Debates within Marxism, anarchism, post-modernism, feminism, and radical democracy will be explored. Prerequisite: *Politics 233, 305, 334 or 335* or permission of the instructor. Regular lectures and tutorials.

Politics 334

Liberal democratic theory. An examination of the development of liberal democratic theory in the nineteenth and twentieth centuries with attention to the relationship between citizens and experts in public life. (Offered Summer 1996.)

Politics 335

The political imagination. Political thought as it appears in a diversity of sources – e.g., literature, film, theatre – as well as in established texts of political theory. With the twentieth century and contemporary politics forming a point of reference, the course opens a particular route of access to both past and present political thought. Weekly lecture/seminar.

D. Torgerson/E. Stavro-Pearce

Politics 340

Comparative European Politics. An exploration of current political changes in Europe, focusing on political integration in the European Union (EU) or the transformation processes in postcommunist Central-Eastern Europe. Regular lectures and tutorials.

Politics 341

Party organization and elections. A comparative study of political parties and the electoral process with particular attention given to the impact of new electoral technologies and changes in voting behaviour. Examples are drawn from Canada, the United States, Britain and other western democracies. Prerequisite: a two-hundred level Politics course or permission of the instructor. Weekly lectures and fortnightly tutorials.

J. Wearing

Politics-Canadian Studies 362

Public Policy and Administration in Canada. An integrated study of the policy-making process, linking ideas, ideologies and interests with political and administrative structures and processes, with the aim of establishing what is distinctive about the process in Canada. Students will have the opportunity to carry out a research project in a policy area of their choosing. Regular lectures and tutorials.

Politics 390, 391a, 392b, 393c

Reading course in politics. Open only to students majoring in Politics and designed to provide an opportunity for more intensive examination of material studied in other politics courses. Periodic tutorials. Prerequisite: permission of the department, but see Special Provisos.

Politics 402

Honours thesis. A scholarly project on a specific topic to be developed and carried out under the supervision of a member of the department and for which a double credit will be given. (See Special Provisos.)

Politics-Canadian Studies 405

Contemporary Canadian problems. A project-oriented course which focuses on a set of selected Canadian political problems. Students will have the opportunity to carry out a research project in an area of their choosing. Regular seminars.

R. Campbell

Politics 420

Advanced Topics in International Relations Theory. "Thinking globally" has become a requirement of living in an era of globalization. Drawing on current theories of international relations, as well as insights afforded by social and political theory, this course explores the issue of how to think critically about world politics in the shadow of the 21st century. Regular seminars. Prerequisite: *Politics 220* or permission of the Instructor. A political theory course is recommended.

M. Neufeld

Politics 425

Advanced topics in international political economy. This course aims to provide students an opportunity to study the field of international political economy at an advanced level. In the course, students will investigate the key conceptual and theoretical debates in the field and study some of the central issues and trends within the contemporary global political economy. Prerequisite: *Politics 220* or permission of instructor. A political theory course is recommended. Regular seminars.

E. Helleiner

Politics 430

Contemporary political analysis. An examination of contemporary debates within feminist theory. Prerequisite: a political theory course is recommended. Weekly seminars.

E. Stavro-Pearce

Politics-Comparative Development 440

Political Economy in Comparative Perspective. The course is concerned with the theory and practice of capitalism. Also with the history and ethical implications of capitalism. Various aspects of development, welfare and comparative politics are introduced. No previous background in economics needed. Prerequisite: Fourth Year students only. Weekly seminar.
M. Gunther

Politics-Comparative Development 450

Democracy and Democratization. A study of competing theories of democracies and approaches to democratization, the problematic relationship between capitalism and democracy, the role of political culture and ideology. Students develop their own research projects. Prerequisite: A political theory course is recommended. Weekly seminars.

Politics-Environmental and Resource Studies 460

Public policy in comparative perspective. The course uses a comparative and case study method to compare selected policies in Canada and other Western polities. Areas to be examined include environmental, economic, health and social policy. The course will emphasize the development of projects involving primary research. Prerequisite: a political theory course is recommended. Weekly seminars.
R. Paehlke

Comparative Development-Canadian Studies-Political Studies 464
(See Comparative Development.)**Politics 490, 491a, 492b, 493c**

Reading course in politics. Open only to students in the fourth quarter of a Politics major program. Periodic tutorials.

Alternatively a student may do an internship, involving field and written work in an area related to politics. For further details, see the departmental brochure. Prerequisite: permission of the department, but see Special Provisos.

Psychology**Associate Professor and Chair of the Department**

P. Watson, M.A., PH.D. (WESTERN ONTARIO)

Professors

C.H. Ernest, B.A. (SASKATCHEWAN), M.A., PH.D. (WESTERN ONTARIO) (on leave Winter Term 1997); G.T. Reker, B.A. (MCMASTER), M.A.S.C., PH.D. (WATERLOO); C.T. Smith, B.S.C. (MANITOBA), M.A., PH.D. (WATERLOO); Gordon Winocur, M.A. (MANITOBA), PH.D. (WATERLOO); P.T.P. Wong, B.A. (CARLETON), M.A., PH.D. (TORONTO)

Associate Professors

F.A. Bleasdale, B.A. (TORONTO), M.A., PH.D. (WESTERN ONTARIO); D.J. Kennett, B.A., PH.D. (MCMASTER); D.G. Lowe, B.A. (MCMASTER), M.A., PH.D. (WATERLOO); R.B. Morris, B.A. (REDLANDS), M.S.C. (WASHINGTON), PH.D. (ALBERTA); R.G. Settingington, M.A., PH.D. (TORONTO); C.F. Sproule, M.A. (TORONTO)

Assistant Professors

J.B. Aubrey, M.S.C. PH.D. (ALBERTA); J.D.A. Parker, B.A. (SIMON FRASER), M.A., PH.D. (YORK)

Required Courses

The Department of Psychology offers two Honours programs, one course-based (normally leading to the B.A.) and one thesis-based (leading to the B.Sc.). Students intending to do a thesis-based Honours program should discuss their program with the chair of the Honours Committee before choosing their *three-hundred* and *four-hundred* level courses.

The course-based Honours program consists of 20 courses with a minimum of 11 full-course equivalents (or eight if joint-major) in Psychology, including:

- Psychology 101, 215*
- one from 221, 235, 271, 280
- one of 315 or 333
- two Basic full-course equivalents (or one if joint-major) from: 306, 312b, 351, 365, 375a, 376b, 396a, 470
- two specialized full-course equivalents (or one if joint-major) from: 301, 320, 340, 382, 430, 450, 480
- three additional *three-hundred* or *four-hundred* level Psychology courses (or two if joint-major)

The thesis-based Honours program consists of twenty courses with a minimum of eleven full-course equivalents (or eight if joint-major) in Psychology, including: *Psychology 101, 215, 315, 402* (or *401* if joint-major), *410*

- one from *221, 235, 271, 280*
- two basic full-course equivalents (or one if joint-major) from: *306, 312b, 351, 365, 375a, 376b, 396a, 470*
- two specialized full-course equivalents (or one if joint-major) from: *301, 320, 340, 382, 430, 450, 480* (see Notes)

The General program consists of fifteen courses with a minimum of six full-course equivalents (or five if joint-major) in Psychology, including:

Psychology 101, 215

- one from *221, 235, 271, 280*
- one basic full-course equivalent from: *306, 312b, 351, 365, 375a, 376b, 396a, 470*
- one specialized full-course equivalent from: *301, 320, 340, 382, 430, 450, 480*
- one additional *three-hundred* or *four-hundred* level Psychology course (delete this sixth course if joint-major)

Notes:

- A standing of C- (60%) or higher is required in *Psychology 101* in order to register in any other Psychology course; no credit is given for any upper level Psychology course completed at another university before a standing of C- or higher is received in *Psychology 101* or its equivalent.
- Students contemplating taking a reading course must consult with the course coordinator prior to April 30 of the preceding academic year.
- Students doing research involving animal subjects in any Psychology course must complete satisfactorily the university's Animal Care course as part of the Psychology course requirements.
- *Psychology 333* requirement will be waived for students who have completed the former *Psychology 332b*.
- If both *Psychology 315* and *Psychology 333* are satisfactorily completed, *Psychology 333* may be counted as a specialized course.
- For Part-time Honours Thesis students, *PS 401* or *402*, and *PS 410* must be completed as the final requirements toward the B.Sc. degree

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Psychology 101

Introduction to psychology. A survey of the major areas of psychology, including its historical development and the methods of the science, the development of behaviour, learning and memory, biological and perceptual processes, individual differences and personality, and social determinants of behaviour. Two lectures weekly; two-hour laboratory fortnightly.

Psychology 215

Basic experimental methods and statistics. An introduction to methodological, statistical, and computer techniques in psychological research and the application of these techniques to empirical research in the discipline. (This course fulfills the Mathematics requirement for the B.Sc.) Prerequisite: C- or higher in *Psychology 101*. Three lectures weekly, workshop or laboratory weekly.

Psychology 221

Introduction to physiological and comparative psychology. A consideration of the methods and techniques of physiological and comparative psychology, including neuroanatomy, sensory and motor systems, and physiological mechanisms of behaviour. Prerequisite: C- or higher in *Psychology 101*. Two lectures weekly; seminar fortnightly.

Psychology 235

Personality theory. An examination of significant personality theories and models including Freudian, Neo-Freudian, Behaviourist, Third Force, Existentialist and Phenomenological theorists. Prerequisite: C- or higher in *Psychology 101*. Lecture and seminar weekly.

Psychology 271

Social psychology. A discussion of contemporary research in attribution and social cognition; attitude formation and change, group structure and processes; social influence processes; and interpersonal relations, including liking, prejudice, aggression, and altruism. Prerequisite: C- or higher in *Psychology 101*. Two lectures weekly; seminar fortnightly.

Psychology-Philosophy 277

Philosophy of mind. (See Philosophy.)
Not counted as part of the minimum requirements for the General or Honours degrees in Psychology.

Psychology 280

Child psychology. The development of the normal child from conception to adolescence, with emphasis on the empirical research and theoretical issues pertaining to child development and behaviour. Prerequisite: C- or higher in *Psychology 101*. Two lectures weekly, seminar fortnightly.

Psychology 301

Educational psychology. An examination of the ways in which the methods and content of psychology may be applied in the search for solutions to problems of teaching and learning, with emphasis on the theoretical and empirical bases for decisions about what constitutes sound educational practice. Prerequisite: any two-hundred level Psychology course. Two lectures weekly; seminar fortnightly.

Psychology 306

Human information processing. An intensive examination of selected aspects of human behaviour which are analyzed by an information processing approach. Specific topics include detection, discrimination, sensory coding, pattern recognition, attention, and memory. Prerequisite: *Psychology 215*. Three lectures/laboratories weekly.

Psychology 312b

Research methodology. A course designed to allow in-depth study of methods of empirical research involved in a specific area of the discipline. Also included will be an introduction to computer analysis of empirical data. A major component of the course is the completion of a group research project. Prerequisite: *Psychology 215*. Two-hour lecture; one-hour workshop weekly.

Psychology 315

Advanced statistics and research design. An intensive study of the application of statistical techniques to a variety of research questions and experimental designs. Focus is on the laws of probability, techniques of analysis of variance and covariance, correlation, regression and multivariate procedures. Prerequisite: *Psychology 215*. Three lectures and two-hour workshop weekly.

Psychology 320

Applied learning. The application of principles of learning and motivation to practical situations including teaching, child rearing, public institutions, and animal training. The two areas of concentration are: a) basic principles of learning and b) their application. Prerequisite: any two-hundred level Psychology course. Two-hour lecture weekly; workshop weekly.

Psychology 333

Psychometrics. A detailed intensive examination of the principles of test-construction, involving item writing, scaling, item analysis, reliability, validity, and validity checks. Introduction to SPSS computer programming and test evaluation. In the second half of the course, a number of educational, psychological, and clinical instruments will be examined in depth. Prerequisite: *Psychology 215*. Three lectures/laboratories weekly. (Students may not count both the former *Psychology 332b* and *Psychology 333* for credit.)

Psychology-Biology 336b

Animal behaviour. (See Biology.) Not counted as part of the minimum requirements for the General or Honours degrees in Psychology.

Psychology 340

Abnormal psychology. A survey of deviations and disorders in behaviour as investigated by experiments and other systematic procedures. Prerequisite: any two-hundred level Psychology course. Two lectures weekly; seminar fortnightly.

Psychology 351

Learning. An examination of learning processes in humans and animals, including such topics as theories of learning, classical and instrumental conditioning, motivation, and the higher cognitive activities involved in human learning, memory, and related areas. Prerequisite: *Psychology 215*. Two lectures weekly; two-hour laboratory or problem session fortnightly.

Psychology 365

Psycholinguistics and reading processes. A survey of theory and research on the production and comprehension of spoken and written language. Topics covered include syntactic and semantic structure of language, mental representation, the relation between language and cognitive processes, language development, bilingual-

ism, and reading processes. Prerequisite: *Psychology 215*. Two lectures weekly; laboratory fortnightly. (Students may count only one of *Psychology 302a*, *Psychology 365* and *Psychology 4952* for credit.)

Psychology-Biology 375a

Principles of the nervous system. An intensive coverage of the central nervous system, its anatomy and physiological interactions. The course emphasizes sub-cortical and cortical brain structures and their functional characteristics. Prerequisite: *Psychology 221* or a relevant upper-level Biology course (which requires permission of the department). Two lectures and two-hour laboratory weekly.

Psychology-Biology 376b

Neuropsychology. An examination of the relationship between brain function and psychological processes, drawing heavily from contemporary research involving humans and animals, and describing the neural bases for such psychological processes as learning, memory, language, and emotion. Special attention is given to behavioural abnormalities resulting from brain pathology. Prerequisite: *Psychology-Biology 375a*. Two lectures and seminar weekly.

Psychology 382

Exceptional development. An overview of the major areas of exceptional development, including mental retardation, giftedness, sensory impairments, specific learning disabilities, behaviour problems, autism, and multiple impairments. Prerequisite: *Psychology 280*. Three lectures/discussions weekly.

Psychology 390, 391a, 392b

Reading course. A course designed to allow advanced students in Psychology to pursue independent study under the direction of departmental faculty. Not counted as part of the minimum requirements for the General or Honours degrees in Psychology. Prerequisite: *Psychology 215* and permission of the department. (See Notes.)

Psychology 396a

Special Topic: Emotion. A survey of theory and research on human and animal emotion. Topics covered include the definition, measurement, evolution, development, control, physiology, and neurology of emotions, as well as the connections

between emotions, cognitions, and consciousness. Prerequisite: *Psychology 215*. Three lectures/discussions weekly.

Psychology 401

Joint-major Honours thesis. This is the same course as *Psychology 402* with the exception of the thesis being jointly supervised by and given a single course credit by both participating departments. Prerequisite: same as *Psychology 402*. Corequisite: *Psychology 410*.

Psychology 402

Single-major Honours thesis. A double-credit course during which students will design and execute a major piece of psychological research under the supervision of departmental faculty. Students must secure agreement of faculty for supervision by the end of March of the preceding year. Prerequisite: *Psychology 315*, one basic full-course equivalent from *302a*, *306*, *312b*, *351*, *375a*, *376b*, *396a*, *4952*; a minimum 70% average in all completed Psychology courses; and permission of the Department. Corequisite: *Psychology 410*.

Psychology 410

Thesis seminar. A seminar course in which students discuss empirical and theoretical issues related to their Honours thesis research, colloquia topics, and current issues in psychology under the direction of departmental faculty. Prerequisites: same as *Psychology 401* and *402*. Corequisite: *Psychology 401* or *402*. Two seminars weekly.

Psychology 430

Human abilities. Integrates non-experimental and experimental approaches to the study of abilities. The first half focusses on historical figures, psychometric theories, and information processing approaches to understanding individual differences in intelligence. Heredity and environment issues, as well as group differences (age, sex, race/culture) are discussed in the second term. Prerequisite: *Psychology 215*, plus successful completion of at least 10 courses, plus Honours standing. Two lectures weekly; seminar fortnightly. (Students may not count both *Psychology 430* and *Psychology 330a* for credit.)

Psychology 450

Health psychology. This course examines the interface of psychosocial and biomedical processes in the prevention of illness and promotion of health. Focus is on

theory-based psychological research and on the practice of health psychology. Topics include attribution theory, self-efficacy, stress and coping, lifestyle and risk factors in various medical disorders. Prerequisite: *Psychology 215*, plus successful completion of at least 10 courses, plus Honours standing. Two lectures, seminar/workshop weekly. (Students may not count both *Psychology 450* and *Psychology 4951* for credit.)

Psychology 470

History and systems of psychology. A survey of the history and systems of psychology through a discussion of the work of various authors who may be considered important in the history of psychology because of their contribution to systematic theory, research, or the organization of the discipline. Prerequisite: any four Psychology courses as pre- or co-requisite. Two lectures weekly; seminars fortnightly.

Psychology 480

Adult development and aging. A detailed examination of psychological processes associated with development in adulthood and old age. Topics include biological and psychological theories of aging; research methods; age changes in memory, intelligence, personality, attitudes, stress coping and health; successful aging; psychopathology; senile dementia; methods of assessment; methods of prevention and intervention. Prerequisite: *Psychology 215*, plus successful completion of at least 10 courses, plus Honours standing. Two lectures weekly; seminar fortnightly.

Psychology 490, 491a, 492b

Reading course. A course designed to allow students in the fourth year of their Psychology program to pursue independent study under the direction of departmental faculty. (See Notes.) Not counted as part of the minimum requirements for the Honours degree. Prerequisite: *Psychology 215*, plus successful completion of at least 10 courses, plus Honours standing, plus permission of the department.

Science

The Assoc. Dean of Arts & Science (Science), is responsible for the administration of all general science courses.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Physics 150

Introductory Astronomy. (See the Physics section of the Calendar)

Science-Physics 209

Introduction to physics. A survey course with a laboratory component intended for concurrent education students and others who are not majoring in Mathematics or a physical science. Emphasis is placed on empirical results obtained through experiment and the construction of conceptual models. Not to be counted towards a major in Physics. Not open to students who have declared a Physics major (single or joint), or concurrently registered in *Physics 100*.

Science-Geography 240

Geology. (See the Geography section of the Calendar)

Mathematics 280

Mathematics for the contemporary Classroom. (see the Mathematics section of the Calendar)

Physics 250

Selected topics in Astronomy and Cosmology (See the Physics section of the Calendar)

Science 350

Communicating science. This course is designed to help students develop their skills in communicating science to colleagues in their own field and to specific audiences within the general public. Focus is on written & oral communication skills, although non-traditional skills (theatre, displays, games) are also examined. Computers and audio-visual equipment are used extensively. Open to science students and to students in the Teacher Education Program with a minimum of three science credits or with the permission of the instructor.

Science-Mathematics 380

History of mathematics. (See the Mathematics section of the Calendar)

Sociology

Professor and Chair of the Department

A. Heitlinger, B.A. (KENT), PH.D. (LEICESTER)

Professor Emeritus

R.A. Lockhart, M.A. (SIMON FRASER), PH.D. (ESSEX)

Professors

P. Bandyopadhyay, B.A. (CALCUTTA), M.A. (OXFORD, MANCHESTER), PH.D. (MANCHESTER); R.T. Bowles, B.Sc. (BRIGHAM YOUNG), PH.D. (OREGON) (on leave 1996-97); J. Hillman, M.A. (OXFORD), PH.D. (SUNY, BUFFALO)

Associate Professors

S. Arat-Koc, B.A. (BOGAZICI), M.A. (WATERLOO), PH.D. (TORONTO) (on leave Winter 1997); D.M. Clarke, B.A. (TRENT), M.A. (MCMASTER), PH.D. (CARLETON) (on leave 1996-97); J.R. Conley, B.A. (ALBERTA), M.A. (TORONTO), PH.D. (CARLETON); C.V. Huxley, B.A. (YORK, ENG.), M.A. (SIMON FRASER), PH.D. (TORONTO); S. Katz, B.A. (YORK), M.A. (MCGILL), PH.D. (YORK); B.L. Marshall, B.A., M.A. (GUELPH), PH.D. (ALBERTA); F. Nutch, B.A. (ADELPHI), M.A. (HAWAII), PH.D. (YORK) (on leave Winter 1997); G.M. Thibault, B.A., B.Ed., M.A., PH.D. (DALHOUSIE)

Required Courses

The single-major Honours program consists of nineteen courses. Minimum nine courses in Sociology, including: *Sociology 100, 210, 220, 221a/b, 222a/b* or equivalent*, and at least four *three-hundred* series or *four-hundred* series courses of which at least one must be a *four-hundred* series course. Students planning to enter graduate school are strongly advised to take *Sociology 403a* and *Sociology 404b* (contemporary sociological theory).

Joint-major Honours program. Minimum seven courses in Sociology, including: *Sociology 100, 210, 220, 221a/b, 222a/b* or equivalent*, plus at least two *three-hundred* series or *four-hundred* series courses of which at least one must be a *four-hundred* series course. Students planning to enter graduate school are strongly advised to take *Sociology 403a* and *Sociology 404b* (contemporary sociological theory).

Single-major General program. Minimum six courses in Sociology, including: *Sociology 100, 210, 220*, plus two *three-hundred* series courses.

Joint-major General program. Minimum five courses in Sociology, including: *Sociology 100, 210, 220*, plus one *three-hundred* series course.

Notes:

The program has two tiers: foundation courses in basic areas of Sociology at the *one-hundred* and *two-hundred* level, and courses in specialized areas of Sociology at the *three-hundred* and *four-hundred* levels. The foundation courses aim to provide a grounding in the core theoretical and methodological aspects of the discipline. The specialized courses permit students to study in some detail particular substantive areas in sociology.

A standing of C- (60%) or higher is required in *Sociology 100* for registration in upper-year Sociology courses. Students enrolling in cross-listed courses have the option to substitute minimum 60% in *Sociology 100* with minimum 60% in the prerequisite for that particular department or program. The prerequisite is contained in the calendar specification for the relevant courses.

Three-hundred series courses are open to students who have completed five university courses. Students are strongly encouraged to complete at least one full course credit from among *Sociology 210, 220, 221a/b* and *222a/b* before proceeding to *three-hundred* series courses.

Four-hundred series courses are open to students who have completed ten university courses, of which at least two should be at the *three-hundred* level. Students are strongly encouraged to complete at least two full course credits from among *Sociology 210, 220, 221a/b* and *222a/b* before proceeding to *four-hundred* series courses.

Students are advised to take *Sociology 389* if they are intending to enter professional or graduate schools in Canada.

* *Sociology 222a/b* is not open to students who have completed or are currently registered in either *Mathematics-Statistics 150, Psychology 215* or *Psychology 315*. However, these three courses will be

deemed equivalent to *Sociology 222a/b* for program requirements, but do not count as a Sociology credit.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Sociology 100

Introduction to social analysis. An introduction to the basic ideas of sociological analysis.

S. Katz, G. Thibault & staff

Sociology 210

Classical sociological theory. An examination of the structure and scope of sociological theorizing. Conceptions of theory, method, and object of investigation will be explored with regard mainly to Marx, Weber and Durkheim. Prerequisite: C- or higher in *Sociology 100*.

J. Hillman & staff

Sociology 220

Social inequality: class, gender, ethnicity. The sociological study of social inequality, concentrating on class, gender, and ethnicity as relations of domination will be explored through a variety of theories and methods. The course will focus on the structural analysis of these social relationships, their links with each other, and their effects on societies and individuals.

Prerequisite: C- or higher in *Sociology 100*.

J. Conley

Sociology 221a

Research methods. An introduction to the major research methods employed in sociological research. Prerequisite: C- or higher in *Sociology 100*.

C. Huxley

Sociology 222b

Statistics. An introduction to basic statistics and their application in sociological research. Prerequisite: C- or higher in *Sociology 100*.

B. Marshall

Sociology 230

Self and society. This course examines the concept of self in sociological theory and its development in interactionist, dramaturgical and ethnographic analyses. Critical emphasis is placed on everyday contexts of identity, language and power, and historical, crosscultural and postmodern

constructions of personhood. Prerequisite: C- or higher in *Sociology 100*.

F. Nutch & S. Katz

Sociology 241

Families and households. Sociological frameworks are applied to the analysis of different family forms, internal family processes, and the societal contexts which shape families. Topics include mate selection and couple formation, sexuality, marriage and divorce, childbirth and child development, the division of household labour, family stress and family violence. Prerequisite: C- or higher in *Sociology 100*.

Sociology-Politics 305

Politics and society in Quebec. (See Political Studies.)

Sociology-Administration 333a

Social organization and bureaucracy. An overview of different approaches to the analysis of complex organization including classical theories of bureaucracy, the managerial tradition and perspectives drawn from contemporary sociology. Selected case studies are examined with special emphasis on the analysis of the modern enterprise. Prerequisite: C- or higher in *Sociology 100*, or *Administration 250*.

Sociology 334b

Sociology of work. The nature and meaning of paid work in North America in the last half of the 20th century. The effects of technological changes, the shift to a service economy, and the changing gender composition of the labour force on managerial and employee strategies to control the workplace. Prerequisite: C- or higher in *Sociology 100*, or *Administration 250*.

C. Huxley

Sociology/Canadian Studies 341a

Sociology of education. A critical examination of the relationship among schooling practices, educational theory, family, work and the polity. In particular the focus is on the relationship between forms of educational knowledge that are transmitted in schools and the politics of social inequalities inherent in that knowledge. Prerequisite: C- or higher in *Sociology 100* or *Canadian Studies 200* or *300*. (Not open to students with credit in the former *Sociology/Canadian Studies 340*.)

G. Thibault.

Sociology/Women's Studies 343a

Sociology of gender. This course will focus on gender as both an analytical construct in sociological theory and research, and as a key aspect of social organization. Issues to be examined include the social construction of masculinity and femininity, theories of gender acquisition and the social reproduction of gender inequalities. Prerequisites: C- or higher in *Sociology 100* or *Women's Studies 100*. (Not open to students with credit in the former *Sociology/Women's Studies 342*.)
B. Marshall

Sociology/Women's Studies 344b

Selected issues in gender and sexuality. The focus this year will be on the social construction of sexuality. Issues include theoretical treatments of the body, gender and sexuality, examination of the construction of 'normal' and 'deviant' sexualities, and forms of sexual regulation and resistance. Prerequisites: C- or higher in *Sociology 100* or *Women's Studies 100*. (Not open to students with credit in the former *Sociology/Women's Studies 342*.)
B. Marshall

Sociology-Cultural Studies 350

Modern cultural theory. (See Cultural Studies.)

Sociology 363

Sociology of health and illness. An analysis of health care systems. Topics include definitions of health and illness, medical technology and health professions, health care politics and policy, and class and gender relations in health care delivery systems. Prerequisite: C- or higher in *Sociology 100*.
A. Heitlinger

Sociology 364a

Deviance and social control. This course examines major sociological theories and debates about deviant behaviour, including the social construction of normality and deviance and their institutionalization, and informal modes of social control. Prerequisites: C- or higher in *Sociology 100*. (Not open to students with credit in the former *Sociology 361*.)

Sociology 365b

Crime and regulation. This course examines those forms of deviant behaviour which are defined as criminal in terms of meaning, variety and distribution, as well as formal modes of their regulation, in-

cluding policing and the criminal justice system. Prerequisites: C- or higher in *Sociology 100*. (Not open to students with credit in the former *Sociology 361*.)

Sociology 366

Analysis of social policy. An examination of the expanding role of state and government institutions in shaping socioeconomic conditions and social welfare. Policy formulation and implementation will be assessed with emphasis on such sectors as education, health, housing and welfare. Prerequisite: C- or higher in *Sociology 100*.

Sociology 383a

Urban culture. An examination of theories which analyse urbanism as a way of life with emphasis on the form and content of human interaction. Prerequisite: C- or higher in *Sociology 100*.

Sociology 384b

Urban social structure. An introduction to the forces shaping the types and structures of land use and the built environment. This will include issues such as the influence of spatial structures and relations on urban social stratification; occupational, age-group, ethnic and life-cycle related variations in urban social experience; the political economy of housing; and the political process around urban services, amenities and commercial development. Prerequisite: C- or higher in *Sociology 100*.

Sociology-Canadian Studies 389

The social structure of Canada. This course uses historical and contemporary material to examine class, gender, race, ethnicity and region in the making of Canadian society and the state. It provides a theoretical overview of sociological and political economy perspectives on Canadian society and recent critiques demonstrating the limitations of these perspectives. Prerequisite: C- or higher in *Sociology 100* or *Canadian Studies 200* or *300*.

Sociology 402

Honours thesis. A specific scholarly project on a well-defined topic, for which double credit will be given, to be worked out in consultation with the student's Honours supervisor. Prerequisite: 75% (B) average in sociology courses. Regular meetings with students writing Honours thesis.

Sociology 403a

Contemporary Sociological Theory I. Advanced analysis of major questions in sociological theory. This course will provide a selective overview of 20th century sociological theory. It will place a particular emphasis on the challenges posed to "mainstream" sociological theory by development theory, feminist theory, neo-Gramscian theory and postmodern theory. Prerequisite: *Sociology 210* or permission of the instructor. (Not open to students with credit in the former *Sociology 400*.)

Sociology 404b

Contemporary Sociological Theory II. Theory and Methodology. With special emphasis on the tradition of critical theory, but drawing on a wide range of literature, we will examine the relationship between theory and methodology in contemporary sociological debates. We will explore both metatheoretical assumptions and specific contexts of research, including debates about foundations, positivism, objectivity, standpoint theories, quantitative vs. qualitative methods, and the interface of theory, research and political interests. Prerequisite: *Sociology 210* or the permission of the instructor. (Not open to students with credit in the former *Sociology 400*.)

B. Marshall

Sociology-Cultural Studies 440

Special topics in the sociology of knowledge and culture. The course reviews Michel Foucault's theories of power, knowledge, subjectivity and governmentality and related studies in disciplinarity. Considerable attention is devoted to critiques of human science expertise, risk management, surveillance technology, discursive regimes and models of selfhood in lifestyle, sexuality and popular therapy. Prerequisite: *Sociology 210*, *Cultural Studies 250*, or permission of the instructor.

S. Katz

Sociology-Canadian Studies 445

The media and communications in Canada. Overview of the history and political economy of the media industries, including publishing, film, radio, television, and new communication technologies. Special topics include media ownership and control, the process of television news production, and the dynamics of media

reception. Prerequisite: *Canadian Studies-History 300* or *Canadian Studies-Sociology 389* or permission of the instructor.

Sociology/Women's Studies 461a

Gender, Regulation and Resistance. An advanced critical examination of gender regulation which authorizes certain kinds of gender identities as legitimate and other as problematic. Topics to be considered include institutional containment, sexual terrorism, moral panics, violence, and racial eugenics. Prerequisite: *Sociology 343a* or *Sociology 344b*.

G. Thibault

Sociology/Women's Studies 462b

Women and Social Policy. A study of social policy in areas which directly implicate and 'gender' women, such as health care and family welfare, sexuality, corrections, pay (in)equality, sexual harassment and housing. Prerequisite: *Sociology 343a* or *Sociology 461a*.

G. Thibault

Sociology-Comparative Development Studies 470a

Social movements-religion in development. (See Comparative Development Studies.)

Sociology 496a

Special topics in sociological investigation. This year: Marine Social Worlds. An examination of sociological theory and research on the social worlds of mariners, tourists, and marine scientists. Prerequisite: *Sociology 210* or permission of the instructor.

F. Nutch

Sociology 497b

Special topics in sociological investigation. This year: Protest, contention, and social movements. An examination of sociological theory and research on contemporary social movements covering topics such as mobilization and organization, collective identities, forms of contentious action, relationships between contenders and powerholders, and the outcomes of social movements. Prerequisite: *Sociology 210* or permission of the instructor.

J. Conley

Reading Courses

Both full- and half-year reading courses are available as *Sociology 390, 391a, 392b, 393c, 490, 491a, 492b, 493c*.

Registration in reading courses is contingent on instructor's permission and departmental approval in advance of course registration.

Special Topics Courses

Both full- and half-year special topic courses are available as *Sociology 395, 396a, 397b*.

Statistics

Mathematics-Statistics 150

A non-calculus-based introduction to probability and statistical methods. (See Mathematics.)

Mathematics-Statistics 251a

Probability and statistics I. (See Mathematics.)

Mathematics-Statistics 252b

Probability and statistics II. (See Mathematics.)

Computer Studies-Mathematics-Statistics 351

Linear statistical models. (See Mathematics.)

Mathematics-Statistics 451a

Sampling theory. (See Mathematics.)

Mathematics-Statistics 452b

Theory of inference. (See Mathematics.)



Women's Studies

Assistant Professor and Chair of the Program

M. Hobbs, B.A. (TRENT), M.A., PH.D. (TORONTO)

Professor

C. Verduyn, B.A. (TRENT), M.A., PH.D. (OTTAWA)

Associate Professors

J. Sangster, B.A. (TRENT), M.A., PH.D. (MCMASTER); S. Arat-Koc, B.A. (BOGAZICI), M.A. (WATERLOO), PH.D. (TORONTO); W. Lem, M.A., PH.D. (TORONTO)

Associated Faculty

Canadian Studies, M. Lacombe; *English Literature*, J.A. Buckman, M.C. Eddy, R.J. Dellamora; *History*, F. Harris-Stoertz, *Political Studies*, E. Stavro-Pearce; *Sociology*, B.L. Marshall, G.M. Thibault, A. Heitlinger; *Native Studies*, E. Manitowabi, S.I. Williams.

The Women's Studies Program provides an opportunity for students to pursue a joint-major Honours degree by combining Women's Studies required, cross-listed, and support courses with a joint-major in another discipline.

Required Courses

The joint-major Honours program consists of nineteen or nineteen and a half full courses, depending upon the number of courses required by the paired discipline. Minimum seven courses in Women's Studies, including *Women's Studies 100**, *201**, *300*, *400*, two other cross-listed courses, and one other course, either cross-listed or support.

Joint-major General program. Minimum five Women's Studies courses, including *Women's Studies 100**, *201**, *300*, one other cross-listed course, and one other course, either cross-listed or support.

* for students entering the program in 1993-94 or later. Students who began the program before 1993-94 require WS 200.

Please note that some Women's Studies cross-listed courses have prerequisites not listed here.

Students may include no more than one reading course in the minimum five Women's Studies courses required for the General joint-major, and no more than two in the minimum seven Women's Studies courses required for the Honours joint-major.

Please consult the academic timetable to determine which of the courses listed will be offered in 1996-97.

Women's Studies 100

Introduction to women's studies. An interdisciplinary introduction to women's studies. Areas to be examined include sex vs. gender, definitions of feminism, and issues in contemporary feminism. Lecture, seminar weekly. Not open to students with credit in *Women's Studies 200*.
staff

Women's Studies 201

Introduction to feminist analysis. An introduction to feminist research methods and the debates surrounding them. An overview of feminist critiques of some traditional academic disciplines, their theoretical underpinnings and methods. Prerequisite: *Women's Studies 100*.
Staff

Women's Studies-Classical Civilization 231a

The experience of women in Greek archaic and classical periods (c. 700-300 B.C.). (See Ancient History and Classics.)

Women's Studies-Classical Civilization 232b

The role in society of Roman women in the late Republican and Imperial periods (100 B.C.-A.D. 300). (See Ancient History and Classics.)

Women's Studies-Canadian Studies-English 266

Canadian women's writing. (See Canadian Studies.)

Women's Studies-Canadian Studies 275
Women in Canada. (See Canadian Studies.)

Women's Studies 300

Feminist theory. An examination of the development of feminist theory through classic texts and the debates those texts have inspired. The course focuses on key debates in Marxism and socialist feminism,

literary theory, psychoanalysis, and feminist epistemology. Lecture, seminar weekly. Prerequisite: *Women's Studies 100* and *Women's Studies 201*, or permission of instructor.
M. Hobbs

Women's Studies-English 310
Gender and literature. (See English.)

Women's Studies-Canadian Studies-History 316
Women in North America. (See History.)

Women's Studies-Comparative Development 325
Women and development. An exploration of the theoretical, analytical and political issues in the study of women and development, using case material from developing countries and regions within developed countries. Prerequisite: *Comparative Development 100* or *Women's Studies 100* or permission of the instructor.
W. Lem

Women's Studies-Sociology 343a
Sociology of gender. (See Sociology.)

Women's Studies-Sociology 344b
Selected issues in gender and sexuality. (See Sociology.)

Women's Studies-Native Studies 350
First Nations women. (See Native Studies.)

Women's Studies-Anthropology 369a
Gender in prehistory. (See Anthropology.)

Women's Studies-History 375
Women in Britain and Europe. (See History.)

Women's Studies 390, 391a, 392b, 393c
Reading course. Designed to pursue special research interests in women's studies largely through independent study. Details to be arranged in consultation with Women's Studies staff and proposal to be submitted to program for approval.

Women's Studies 395, 396a, 397b, 398c
Special topics: consult program office for 1996/97 offerings.

Women's Studies 396a
Special topic: Gender, state and ethnicity.
S. Arat-Koc

Women's Studies-Geography 396b

Special topic: Gender and geography. (See Geography.)

Women's Studies 400

Feminist praxis. Analysis of the issues, struggles, debates, conflicts and forms of organization which have shaped the first and second waves of feminism in North America and feminist movements in the third world today. The course will focus on the articulation of the feminist project with class and racial/national projects.

Prerequisite: *Women's Studies 100*, *Women's Studies 201* and *Women's Studies 300*.

Women's Studies 401

Honours thesis. Single credit. Consult program office for information and procedure. Students wishing to take a double credit thesis with one credit applied to WS and the second to their other major should see the Women's Studies Program Chair.

Women's Studies-Anthropology 422

Women: an anthropological perspective. (See Anthropology)

Women's Studies-Political Studies 430

Feminists theorize the political. (See Political Studies)

Women's Studies-Sociology 461a

Gender, regulation and resistance. (See Sociology.)

Women's Studies-Sociology 462b

Women and social policy. (See Sociology.)

Women's Studies-Canadian Studies-English 466

Canadian literary pluralities. (See Canadian Studies.)

Women's Studies-English 475

Advanced studies in American literature. Topic for 1996/97: William Faulkner and Toni Morrison. (See English.)

Women's Studies 490, 491a, 492b, 493c

Reading course. Consult program office for registration and procedure.

Women's Studies 495, 496a, 497b, 498c

Special topics: consult program office.

Women's Studies-History 4905

Medieval gender and the family. (See History.)

Support courses

Students may appeal to the Chair to have a course from another discipline designated as a support course if it can be demonstrated that at least 50% of the content of that course pertains directly to Women's Studies.

Joint Programs with Fleming College

The University has entered into several agreements with Sir Sandford Fleming College for the provision of joint degree and non-degree programs. The Trent-Fleming joint programs extend educational opportunities by combining theory and practice in a number of professional and career fields.

Currently, degree programs are available in Geographical Information Systems, Museum Studies, and Nursing. Non-degree certificate programs are available in Police Administration and in Child and Family Studies.

Geographical Information Systems Program

The Geographical Information Systems (GIS) program leads to an Honours Bachelor of Science degree from Trent University in Geography or in Environmental Resource Science.

Students completing the program will receive an advanced GIS Applications Specialist Certificate from Sir Sandford Fleming College's School of Natural Resources. The certificate will be noted on the Trent transcript as an emphasis in Geographical Information Systems.

Students who have completed a minimum of 10 university credits, with suitable standing towards a Trent Honours degree, are eligible for the program.

Completion of the two-semester Fleming certificate will constitute the third quarter of the student's Honours program and five upper-year science courses will be transferred to the student's Trent transcript upon completion of the GIS certificate with a minimum average of 70%.

Students interested in the program must consult with the appropriate chair(s) at Trent. Admission to the program is limited and on a competitive basis. Selection will be based on the program of courses

completed and on cumulative averages to date, including second-quarter mid-year marks.

Applicants should normally have completed at least three courses in the major, including the *one-hundred level* introductory course. In the case of Geography majors, completion of *Geography-Environmental and Resource Science-Biology 208a* and *Geography 211b* would also be expected. *Computer Studies 101a* and *102b* are prerequisites for admission to the program.

Applications must be submitted to the chair(s) consulted at Trent by March 1 of the second quarter.

As a formality, students are also required to apply to the Ontario College Application Service in Guelph and include the appropriate fee. Applications are available from the chair consulted.

Students admitted to the program will be notified prior to the deadline for Trent's Early Registration. Admission is subject to review of final grades in the second quarter.

Students admitted to the program will register as full-time Fleming students during the third quarter of their degree and pay regular community college fees. (Consult the Fleming Calendar for details on fees.) Classes will be held at the Lindsay campus of the School of Natural Resources. Students in the program will have access to the facilities and faculty at Trent. Those who wish to retain their Trent college affiliation, which includes a bus pass, must pay an additional fee. (Consult the Trent Calendar for details on fees.)

Students admitted to the program will be asked to participate in Trent's Early Registration for the fourth quarter of their degree.

For further details and an application form, contact the chairs of the Department of Geography or the Environmental and Resources Studies Program.

Museum Management and Curatorship/Special Emphasis Degree

The Trent-Fleming Museum Studies program leads to a Trent Honours degree in any discipline with an emphasis in Museum Studies. Students completing the program will receive an advanced certificate in Museum Management and Curatorship from Fleming College. The certificate will be noted on the Trent transcript as an emphasis in Museum Studies.

Students who have completed a minimum of 10 university credits, with suitable standing towards a Trent Honours degree, are eligible for Fleming's Museum Management and Curatorship certificate program. Applicants normally shall have completed at least three courses in their major before admission to the program.

Students completing the three-semester Fleming certificate with a minimum average of 70% will receive up to four upper-year course equivalents towards an Honours degree. The maximum number of transfer courses, including those from the Fleming certificate, cannot exceed half of the degree requirements.

Students interested in the program must consult with the Chair of the appropriate academic department at Trent. Admission to the program is on a competitive basis.

Applications by letter must be submitted to the Chair consulted at Trent by March 1 for the fall term.

As a formality, students are also required to apply to the Ontario College Applications Service in Guelph and pay a \$25 fee. Applications are available from the Chair consulted.

Final decisions will be made by the end of May. In order to keep options open, students should proceed through early registration as if they will not be taking Museum Studies.

Students admitted to the program will register as full-time Fleming students for three semesters and pay regular community college fees. (Consult the Fleming Calendar for details on fees.) Students in the program shall have access to the library and faculty at Trent. Those who wish to retain their Trent college affiliation, which includes a bus pass and athletic privileges, must pay an additional fee. (Consult the Trent Calendar for details on fees.)

Students admitted to the program will be asked to participate in Trent's Early Registration in the fourth quarter of their degree.

Further details are available from Trent's Registrar's Office, the department of the planned major, or members of *Trent's Museum Studies Committee*: Professors Julia Harrison, Chair (OC), Jackie Tinson (JBC), Stephen Bocking (ES), Elwood Jones (OC), Alan Brunger (ES) and Bernadine Dodge (BL).

Nursing Diploma with a Special Emphasis Degree

This is a four-year program, offered by Trent University and Sir Sandford Fleming College. Successful students will receive a Special Emphasis General Degree from Trent and a nursing Diploma from Fleming.

This is a full time program at Fleming, plus part-time studies at Trent offered on a concurrent basis. Nine Trent courses are required for the successful completion of the Nursing Diploma/Degree program plus the equivalent of six courses at Fleming.

Students accepted into the program must meet the admission requirements of both institutions: Six OAC credits including senior level sciences (two or three from Biology, Chemistry or Physics). Those admitted to the program will be part-time students at Trent for four years and will pay part-time fees for each course taken; e.g., one course in the first year, two in the second, three in the third and fourth years. (Consult the Trent Calendar for details on fees and courses required.) Students will also pay proportional fees to Fleming, based on the number of courses taken each term. (Consult the Fleming Calendar for details on fees and courses required.)

Students will be granted all the rights of part-time students at Trent, although they will need to pay extra fees for a bus pass. Purchase of a bus pass will also allow students in the program to park for free in the North Lot on the Symons Campus of Trent.

Information about the program and admission procedures are available from: The Admissions Office
Sir Sandford Fleming College
Brealey Drive
Peterborough, Ontario
K9J 7B1
Telephone: (705) 749-5530

Students must also apply through the Ontario College Application Service in Guelph. A \$25 fee is required. Applications are available at any community college. The deadline for applications is March 1.

After consultation with Trent, Fleming mails acceptance letters by May 15.

Those admitted to the program will receive a letter from the program coordinator, a schedule of fees required and services provided by each institution, and OSAP information. Please do not hesitate to call Fleming if you have any questions.

Trent University Required Courses

Psychology 101

280

340

Sociology 100

363

and four of:

Psychology 382

Sociology 241

343a, 344b

389

Anthropology 348

Women's Studies 100

Course Sequence

Year 1

Sociology 100

Year 2

Psychology 101

one of: *Sociology* 241

Sociology 389

Women's Studies 100

Anthropology 348

Year 3

Psychology 280

Sociology 363

one of: *Sociology* 389

Anthropology 348

Women's Studies 100

Year 4

Psychology 340

two of: *Psychology* 382

Sociology 343a, 344b

Women's Studies (Course to be determined.)

Sociology 241

Anthropology 348

Sir Sandford Fleming College Required Courses

Year 1

Fall Term:

Health Theory 1330049

Biology 1380142

Clinical I 1110241

Intro to the Community 1330084

Winter Term:

Nursing II 1330081
Biology II 1380143
Clinical II 1110430
Clinical II 1110431
Nursing Theory and Nursing Research
1330068

Year 2**Fall Term:**

Nursing III 1330082
Clinical III 1110432
Clinical III 1110433

Winter Term:

Nursing IV 1330052
Clinical IV 1110434
Clinical IV 1110435

Year 3**Fall Term:**

Nursing V 1330053
Organizational and Professional Aspects
of Nursing 1330054
Clinical V 1110436
Clinical V 1110437

Winter Term:

Clinical VI 1110441
Clinical VI 1110442

Year 4**Fall Term:**

Nursing Models in Theory and Practice
1330069
Clinical VII 1110443
Community Field Practice 1110421

Winter Term:

Nursing Models in Theory and Practice
1330070
Clinical VIII 1110444

Summer Term:

Consolidation (14 weeks) 1110445

Certificate Programs
Certificate in Police Administration

The Certificate in Police Administration is a joint program offered by Trent University and Sir Sandford Fleming College primarily for persons working in the field

of law enforcement, including those who already possess a college diploma or university degree. The certificate is offered through part-time studies.

A student must complete five semester-courses from Fleming and 2.5 year-courses from Trent. (A half year course from Trent equals a semester course from Fleming. A full year course from Trent equals two semester courses from Fleming.) *The required and elective courses in the program are listed in a Fleming-Trent brochure available at both institutions.*

Admission to the individual courses at Fleming or Trent will be based on the published admission requirements in each institution's calendar. Applications are available at the Admissions Office at Fleming or Julian Blackburn College at Trent. Applicants must consult the academic counsellor at Julian Blackburn College and the Counsellor with the School of Technology and Law at Fleming.

Each institution has its own course fee schedules. Each institution has its own academic regulations. Consult the calendars for details.

Students may take courses concurrently at Fleming and Trent toward their certificate. They will be deemed to be students at both institutions. All services normally available to part-time students at either institution will be extended to those taking such courses.

Child and Family Studies Post-Diploma Certificate

The Child and Family Studies Post-Diploma Certificate is a joint program offered by Trent University and Sir Sandford Fleming College for those in the child care field who already possess a college diploma or a university degree. The certificate is offered through part-time studies.

Students must complete six semester-courses from Fleming and three year-courses from Trent. (A half year course from Trent equals a semester course from Fleming. A full year course from Trent equals two semester courses from Fleming.)

There are four units in the program – Child & Family, Resource Teacher, Child Care Administration, and a Special Emphasis – made up of different combinations of courses. *The required and elective courses in the program are listed in a*

Fleming-Trent brochure available at both institutions. Students interested in the program or a Special Emphasis program – suited to particular career development needs – must consult the Academic Counsellor at Trent's Julian Blackburn College, or the Department Administrator for the Community Services Department at Fleming to discuss and plan their course selections.

Admission to the individual courses at Fleming or Trent will be based on the published admission requirements of each institution. See calendars of Fleming and Trent for details.

Each institution has its own course fee schedules. Each institution has its own academic regulations. Consult the calendars for details.

Students may take courses concurrently at Fleming and Trent toward their certificates. They will be deemed to be students at both institutions. All services normally available to part-time students at either institution will be extended to those taking such courses.



Graduate Academic Calendar

(See *University Diary* for overall Calendar and listing of observed holidays)

Spring term 1996

May	6	Monday	Registration for Spring term
May	31	Friday	Spring Convocation

Fall term 1996

September	3	Tuesday	Registration for Fall term
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Winter term 1997

January	6	Monday	Registration for Winter term
April	18	Friday	Last date for oral examinations for Spring Convocation
April	25	Friday	Last date for submission of theses to Office of Research and Graduate Studies for Spring Convocation
May	5	Monday	Registration for Spring term
			Last date for recommendations for degrees for Spring Convocation
May	30	Friday	Spring Convocation

Graduate Study at Trent University

Postal Address:

Office of Research and Graduate Studies
Trent University
Peterborough, Ontario
K9J 7B8

Telephones:

Office of Research and Graduate Studies
(705) 748-1245

Associate Dean of Research and Graduate Studies

P.F. Healy
(705) 748-1478

P. Strode, Graduate Studies Officer
(705) 748-1346

E-mail I.D.:

PSTRODE@TRENTU.CA

Facsimile:

(705) 748-1587

Location:

Suite W203, Otonabee College
Symons Campus

Administration:

The Office of Research and Graduate Studies is responsible for the administration of graduate degree programs offered at Trent University and the coordination and promotion of research and scholarship within the University.

The office is administered by the Associate Dean of Research and Graduate Studies and the Graduate Studies Officer and University Research Officer in co-operation with University committees for specific areas.

The Committee on Graduate Studies consists of members of faculty and graduate students from various disciplines, and this body makes executive decisions regarding graduate admissions and the application of general regulations, standards and procedures.

Graduate Academic Information

Programs of Study

Programs of graduate study are introduced at Trent on a selective basis. Each program has been approved by the Appraisals Committee of the Ontario Council on Graduate Studies to ensure that it meets the high standards required for graduate studies in Ontario universities.

The Master of Arts degree is offered in Anthropology, Canadian Heritage and Development Studies, and Methodologies for the Study of Western History and Culture, the Master of Science and Doctor of Philosophy in Watershed Ecosystems, and the Master of Arts/ Science in Applications of Modelling in the Natural and Social Sciences.

The Anthropology program stresses archaeology and cultural anthropology. The program in Canadian Heritage and Development Studies involves study in one of three interdisciplinary areas: Native studies; environmental and heritage studies; region and place within Canadian society. The focus of the Methodologies for the Study of Western History and Culture Program is upon the foundations and structures of modern knowledge in its historical and cultural contexts.

Graduates in Biology, Geography, or Environmental Science may enrol in Trent's Watershed Ecosystems Program. Emphasis is placed on interaction between various biological and geographical aspects of water and catchment areas as elements in the environment.

The Applications of Modelling in the Natural and Social Sciences Program is oriented towards quantitative models, utilizing computational, mathematical or statistical techniques and is discipline-based but is not a program in applied mathematics.

In addition to degree programs at Trent, an agreement with Queen's University at Kingston allows for selective enrolment at the Master's and Doctoral levels in programs at Queen's with actual study and research supervision under Trent faculty on Trent's campus.

Complete information on each program offered under the auspices of the Office of Research and Graduate Studies is presented in the Graduate Programs of

Study section of this calendar. Prospective applicants should note particularly the admission requirements, the fields in which advanced study and research may be undertaken, and the program requirements, in addition to the regulations of the Graduate Studies Committee which are outlined in this Calendar.

Application

Initial enquiries concerning graduate study at Trent University may be made to the graduate programs. However, applications for admission to graduate studies must be made on the prescribed form and submitted to:

Office of Research and Graduate Studies
Trent University
Peterborough, Ontario, Canada
K9J 7B8

The deadline for receipt of applications for fall admission to graduate study is February 15. In any case, students are urged to apply at an early date. Late applications from students who meet our minimum admission standards will be considered in the order received when vacancies remain in the chosen program.

Candidates must arrange to have submitted to the Office of Research and Graduate Studies by the appropriate officials of the university or universities they have attended, official transcripts showing the subjects studied and the standing received in all undergraduate and any graduate work so far undertaken. Normally, applications should be supported by letters of recommendation from at least two faculty members who are familiar with the work of the candidate. Letters of recommendation must be mailed directly by faculty members.

Applicants must list courses currently being taken and must arrange to have the final standings in them forwarded as soon as the results become available.

Admission

At least an upper second-class standing (B+) in the final year at the Honours level in the department or interdisciplinary areas of the program in which the graduate degree is being sought at Trent, or its equivalent, will be required for approval of the admission of candidates for the Master's degree. Candidates who do not meet this requirement should consult the graduate program director for guidance in developing a program which would make them eligible for consideration for admission to

a graduate program. They will not become candidates for the Master's degree until their academic standing has been brought up to the Honours level.

Applicants to the Ph.D. program in Watershed Ecosystems should normally have an M.Sc. degree.

All applications will be initially examined and evaluated by the appropriate programs. All supporting documents (transcripts, letters of reference, etc.) must be received before any application can receive formal consideration. A program's recommendations for admission will be forwarded to the Office of Research and Graduate Studies whereupon the completed applications will be considered by the Graduate Studies Committee. The Office of Research and Graduate Studies will officially notify each applicant of the action taken on his or her application.

Official letters of acceptance are only for the academic year indicated. Successful applicants must reply in writing indicating whether or not they accept the offer of admission. If they are unable to commence studies in the term agreed upon, the programs reserve the right to reconsider their acceptance.

Transfer of Credit

Graduate courses completed at another institution may be accepted in partial fulfillment of Trent's degree requirements. Credit for such work will be determined by the Graduate Studies Committee on the recommendation of the program concerned.

Qualifying Year

Applicants whose background is not sufficient for direct entry into a graduate program may be advised to undertake a make-up or Qualifying Year. Successful completion of a Qualifying Year recommended by the program concerned will permit the student to compete for admission on an equal basis with other applicants. Admission to a graduate program is not, however, guaranteed.

Language Proficiency

The Graduate Studies Committee may require a test of proficiency in the English language for candidates whose mother tongue is not English, by means of one of the following:

- a) The English Language Institute, Testing and Certification Div., North Univ. Bldg., University of Michigan, Ann Arbor, Michigan 48104, USA.
- b) TOEFL, Educational Testing Service, Princeton, New Jersey 08540, USA.

Applicants are expected to make their own arrangements for taking this test by contacting the centre in their locale or by writing to one of the above.

Where the language of instruction in the undergraduate program has been English, the Graduate Studies Committee is prepared to consider evidence of proficiency in the use of the English language other than that provided by the tests referred to above.

Graduate Record Examinations

Applicants for admission whose academic credentials are difficult to assess may be asked to take the Graduate Record Examination administered by the Educational Testing Service, Princeton, NJ, 08540, USA. Students are expected to make their own arrangements and will bear the cost of taking the Graduate Record Examinations.

Master's/Doctoral Degree Regulations

Registration

Students whose applications for admission to graduate study have been approved for full- (or part-) time study should present themselves for registration on the dates recorded in the Calendar. Graduate students, full- or part-time, proceeding to a degree must maintain continuous registration, either active or inactive, in each successive term from the time of initial admission until the end of term during which the requirements for the degree are completed.

Registration consists of the completion of a registration form which requires a statement of the program of studies to be followed for the current year, the name of the student's supervisor, the names of the members of the student's supervisory committee, and the thesis topic. If it is not possible to state the thesis topic at the time of registration the field of research should be indicated. The registration form must be signed by the director of the program and the graduate studies officer.

A personal data form must be completed at registration and revised in subsequent years.

Full-time Master's students beyond second year, and part-time students beyond third year, carry out registration on a per term basis. Full-time Doctoral students beyond third year, and part-time students beyond fourth year, carry out registration on a per term basis.

Failure to Register

Graduate students who fail to register for any term and have not been given an official leave of absence will be considered to have withdrawn voluntarily from their program.

For subsequent reinstatement, the student must make application to the Office of Research and Graduate Studies after which the program must make a written recommendation, outlining any academic conditions which it deems necessary.

Full-time, Part-time and Inactive Status

A graduate student may be either full-time, part-time or inactive.

Full-time

A full-time student is one who:

- (i) is designated by the University as a full-time graduate student
- (ii) is geographically available and visits the campus regularly
- (iii) is not regularly employed on other work within the University for more than an average of 10 hours per week for any period for which he/she is registered as a full-time graduate student, and is not employed outside the University except by permission of his/her supervisor, and
- (iv) in the light of the foregoing identifies himself/herself as a full-time graduate student.

Note:

It is understood that a graduate student may be absent from the University while still under supervision (e.g., visiting libraries, attending a graduate course at another institution, doing field work). If such periods of absence exceed four weeks in any term written approval must be obtained from the program director and the graduate studies officer. Irrespective of this provision, a student conducting experimental work in an external laboratory

would not normally be considered as a full-time student except by written permission of the graduate studies officer upon recommendation of the supervisor.

If the student is employed on a graduate assistantship, the 10 hours per week should represent the total time spent by the student in connection with the appointment; that is, it includes time spent on preparation work, reading set assignments, marking examinations, maintaining office hours etc.

Students who at any time cease to meet all of the criteria for full-time status, but are in good standing and wish to continue with their studies, must change to part-time status. If this change in status takes place during a term, adjustments to time limits and fees are made effective from the start of the next term. Such a change requires the written consent of the student's supervisor and graduate program director.

Part-time

Any student is considered to be part-time who does not meet the conditions for a full-time student. Normally, a part-time student will be taking considerably less than a complete program each academic year.

If a student changes his/her status from part-time to full-time, he/she must re-register. Such a change requires the written consent of the student's supervisor.

Inactive/Leave of Absence

Students who have valid reasons for not registering for a term may apply for permission exempting them from registering by:

- (i) writing to the graduate studies officer stating the reasons for an exemption; and
- (ii) requesting a statement from their supervisor that they will not be on campus (involved in activities related to graduate courses or the thesis) for four months, will receive no supervision, and will not use any university facilities (i.e., library, laboratories, computer centre, or receive any type of supervision through correspondence). The statement, which must be forwarded to the graduate studies officer, must confirm that no thesis work of any kind will be pursued during the term in question. Exemptions, if granted, will be for one term only.

Residence Requirements

Full-time Master's degree candidates shall spend a minimum of one year as full-time students after completion of an Honours program. Full-time Doctoral degree candidates shall spend a minimum of two years as full-time students after completion of a Master's program. A student may register as full-time off-campus provided that such an arrangement has been approved by the graduate studies officer (see previous section). For part-time graduate students two years of part-time study shall be deemed equivalent to one year of full-time study, due adjustment being made for any time spent as a full-time student during the summer.

Time Limits

The maximum time allowed to complete all requirements for the Master's degree from initial registration is three years for a full-time candidate or five years for a part-time candidate. The maximum time allowed to complete all requirements for the Doctoral degree from initial registration is five years or nine years for a part-time candidate. (Note: see regulations pertaining to full-time/part-time status.)

When students change status from full-time to part-time (or vice-versa) the time remaining to complete degree requirements will be adjusted with one term of full-time study being equivalent to two terms of part-time study. Such adjustments will take effect at the start of the next term. In all cases, the total time to complete all degree requirements will not exceed five years (Master's) or nine years (Doctoral).

In the case of full-time students, the completion of course work is an absolute requirement by the end of two years (Master's, or three years Doctoral) in order to continue on in the program.

Extension of Time Limits

No extensions of the prescribed time limits will be granted except under extraordinary circumstances. In such instances, a time limit extension request form must be completed by the student in consultation with the supervisor and submitted to the graduate program director. If the director supports the request, a recommendation will be referred to the associate dean for approval.

College Affiliation

Every student is required to have college affiliation at Trent. All graduate students (full- and part-time) will be assigned to Peter Robinson College where arrangements have been made for access to a common room and other facilities.

Full-time graduate students may request to be assigned or transferred to another of Trent's five residential colleges (in particular for purposes such as accommodation in residence or donning). Part-time graduate students may request to be assigned or transferred to Julian Blackburn College.

The colleges sponsor a series of guest lectures, sports and social activities, and have common areas for resident/non-resident students.

Residence Accommodation

A limited number of residence spaces are reserved for first-year graduate students. The accommodation offered are in predominantly undergraduate residences at Trent's residential colleges and time of occupancy is the undergraduate academic year. Graduate room allocations are made by the Office of Research and Graduate Studies. All rooms must be confirmed by July 10, 1996 by completion of a college application form and payment of a residence deposit in the amount of \$200.

Supervision

A supervisory committee for each graduate student shall be named by the graduate studies committee of the program to which the candidate is admitted and shall consist of the thesis supervisor and two other members of the program, with the supervisor as committee chair.

The role of the committee shall be:

- (i) to ensure that reasonable progress is being made by the student in his/her research and course work. The supervisor shall submit a report on this progress to the graduate studies officer at the end of each winter term.
- (ii) to approve the thesis topic and any prescribed work.
- (iii) to recommend to the graduate studies officer appropriate action (withdrawal, further research or course work) in the light of the student's progress.
- (iv) to suggest the membership of the thesis examining committee when the final preparation of the thesis is in hand.

If a student's supervisor expects to be absent from the University for an extended period of time (i.e., two months or more) it is his/her responsibility either to make suitable arrangements with the student and the program for the continued supervision of the student or to request the program to appoint another supervisor. Such arrangements should be communicated to the Office of Research and Graduate Studies before the supervisor leaves the University.

Guidelines for graduate programs, graduate students, faculty and graduate studies committees are available from the Office of Research and Graduate Studies.

Research and Thesis Requirement

Normally a candidate for a Master's/Doctoral degree will undertake research and write a thesis. In the thesis students should give evidence that they have made a logical and intelligent approach to the selected problem, and the language of the thesis should be clear and precise. The thesis should be as original as possible. However, the goal of originality should not be stressed to the extent that it precludes the examination of old subjects in new ways; nor should it elevate the 'undone' for its own sake, lest the obscure and trivial be emphasized.

In exceptional cases, for a Master's degree only, the thesis may be replaced by other appropriate course work. When the degree is taken by course work, a comprehensive examination may be required.

Although a thesis may be submitted at any time, candidates should note the thesis submission deadlines for the spring convocation in the academic Calendar.

Courses

Normally a student will be required to complete, with at least a second class standing (B-), no fewer than two graduate courses. A program may prescribe additional graduate courses and the student may be required or permitted by the program to take courses in addition to those prescribed for credit. Subject to a review of the candidate's competence in his/her major subject, a candidate may be permitted to take one course in another department/program.

Course Changes

A course change is the addition and/or deletion of one or more individual courses by a registered graduate student. A course change is the only acceptable procedure for revising a graduate student's registration. All course changes must be approved and authorized by the program director and forwarded to the graduate studies officer.

Audit Courses

Upon the recommendation of his/her supervisor, and with the permission of the graduate studies officer, a graduate student may register to attend a course without receiving a grade or credit. Details of the policy and regulations for audit students are available from the Office of Research and Graduate Studies. It should be noted in particular that no grade will be assigned, that permission must be obtained from the course instructor and that a fee is charged.

Grading System for Courses

The minimum passing grade for required graduate courses is second class (B-). Effective with the 1982 spring academic session, the letter grades and their numerical ranges are: A+ = 100-90; A = 89-85; A- = 84-80; B+ = 79-77; B = 76-73; B- = 72-70; F = 69-0.

In addition to alphabetical or numerical grades, the following symbols may also be used on grade reports. These symbols are also used on the academic transcript of students: AEG (Aegrotat Pass); DRP (Course Dropped); AUD (Audit Course); WDN (Withdrawn); INC (Incomplete).

Aegrotat Standing and Incomplete Standing

Petitions for special consideration because of sickness or misfortune at any time during the academic session should be sent to the graduate studies officer as soon as possible, together with medical certificates or other evidence. The University may grant aegrotat standing, or permission to write special examinations, but because aegrotat standing must be based on the achievements of the student throughout the whole of the academic year, it is not appropriate to request such standing as a result of prolonged illness. (See also withdrawal section.)

Incomplete standing will be granted only in cases where a student is unable to complete in proper time the work requirement of a course for reasons beyond the student's control such as illness, physical or emotional disability, loss of or damage to work already completed or in progress, or adverse seasonal effects on field or laboratory projects. Failure by a student to organize the workload in a course will not in itself be considered an adequate reason. Students wishing temporary incomplete standing at the end of a course must petition through the program involved and, where possible, properly support and document the reasons.

Incomplete should not be confused with aegrotat which applies only in cases where students are unable, through similar physical or emotional disability, to write or perform in final examinations.

Courses at Other Universities

Under certain circumstances it is permissible for a student admitted to a degree program and registered at one Ontario university to enrol in approved credit courses at another university. Credit will be granted only if written permission is received from the associate dean and the program director prior to registration for the course work. Application forms for inter-university co-operation are available in the graduate studies office.

Language Requirement

Some programs may require a reading knowledge of a language other than English. Consult the program listings for specific language requirements.

Grade Reports

Program directors must submit a grade report on each student at the end of every academic year indicating grades received in course work. A copy of the report will be mailed to the student by the graduate studies officer.

Unsatisfactory Work

On the recommendation of the program, approved by the Graduate Studies Committee, a student whose work is unsatisfactory may at any time be required to withdraw from the University.

Appeals

Appeals procedures for graduate students parallel those established for undergraduates. (See undergraduate section of Calendar.) In general, the procedures emphasize consultation and cooperation among the individuals most intimately concerned with any problem, while still allowing for an impartial review of difficult cases. Thus, problems concerning individual courses should first be discussed with the instructor, those concerned with course programs should be discussed with the student's supervisory committee, and problems concerned with the application of program or University regulations should be brought to the attention of the program director or the Graduate Studies Committee. Review is accomplished by the impartial body with the best knowledge of the particular problem, e.g., the program director, the Graduate Studies Committee, or, in exceptional cases, the Special Appeals Committee.

Principles Governing Submission and Examination of Theses

The thesis will be defended by the candidate in an oral examination before a thesis examining committee. In the examination students will be required to give evidence that they have a thorough knowledge of the field in which they have been working.

1. Submission of Thesis for Examination

- 1.1 Supervisory committee members shall review a complete typed version of the thesis and send a signed form to the program director verifying that the thesis should proceed to examination.
- 1.2 Depending on program requirements at least three-five copies of the thesis shall be deposited with the program director not less than ten weeks before the convocation at which the candidate expects to receive the degree.

2. Examining Committee

- 2.1 After the supervisory committee has confirmed that the thesis can proceed to examination, the supervisor identifies three potential external examiners to participate in the thesis examination and defence. The Examining Committee is named by the graduate program director, in consultation with the associate dean, and the date, place and time of the defence determined.

- 2.2 The Examining Committee consists of three-five members, of whom at least one must be from outside the university.
- 2.3 The candidate's supervisor is a member of the Examining Committee and any or all members of the supervisory committee may be named as members of the Examining Committee, subject to the policy of the program concerned.
- 2.4 The external examiner must not have any affiliation with the university or the candidate that might be construed as creating a conflict of interest.
3. **Thesis Examination**
Copies of the thesis shall be distributed amongst the Examining Committee by the program director at least three weeks before the scheduled date of the oral, along with a covering letter from the associate dean explaining the status of the thesis and the range of options for its disposition. A form is supplied on which each examiner should verify whether they recommend that the oral examination should proceed. These forms must be returned to the program director at least one week before the scheduled date of the oral.
4. **Defence**
The thesis will be defended by the candidate in an oral examination before the Examining Committee. In the examination candidates will be required to give evidence that they have a thorough knowledge of the field in which they have been working.
 - 4.1 The defence normally shall be scheduled within a period of no fewer than three, and no more than six weeks from the submission of the thesis. The parties concerned may agree upon a postponement.
 - 4.2 The Examining Committee, and the thesis defence examination, will be chaired by a person appointed by the graduate program director.
 - 4.3 Subject to the policy of individual graduate programs, any member of the university is free to attend an oral thesis defence examination.
 - 4.4 The chair will give priority to questions from members of the Examining Committee, and will adjourn the examination when the Examining Committee decides that further questioning is unnecessary.
 - 4.5 The deliberations of the Examining Committee are held in camera. That is to say, only appointed members of the Examining Committee are present at this stage.
 - 4.6 It is the responsibility of the chair to see that a report on the examination is prepared before the committee adjourns.
 - 4.7 Four decisions are open to the Examining Committee, voting to be based on a simple majority:
 - i) the thesis is approved as it stands, or
 - ii) the thesis is approved provided certain minor or major revisions are made, or
 - iii) the thesis is not approved as it stands but may be resubmitted, and re-examined by some or all of the Examining Committee (this may or may not involve another oral defence), or
 - iv) the thesis is not approved.
 - 4.8 If revisions are required, each member of the examining committee must provide a written list of required revisions to the program director immediately following the oral. Minor revisions are defined as corrections which can be made immediately to the satisfaction of the supervisor. Major revisions are defined as corrections requiring structural changes, or other substantive revision. When a thesis is accepted with major revisions, a precise description of the modifications must be included with the Examining Committee's report. It is then the responsibility of the candidate's supervisor to demonstrate to the Examining Committee that the required revisions have been made.
 - 4.9 If the Examining Committee is not prepared to reach a decision concerning the thesis at the time of the thesis defence, it is the responsibility of the chair to determine what additional information is required by the committee to reach a decision, to arrange to obtain this information for the committee, and to call another meeting of the committee as soon as the required information is available. It is also the chair's responsibility to inform the candidate that the decision is pending.

5. Final Submission

- 5.1 The program director, in consultation with the thesis supervisor, must verify that appropriate corrections have been made, and then submits a summary of the thesis defence and examination to the Office of Research and Graduate Studies.
- 5.2 An approved thesis may be submitted at any time following the oral defence. However, for candidates wishing to graduate at a particular convocation, specific deadline dates are printed in the graduate academic calendar section of the Graduate Studies Calendar. The general formula for establishing these dates is five weeks before Spring Convocation. Candidates not meeting these deadlines are required to re-register until the thesis has been formally submitted and approved by the University.
- 5.3 The formal submission of the thesis to the University is made to the graduate studies officer, Suite W203, Otonabee College. At this point, the thesis should be in its final typed version, but only the original copy should be submitted. The graduate studies officer checks through the thesis with regard to format and then seeks final approval from the Committee on Graduate Studies. If there are any discrepancies in format, the student will be contacted by the graduate studies officer.
- 5.4 After the thesis has been formally approved, the candidate submits the required copies and pays the cost for binding and microfilming.

6. Microfilming of Thesis

When the thesis is submitted, the candidate is required to complete a "Non-Exclusive Licence to Reproduce Theses" (Form NL/BN91 [90-09]). This gives consent for the thesis to be microfilmed by the National Library of Canada. There is a fee for this service and the candidate is billed for this at the time the final approved theses are submitted.

7. Binding of Thesis

Theses must be bound in Trent green with front cover and spine writing in gold. Binding arrangements are made through the Office of Research and Graduate Studies.

8. Copyright Regulations

For information concerning thesis borrowing and copyright law, please refer to Appendix IV of "A Handbook for Graduate Students of Trent University".

Note:

1. Arrangements and expenses for typing the thesis are the responsibility of the student.
2. Subject to the approval of the program concerned, a candidate may write his/her thesis and be examined in French.
3. A handbook for graduate students of Trent University including a detailed guide on the preparation of theses is available from the Office of Research and Graduate Studies.

Fees

The following regulations and fees apply to:

- (i) Canadian citizens within the meaning of the Canadian Citizenship Act;
- (ii) landed immigrants within the meaning of the Immigration Act;
- (iii) dependents of persons admitted to Canada under section 7(1)(a) of the Immigration Act (diplomatic, consular and other representatives of foreign countries, the U.N. and other international agencies, their dependents and suites);
- (iv) dependents of persons admitted under section 7(1)(h) of the Immigration Act for the temporary exercise of the profession, trade or occupation.

Degree Fee

In order to convocate, all graduate students (full- and part-time) must have paid at least the minimum Degree Fee. This will be based on the value of 2 years' tuition for a full-time student, e.g., the full-time tuition fee value in the year the degree is completed and in the preceding year. [The doctoral degree fee will be based on the value of 3 years' tuition for a full-time student.] Students who continue study after they have paid the degree fee must continue to pay regular tuition fees in order to remain in program. This policy is effective for all students entering graduate programs at Trent beginning September 1995.

Graduate Fee Schedule

(Based on 1995-96 fees and subject to revision for 1996-97.)

1995-96 Graduate Student Fees¹

Tuition	Full-time	Part-time
Graduate Canadian/Landed Immigrant		
- 1st year (1995-96) - (3 terms)	3,692.00	1,846.00
Post-residency ²		
- 2nd year (1994-95 1st year students)	3,138.00	1,846.00
- 3rd year (1993-94 1st year students)	800.00/term	1,846.00 in 3rd Year then
- students prior to September 1993	615.00/term	615.00/term
Graduate Visa		
- 1st year (1995-96) - 3 terms	14,417.00	7,208.00
Post-residency ²		
- 2nd year (1994-95 1st year students)	12,254.00	7,208.00
- 3rd year (1993-94 1st year students)	3,124.00/term	7,208.00 in 3rd Year then
- students prior to September 1993	2,403.00/term	2,403.00/term
Ancillary		
- Student Health Service	30.00	2.70
- Athletics	110.50	55.75
- Graduate Student Activities	27.00	11.00
- College Fee ³	65.00	32.50
- Convocation Fee	11.25	5.70
- GSA Drug Plan ⁴	80.36	n/a
Optional		
- Transportation Fee ⁵	127.00	n/a
Residence		
- Townhouse without Meals (Peter Robinson College)	\$2,957.00 (September-April)	
- Single Room on Meal Plan (at colleges other than Peter Robinson)	\$5,381.00 (September-April)	
Other Fees		
Additional fees (at 1994-95 levels):		
- Application Fee	35.00	
- Thesis Microfilming	35.00	
- Thesis Binding (per copy)	10.25	
- University Health Insurance Plan for International Students (Mandatory)	535.68 for 1 person*	

* premium depends on number of people covered

Table Notes:

- 1 Subject to approval by the Trent University Board of Governors. The University reserves the right to alter fees and fee structures.
- 2 A former graduate student post-residency category of lower fees has been phased out over three years. Post-residency fees were increased to 65% of residency fees for the 1993-94 intake (i.e., they paid these fees in 1994-95 and in subsequent years). The 1994-95 intake will pay post-residency fees at 85% of residency fees from 1995-96. Students who enter in September 1995 and subsequently will pay maximum fees throughout their degree programs. Students registered prior to September 1993 will continue to pay post-residency fees at 50% of the residency fee in any given year.
- 3 Graduate student college fees are deposited to Peter Robinson College.
- 4 The health/drug plan fee must be paid in the first instance with an opportunity for opting out and applying for a refund of the fee.
- 5 The transportation fee is optional.

Notes:

1. In order to convocate, all students (full- and part-time) must have paid at least the minimum Degree Fee. All students must register at the beginning of their program of study and must maintain continuous registration (except during approved leaves) until degree requirements have been completed and notification of approval to convocate has been received. Returning students who have an unpaid University account for fees and other charges (including library fines and parking fines) at the time of re-registration will be deemed financially ineligible to register.
2. Students enrolled under the Trent-Queen's agreement, while at Trent, are assessed Queen's tuition fees and Trent's ancillary fees.
3. Students paying in two instalments will be charged a \$30.00 first instalment fee. Students who fail to pay the second instalment by the 15th of the first month in second term will be charged an additional \$50.00.
4. Per term tuition and ancillary fees will be charged to full-time students beyond the second year (part-time students beyond third year) of a graduate program. Convocation, GSA activities, GSA health insurance, and transportation fees will be charged in full in the Fall Term; health service, athletics, and non-resident college fees will be divided between Fall and Winter terms.
5. Pro-rated "part-term" refunds of tuition, ancillary and other University fees may be available to those who a) withdraw from a graduate program, or b) complete degree requirements part way through the third or subsequent year. Full refunds of term fees will be available to students who complete their degree requirements (including oral defence and all necessary revisions) before the count date for the term.

Programs of Study**Anthropology**

The M.A. program in Anthropology is focused on the fields of cultural anthropology, archaeology, art, and biological anthropology. Areas of concentration within the program include: 1) the transformation of indigenous social, political, and economic institutions; problems associated with health and health care, ethnicity, gender, nationalism, and class; contemporary Western business and educational institutions, including museums; anthropological method and theory; and the anthropology of tourism. Regions of particular emphasis include Africa, South Asia, the Himalayas, the Pacific, and the industrialized West; 2) the paleoecology, prehistory and ethnohistory of Canada, Mesoamerica, and South America; Old World prehistory; archaeological method and theory; and Canadian historical archaeology; 3) the cross-cultural relationships between and among art (broadly defined), architecture, social organization, gender, politics, values, religion, economy, and technology; 4) biological anthropology with an emphasis on osteology and paleopathology. Other fields of interest can occasionally be accommodated in collaboration with faculty, e.g., medical anthropology and linguistics.

Students are required to complete three courses, to demonstrate capacity to read in the language or languages relevant to their field of research, and to research and write a thesis on an approved topic within one of the fields and areas listed above. They may be required to take an undergraduate course deemed necessary to their program of graduate study, e.g., *AN 211*, *AN 309*. Students are subject to a review of their performance at the end of each academic year. Students also are required to attend and participate in research colloquia.

Graduate Director:

S.M. Jamieson, B.A. (MCMASTER), M.A. (MANITOBA), PH.D. (WASHINGTON STATE)

Faculty**Anthropology:**

J.D. Harrison, B.A. (SASKATCHEWAN), M.A. (CALGARY), D. PHIL. (OXFORD): *Anthropology of institutions, public events, festivals and tourism, cross-cultural representation, museum studies, ethnology, Native North America, South Pacific, contemporary West*; P.F. Healy, B.A. (CALIFORNIA-BERKELEY), M.A., PH.D. (HARVARD): *Archaeology, New World Prehistory, Mesoamerica and lower Central America*; H.S. Helmuth, D.Sc., DR.HABIL. (KIEL): *Physical anthropology, osteology; Germany, North America, Maya*; S.J. Hepburn, B.A. (CALGARY), B.A. (CAMBRIDGE), M.A. (McGILL), PH.D. (CORNELL): *religion, tourism, medical anthropology, development, South Asia*; S.M. Jamieson, B.A. (MCMASTER), M.A. (MANITOBA), PH.D. (WASHINGTON STATE): *Northeastern and Boreal prehistory and ethnohistory, sociopolitical evolution, lithic analysis, interaction theory, historical archaeology*; J.S. Solway, B.A. (OAKLAND), M.A. (TORONTO), PH.D. (TORONTO): *culture and political economy, development, identity, Southern Africa*; M.J. Tamplin, B.A. (TORONTO), M.A. (LONDON), PH.D. (ARIZONA): *Paleoecology, typology, computer applications, Boreal Forest, Europe, Africa* (on leave 1996-97); J.R. Topic, PH.D. (HARVARD): *Archaeology, ethnohistory, complex societies, spatial analysis, Peru, South America*; J.M. Vastokas, M.A. (TORONTO), PH.D. (COLUMBIA): *Anthropology of art, material culture, art and architecture of Europe and the Americas; Northwest Coast, Arctic, Northeast* (on leave 1996-97).

Native Studies:

J.S. Milloy, B.A. (ST.PATRICK'S), M.A. (CARLETON), PH.D. (OXFORD): *historiography, ethnology, criminal justice issues, aboriginal-white relations, Plains, Canada*.

Sociology:

G.M. Thibault, PH.D. (DALHOUSIE): *gender relations, social inequality, sociology of education and deviance, criminal justice issues, history of culture theory, industrialized West*.

Women's Studies:

S. Arat-Koc, B.A. (BOGAZICI), M.A. (WATERLOO), PH.D. (TORONTO): *gender, ideology, class, political economy, social theory, North America, Turkey*.

Conjunct Professors

T.J. Brasser, PH.D. (LEIDEN); D.M. Pendergast, B.A. (CALIFORNIA-BERKELEY), PH.D. (UCLA); H. Saradi-Mendelovici, B.A. (ATHENS), M.A., PH.D. (MONTREAL); P.L. Storck, PH.D. (WISCONSIN); C.D. White, M.A. (TRENT), PH.D. (TORONTO)

Regulations

The general regulations and requirements of Trent University for the M.A. degree apply to graduate study in Anthropology. Students are admitted into the program once a year for studies the following September. Applicants to the program are expected to have a grounding in appropriate research methodology. Normally, candidates who have fulfilled the admission requirements will be required to take at least three graduate courses, normally including *Anthropology 500* or *510*, and to attend and participate in research colloquia. In consultation with their supervisors students select and research a problem in their area of interest, and present a colloquium and write a thesis on this research. Candidates shall maintain at least a second class standing in their work and shall pass an oral examination in defence of their thesis. There is no formal language requirement but the supervisory committee will require each student to demonstrate (to the satisfaction of the supervisor) an acceptable capacity to read in a language or languages considered necessary for purposes of research. In addition, students may be expected to show adequate background knowledge in a related discipline, e.g. art history. For further information write to the Graduate Director of the Department of Anthropology.

External Funding

All students contemplating application to the M.A. program in Anthropology at Trent are urged to apply for an Ontario Graduate Scholarship as well as to additional external (non-University) funding agencies. Applications for OGS materials are available from the Office of Research and Graduate Studies at Trent University.

Graduate Assistantships

All students admitted will be placed in competition for graduate assistantships, which involve a maximum of four terms, normally spanning two consecutive undergraduate academic years, of teaching and related work within the department. Most eligible students receive some form of financial assistance.

Courses Available to Graduate Students

Note: Not all courses are available every year.

Anthropology 500

Method and Theory in Cultural Anthropology (normally required of Cultural Anthropology students). An examination and evaluation of major theories and methods and their relationship to problems in ethnographic analysis and interpretation. Emphasis will be placed on recent advances and their implications for the development of cultural anthropology.

Staff

Anthropology 510

Method and theory in archaeology (normally required of Archaeology students). An examination and evaluation of major theories and methods and their relationship to problems in archaeological analysis and interpretation. Emphasis will be placed on recent advances and their implications for the development of the discipline.

Staff

Anthropology 520

Selected themes in Canadian archaeology. Research-oriented investigations into the archaeological record of Central, Eastern and Northern Canada and adjacent areas. Topics will vary according to interests of staff and students, but will include a review and analysis of regional methodological and theoretical approaches.

S.M. Jamieson and M.J. Tamplin

Anthropology 525

Problems in North American archaeology. Research topics will vary according to interests of staff and students, but will focus on the culture history and process of a selected region. Emphasis will be placed upon methodological and theoretical approaches.

S.M. Jamieson and M.J. Tamplin

Anthropology 530

Problems in Mesoamerican archaeology. Review of the long and variegated history of human occupation in Mexico and Central America. Problems include the rise, the structure, and the fall of complex societies, cultural ecology, the nature of cultural frontiers, and other related issues of Mesoamerican prehistory.

P.F. Healy

Anthropology 540

South American archaeology and ethnohistory. South American prehistory and ethnohistory with a focus on the development of social, political, and economic organization in a wide variety of environments. Factors such as warfare, trade, migration, craft production, subsistence, ritual and ideology are considered. Emphasis is given to Central Andean civilizations, though other regions are considered.

J.R. Topic

Anthropology 545

Critical Issues in Ethnography. An exploration of critical issues and historical and contemporary trends in modes of ethnographic analysis. Topics will primarily, but not exclusively, focus on one of: development, visual representation, gender, institutions in complex societies, or tourism. Particular themes will vary according to student and faculty interests.

J.D. Harrison, S.J. Hepburn, J.S. Solway

Anthropology 555

Problems in Old World archaeology. Archaeological data and approaches from the Old World are employed to explore cultural problems common to all areas of the world. Research topics will vary from year to year.

M.J. Tamplin

Anthropology 560

Paleoecology of the Americas. This course examines the biology and ecology of prehistoric populations in various environmental and cultural settings.

H.S. Helmuth and M.J. Tamplin

Anthropology 575

Word and Image in Cross-Cultural Perspective. An exploration of the relationship between visual and verbal systems of communication from the Upper Paleolithic to the postmodern West. The course aims to delineate and to account for cross-cultural similarities and/or differences in especially visual narratives, whether in meaning or function these be mythical, historical, legendary, biographical, liturgical, self-expressive, or propagandistic.

J.M. Vastokas

Anthropology 580

Anthropology of Art, Architecture, and Material Culture. The development, character and interpretation of prehistoric, historic and contemporary art, architecture and everyday objects in cross-cultural perspective from the point of view of symbolic, semiotic and dialogic anthropology. Emphasis varies from year to year but fields of most interest include Aboriginal North America, the circumpolar northern hemisphere, rock art, and the industrialized West.

J.M. Vastokas

Anthropology 585

Prehistoric Art of Palaeolithic Europe and the Circumpolar Zone. A survey and critical re-examination of existing knowledge and understanding of the forms, functions, meanings, chronology, and interrelationships of the cave (parietal), rock (rupestrial), and mobiliary (small scale, portable) art of Palaeolithic and Mesolithic Western Europe, Scandinavia, Finland, northern Russia, Siberia, the northernmost Pacific rim, including the coasts of northeast Asia and northwestern North America, Alaska, the Canadian arctic and subarctic, and Greenland.

J.M. Vastokas

Anthropology 590

Special topics.

Staff

Applications of Modelling in the Natural and Social Sciences

This interdisciplinary graduate program provides for study towards an M.Sc. or M.A. degree in the application of techniques and theory of modelling in the natural sciences and social sciences. It encompasses the following traditional disciplines: Biology, Chemistry, Computer Science, Economics, Environmental Science, Geography, Mathematics, Physics, Psychology and Sociology.

The Master's program in the Applications of Modelling in the Natural and Social Sciences is designed to overcome some of the barriers to interdisciplinary collaboration by bringing together, at the graduate level, students who are actively applying modelling techniques in their thesis research in a broad range of disciplines. The research is in the social and natural sciences, and in fields in which

Trent has demonstrated strong research performance. Although it is oriented towards quantitative models, utilizing computational, mathematical or statistical techniques, it is discipline-based and is not a program in applied mathematics. It has three primary objectives:

1. The teaching of fundamental and common analytical modelling techniques required for research in a large number of quantitative fields.
2. The cross-fertilization that comes from sharing ideas with researchers in other disciplines, and the development of the communication skills required for this to occur.
3. Sufficient training of the student in his/her chosen discipline, including coursework and a research thesis, to permit progression to a disciplinary Ph.D. program at another institution.

Students are involved both in thesis research and coursework in their "home" discipline, and in interdisciplinary study. They carry out coursework in the foundations and methods of quantitative modelling and participate in an interdisciplinary seminar. In this seminar the student discusses, in a way comprehensible to the audience, the system being modelled, the model developed, and the means of validation of the model; here the emphasis is upon the modelling process itself rather than on the relevance of the results to the discipline of the research. Through this seminar the students develop the skills required to communicate with researchers outside their own discipline, and develop a perspective on their own and other disciplines not obtainable within a single-discipline context.

Specific Admission Requirements

The normal requirement for admission into this program is an upper second class (77 or better) (B+ at Trent) standing, or its equivalent, in a joint or single honours B.Sc. or B.A. degree in one of the traditional disciplines (see above). Prior to acceptance, a core faculty member must have been identified who will supervise the student's work. Prospective students must be reasonably well versed in mathematics, statistics and computing. They must have one calculus course beyond the introductory level, including differential equations, some familiarity with linear algebra, and be capable of programming in at least one computational language.

Faculty and Research Areas

Program Director

A.J. Slavin, M.Sc. (TORONTO), Ph.D. (CAMBRIDGE)

Chemistry:

R.E. March, B.Sc. (LEEDS), Ph.D. (TORONTO): *Mass spectrometry*; D. Mackay, Ph.D. (GLASGOW): *Environmental transport modelling*; K.B. Oldham, Ph.D., D.Sc. (MANCHESTER): *Electrochemistry*; J.M. Parnis, B.Sc., Ph.D. (TORONTO): *Matrix isolation spectroscopy and gas-phase reaction*

Computer Studies:

R.T. Hurley, Ph.D. (WATERLOO): *Distributed systems*; J.W. Jury, M.Sc., Ph.D. (TORONTO): *Statistical process control*; S.B. Regoczai, M.Sc. (TORONTO): *Knowledge acquisition*

Economics:

D.C.A. Curtis, M.A. (QUEEN'S), Ph.D. (MCGILL): *Modelling economic change*; J.A. Muldoon, M.A. (GUELPH), Ph.D. (MCMASTER): *Health care delivery*; K.S.R. Murthy, M.Sc. (KARNATAK), M.A. (DELHI, WESTERN), Ph.D. (WESTERN): *Econometric modelling and forecasting*

Environmental and Resource Studies:

W.F.J. Evans, M.A., Ph.D. (SASKATCHEWAN): *Ozone depletion, global warming*

Geography:

J.G. Cogley, M.A. (OXFORD), M.Sc., Ph.D. (MCMASTER): *Climatic and hydrological modelling*; P. Lafleur, M.Sc. (TRENT), Ph.D. (MCMASTER): *Boundary-layer climatology*; C.L. McKenna Neuman, Ph.D. (QUEEN'S): *Wind erosion*; R. Ponce-Hernandez, M.Sc. (CHAPINGO), Ph.D. (OXFORD): *Modelling applications of geographical information systems and remote sensing*

Mathematics:

C. Carter, B.Sc., Ph.D. (LONDON) (Emeritus): *Solar heating simulation*; D.G. Poole, M.Sc., Ph.D. (MCMASTER): *Discrete mathematical models*; B. Zhou, Ph.D. (SOUTH CAROLINA): *Combinatorics and graph theory*

Physics:

P. Davis [Conjunct], Ph.D. (TORONTO): *Transport of environmental contaminants*; K. De Bell, M.Sc., Ph.D. (LONDON): *Modelling phase transitions, thin films*;

J.W. Jury, M.Sc., Ph.D. (TORONTO): *Subatomic physics*; A.J. Slavin, M.Sc., (TORONTO), Ph.D. (CAMBRIDGE): *Structure and reactivity of solid surfaces*

Psychology:

D.J. Kennett, Ph.D. (MCMASTER): *Stress and coping*; J.D.A. Parker, B.A. (SIMON FRASER, M.A., Ph.D. (YORK): *Stress and coping, personality and psychopathology*; C.T. Smith, Ph.D. (WATERLOO): *Relationship between sleep and memory*

Conjunct Professor

P.A. Davis, M.Sc., Ph.D. (TORONTO) (Atomic Energy of Canada Limited)

Regulations

The general regulations and requirements of Trent University for the M.Sc. or M.A. degree apply to this graduate program. Candidates are required to submit and be examined on a research thesis supervised by one of the core faculty listed above. Selection of the research topic is made by the student together with her/his supervisor and graduate supervisory committee (typically three core faculty members including the supervisor and the chair of the home department).

Coursework counts for about one-third of the work towards the degree. A grade of at least B- (70) must be obtained in each of the graduate courses. Each student must satisfactorily complete at least five one-term modelling courses, consisting of three courses in the philosophical, mathematical and computational aspects of modelling, and two courses in the home discipline. The required coursework is normally completed in two terms, allowing the summer terms and the entire second year to be devoted to uninterrupted research. The student is also required to attend a regular seminar on modelling and to make one presentation each year.

Courses Available to Graduate Students

AM 501 a/b, AM 502 a/b

Discipline-specific courses in the home department. These may be given by the research supervisor in a reading/project course format.

AM 561a

The foundations of modelling. What modelling is and how it interfaces with related activities such as data gathering, simulation and hypothesis testing.

AM 562a/b

Advanced topics in modelling.
Prerequisite: *AM 561a* or equivalent.

AM 571a

Mathematical aspects of modelling. Various mathematical approaches to modelling are illustrated, the emphasis being on the methods rather than on the mathematical detail. The course discusses such topics as stochastic and deterministic modelling, dimensional analysis and nonlinear systems. Prerequisite: a university calculus course beyond the introductory level, including differential equations.

AM 572a/b

Special topics in the mathematics of modelling. Prerequisite: *AM 571a* or equivalent.

AM 581b

Computational aspects of modelling. Common computational techniques in modelling: simulation, numerical analysis, solutions of differential and difference equations. Prerequisite: the ability to program a computer in at least one computational language; differential equations.

AM 582a/b

Advanced topics in computational aspects of modelling. Prerequisite *AM 581b* or equivalent.

AM 590

Seminar on applications of modelling. Each student in the program makes one presentation per year on his/her research, with emphasis on the assumptions, methodology and analysis of the models used. These presentations are complemented by contributions from invited speakers and core faculty. This seminar course will be given a pass/fail grade every year, based on the presentations, attendance and participation by the student. A student's presentation will be attended and graded by her/his supervisory committee. Attendance is compulsory.

Students are normally required to take *AM 501a/b*, *502a/b*, *561a*, *571a*, *581b*. Students with advanced preparation in the material covered in any of *561a*, *571a* or *581b* may appeal to take the corresponding advanced course instead: *562a/b*, *572a/b* or *582a/b*, respectively.

Financial Support

The majority of students accepted are offered a teaching assistantship. These stipends are frequently increased by research stipends provided from research funds. This occurs most often in disciplines in the natural sciences. Canadian candidates are encouraged to apply for national and provincial scholarships (NSERC and OGS awards). The program also provides funds to cover some overhead research costs such as laboratory and computing supplies, equipment and some conference travel.

Biology

(See Applications of Modelling, Watershed Ecosystems and Trent-Queen's Programs.)

Canadian Heritage and Development Studies

This collaborative interdisciplinary M.A. program is offered by the Frost Centre for Canadian Heritage and Development Studies and involves faculty from Administrative Studies, Canadian Studies, Cultural Studies, Environmental and Resource Studies, Native Studies and Women's Studies in addition to the departments of Economics, English, French, Geography, History, Political Studies, and Sociology.

The Centre and M.A. program focus especially on: The study of the Aboriginal peoples in Canada; interdisciplinary explorations of Canadian culture through literature, the visual arts and monuments; interdisciplinary explorations of power and policy in Canadian society; environmentalism and bio-regionalism in Canada; natural and cultural heritage: policy, planning, management and interpretation; the interdisciplinary exploration of region and place in Canada, including the comparative analysis of regionalism in federal societies; the interdisciplinary exploration of women in Canadian society; community economic development; Canada in the international context.

Geographically, there is an emphasis on Canada, the North, and comparisons between Canada and other countries.

Applications will be considered from candidates with an Honours degree in a relevant area, an interest in interdisciplinary research, and some understanding of Canada.

Program Director
(To be named)

Faculty

S. Arat-Koc, B.A. (BOGAZICI), M.A. (WATERLOO), PH.D. (TORONTO); D.P. Berrill, B.A. (NORTHWESTERN), M.A. (TORONTO), PH.D. (EAST ANGLIA); J. Bishop, B.A. (NEW BRUNSWICK), M.A., M.B.A. (MCMASTER), PH.D. (EDINBURGH); S. Bocking, B.Sc., M.A., PH.D. (TORONTO); J.M. Bordo, B.A. (MCGILL, ALBERTA), M.A., M.Phil., PH.D. (YALE); R.T. Bowles, B.Sc. (BRIGHAM YOUNG), PH.D. (OREGON); A.G. Brunger, B.Sc. (SOUTHAMPTON), M.Sc. (ALBERTA), PH.D. (WESTERN ONTARIO); K.L. Campbell, B.A. (TRENT), M.B.A. (TORONTO); R. Campbell, B.A. (TRENT), M.A. (TORONTO), PH.D. (LONDON); M.J. Castellano, B.A. (QUEEN'S), M.S.W. (TORONTO); S. Choudhry, M.A. (MCGILL), PH.D. (MANITOBA); D.M. Clarke, B.A. (TRENT), M.A. (MCMASTER), PH.D. (CARLETON); J.R. Conley, B.A. (ALBERTA), M.A. (TORONTO), PH.D. (CARLETON); L.W. Conolly, B.A. (WALES), M.A. (MCMASTER), PH.D. (WALES); D.C.A. Curtis, M.A. (QUEEN'S), PH.D. (MCGILL); M.C. Eddy, M.A. (WESTERN ONTARIO), PH.D. (TORONTO); M.G. Fox, B.Sc. (PENNSYLVANIA), M.Ed. (CALGARY), PH.D. (QUEEN'S); M. Gunther, B.A. (WITWATERSRAND), PH.D. (NORTH CAROLINA); J. Harrison, B.A. (SASKATCHEWAN), M.A. (CALGARY), D.Phil. (OXFORD); E. Helleiner, B.A. (TORONTO), M.A., PH.D. (LONDON); F.M. Helleiner, M.A., PH.D. (WESTERN ONTARIO); M. Hobbs, B.A. (TRENT), M.A. (TORONTO), PH.D. (OISE); T.C. Hutchinson, B.Sc. (MANCHESTER), PH.D. (SHEFFIELD); C.V. Huxley, B.A. (YORK, ENG.), M.A. (SIMON FRASER), PH.D. (TORONTO); J.N. Jennings, B.A. (TORONTO), M.A. (CALGARY), PH.D. (TORONTO); E.H. Jones, B.A. (SASKATCHEWAN), M.A. (WESTERN ONTARIO), PH.D. (QUEEN'S); S.H.W. Kane, B.A. (CARLETON), M.A., PH.D. (TORONTO); P. Kulchyski, B.A. (WINNIPEG), M.A., PH.D. (YORK); M. Lacombe, M.A., PH.D. (YORK); B. Leith, B.A. (WESTERN ONTARIO), M.A., PH.D. (YORK); E. Maniowabi, J.S. Marsh, B.A. (READING), M.Sc. (ALBERTA), PH.D. (CALGARY); B.L. Marshall, M.A. (GUELPH), PH.D. (ALBERTA); D. McCalla, B.A. (QUEEN'S), M.A. (TORONTO), D.Phil. (OXFORD); D.N. McCaskill, B.A. (WINNIPEG), M.A. (CARLETON), PH.D. (YORK); J.S. Milloy, B.A. (ST. PATRICK'S), M.A. (CARLETON), PH.D. (OXFORD); D.R. Morrison, M.A. (SASKATCHEWAN), D.Phil. (SUSSEX);

J.A. Muldoon, B.Sc. (BROCK), M.A. (GUELPH), PH.D. (MCMASTER); G.A. Nader, B.A. (LONDON), PH.D. (DURHAM); D. Newhouse, B.Sc., M.B.A. (WESTERN ONTARIO); F. Nutch, M.A. (HAWAII), PH.D. (YORK); R.C. Paehlke, B.A. (LEHIGH), M.A. (NEW SCHOOL FOR SOCIAL RESEARCH), PH.D. (BRITISH COLUMBIA); M.A. Peterman, A.B. (PRINCETON), M.A., PH.D. (TORONTO); J. Sangster, B.A. (TRENT), M.A., PH.D. (MCMASTER); D. Sheinin, B.Sc. (TORONTO), M.A., PH.D. (CONNECTICUT); S.D. Standen, B.A. (BRITISH COLUMBIA), M.A. (OREGON), PH.D. (TORONTO); J.E. Struthers, M.A. (CARLETON), PH.D. (TORONTO); T.H.B. Symons (Vanier Professor Emeritus); C.H. Taylor, M.A. (CANTERBURY), PH.D. (MCGILL); G. Thibault, B.A., B.Ed., M.A., PH.D. (DALHOUSIE); Y. Thomas, B.A. (UQAM), M.A., PH.D. (MONTREAL); D. Torgerson, A.B. (CALIFORNIA-BERKELEY), M.E.S. (YORK), M.A., PH.D. (TORONTO); J.M. Vastokas, M.A. (TORONTO), PH.D. (COLUMBIA); C. Verduyn, B.A. (TRENT), M.A., PH.D. (OTTAWA); J.H. Wadland, M.A. (WATERLOO), PH.D. (YORK); K. Walden, M.A., PH.D. (QUEEN'S); J. Wearing, B.A. (WESTERN ONTARIO), M.A. (TORONTO, OXFORD), D.Phil. (OXFORD); A.L. Wernick, B.A. (CAMBRIDGE), M.A. (TORONTO); T.H. Whillans, B.A. (GUELPH), M.Sc., PH.D. (TORONTO)

Regulations

The general regulations and requirements of Trent University for the M.A. degree apply to the Canadian Heritage and Development Studies Program. The main emphasis will be on the research and writing of an interdisciplinary thesis on an approved topic within a maximum period of three years. Two graduate courses comprising *CHDS 500*, and one of *CHDS 510I*, *CHDS 5102*, *CHDS 5103*, *CHDS 520*, *CHDS 530*, *CHDS 540*, *CHDS 550*, *CHDS 560*, *CHDS 570*, *CHDS 580*, *CHDS 590*, or *CHDS 599a/b* are also required. Candidates must attain at least a second class standing (B-) in their work, and shall pass an oral examination in defence of their thesis. Additional requirements appropriate to the candidate's field may be specified by the supervisory committee.

Courses**CHDS 500**

Interdisciplinary colloquium: this course examines and provides examples of conceptual and practical aspects of interdisciplinary research in Canadian Heritage and Development Studies. In particular, it deals with the concept of, approaches to, sources for, and progress on an M.A. thesis.

Program Director and guests

CHDS 5101

The Study of the Aboriginal Peoples in Canada: Management Stream

CHDS 5102

The Study of the Aboriginal Peoples in Canada: Historical-Political Stream

CHDS 5103

The Study of the Aboriginal Peoples in Canada: Contemporary, Social and Cultural Issues Stream

CHDS 520

Interdisciplinary Explorations of Canadian Culture Through Literature, the Visual Arts and Monuments

CHDS 530

The Interdisciplinary Explorations of Power, Policy and Labour in Canadian Society

CHDS 540

Environmentalism and Bio-regionalism in Canada

CHDS 550

Heritage Resource Policy Management, Landscape and Parks

CHDS 560

The Interdisciplinary Exploration of Region and Place in Canada, Including the Comparative Analysis of Regionalism in Federal Societies

CHDS 570

The Interdisciplinary Exploration of Women in Canadian Society

CHDS 580

Community Economic Development

CHDS 590

Canada in the International Context

CHDS 599a/b

Special Topic. This course can be substituted for one of the above theme courses when it is not offered. A written justification, course outline, and approval of the Program Director are required to take the course.

Thesis Supervision

Theses will be supervised by a committee consisting of a primary supervisor, who must be a tenured or tenure-track faculty member of the Frost Centre, a secondary supervisor, who must be a member of the Frost Centre and another secondary supervisor, who may be from outside the university, if appropriately qualified. The committee must represent at least two of the disciplines or programs involved in Canadian Heritage and Development Studies.

Financial Support

Applicants are encouraged to seek external scholarships where available. All students admitted will be considered for teaching and research assistantships for a maximum of four terms, normally spanning two consecutive undergraduate academic years.

For further information write to the director of the Frost Centre, Trent University.

Chemistry

(See Applications of Modelling and Trent-Queen's programs.)

Classical Studies

(See Trent-Queen's Program.)

Computer Studies

(See Applications of Modelling Program.)

Economics

(See Applications of Modelling Program.)

Environmental Studies

(See Applications of Modelling Program.)

Geography

(See Applications of Modelling, Watershed Ecosystems and Canadian Heritage and Development Studies programs.)

Mathematics

(See Applications of Modelling Program.)

Methodologies for the Study of Western History and Culture

Trent's M.A. program in Methodologies for the Study of Western History and Culture was established in 1988 as the result of an initiative from faculty in a range of disciplines, including Cultural Studies, Philosophy, History, English, Classics and Sociology.

Interdisciplinary in spirit and emphasis, the program focuses on contemporary issues concerning the interpretation/analysis of Western culture, past and present, using the term "culture" in its widest sense. It responds to a situation in which the human sciences, without having resolved traditional problems concerning strategies for (and the status of) their various kinds of inquiry, have been overtaken by new problems in which once foundational categories, assumptions and dichotomies have been radically challenged by deconstructionist, feminist psychoanalytic, ecological and anti-Eurocentric critiques.

The aim of the program is to enable students to engage with these issues in the context of substantive projects of research. Particular areas of emphasis are: textuality, semiotics and discourse analysis; nature, culture and technology; gender and feminist theory; media and popular culture; and the philosophy and history of science.

Student work centers on the thesis (to be supervised by faculty from two disciplines), and on the Methodologies Seminar which involves all students and faculty in the program.

The degree course is intended both as a preparation for doctoral studies, and as a qualification in itself for those (e.g. in

teaching, media, law, or government service) pursuing a non-academic professional career.

Applications will be considered from candidates with an Honours degree in a relevant discipline or disciplines, and an interest in interdisciplinary research.

Faculty

Program Director

A.L. Wernick, M.A. (CAMBRIDGE), M.A. (TORONTO) [Cultural Studies]

Program Committee

Z. Baross, B.A. (U.B.C.), M.A. (LONDON), PH.D. (AMSTERDAM) [Cultural Studies]; J. Bordo, B.A. (MCGILL, ALBERTA), M.PHIL., PH.D. (YALE) [Cultural Studies]; C.V. Boundas, M.A., PH.D. (PURDUE) [Philosophy]; R.E. Carter, M.DIV. (HARVARD), M.A., PH.D. (TORONTO) [Philosophy]; J.A. Fekete, M.A. (MCGILL), PH.D. (CAMBRIDGE) [Cultural Studies and English]; B.J. Hodgson, M.A. (TORONTO), PH.D. (WESTERN ONTARIO) [Philosophy]; D.G. Holdsworth, M.SC. (MCMASTER), PH.D. (WESTERN ONTARIO) [Environmental and Resource Studies]; S.H.W. Kane, B.A. (CARLETON), M.A., PH.D. (TORONTO) [English and Cultural Studies]; B.L. Marshall, B.A., M.A. (GUELPH), PH.D. (ALBERTA) [Sociology, Women's Studies]; S.B. Regoczei, M.SC. (TORONTO) [Computer Studies]; E. Stavropoulos, M.A., PH.D. (TORONTO) [Political Studies]; D.F. Theall, B.A. (YALE), M.A., PH.D. (TORONTO) [English and Cultural Studies] (Emeritus); D.K. Torgerson, A.B. (CALIFORNIA-BERKELEY), M.E.S. (YORK), M.A., PH.D. (TORONTO) [Administrative Studies and Political Studies]

Regulations

The general regulations and requirements of Trent University for the M.A. degree apply to the Methodologies Program. Candidates are expected to submit a thesis on an approved topic within two years. At least two courses are required: the seminar, and one other in a related field. Candidates must attain at least a second class standing in the course work and must pass an oral examination in defense of the thesis. Additional requirements appropriate to the candidate's field may be specified by the supervisory committee.

Courses

M500

Seminar on methodology. The seminar brings together all faculty and students enrolled in the program for an intensive exploration of competing contemporary theoretical perspectives bearing on the study of Western history and culture.

The focus will be on problems of value, ideology, interpretive "prejudice" language and cultural forms and situations, in the context of a broadly defined theme which will vary from year to year.

A. Wernick and staff

M590

Reading course.

Thesis Supervision

Theses will be supervised by two faculty representing at least two of the disciplines or programs involved, one of whom will be named the principal supervisor. It may be recommended that additional supervision be provided by adjunct faculty or other members of the program.

Graduate Assistantships

Applicants are encouraged to seek external scholarships where available. All students admitted will be considered for teaching and research assistantships for a maximum of four terms, normally spanning two consecutive undergraduate academic years.

For further information write to the director of Methodologies for the Study of Western History and Culture, Peter Robinson College, Trent University.

Physics

(See Applications of Modelling and Trent-Queen's programs.)

Psychology

(See Applications of Modelling Program.)

Sociology

(See Applications of Modelling Program.)

Trent-Queen's

Under the terms of an agreement between Trent University and Queen's University at Kingston, faculty of Trent University may undertake the supervision and instruction, at Trent University, of graduate students enrolled for Master's or Ph.D. degrees at Queen's University. The Trent faculty members who participate in this arrangement will have been admitted to the graduate faculty and will have been appointed as adjunct faculty at Queen's University. Students who wish to enrol at Queen's University and pursue graduate study at Trent University must make application initially to Trent University.

Associate Director
(To be named)

Trent Faculty Currently Holding Adjunct Appointments at Queen's

These are listed under the collaborating departments:

Biology/Environmental and Resource Studies

M. Berrill, B.SC. (MCGILL), M.SC. (HAWAII), PH.D. (PRINCETON); R.D. Evans, B.SC. (TORONTO), PH.D. (MCGILL); T.C. Hutchinson, B.SC. (MANCHESTER), PH.D. (SHEFFIELD); C.D. Metcalfe, B.SC. (MANTOBA), M.SC. (NEW BRUNSWICK), PH.D. (MCMASTER); E. Nol, B.SC. (MICHIGAN), M.SC. (GUELPH), PH.D. (TORONTO)

Chemistry

R.E. March, B.SC. (LEEDS), PH.D. (TORONTO), F.C.I.C.; K.B. Oldham, D.SC., PH.D. (MANCHESTER), F.R.I.C., F.C.I.C., (Emeritus); J.M. Parnis, B.SC., PH.D. (TORONTO)

Classical Studies

J.P. Bews, B.A. (QUEEN'S), M.A., PH.D. (LONDON); I.C. Storey, M.A. (TORONTO), M.PHIL. (OXFORD), PH.D. (TORONTO)

Geography

J.M. Buttle, B.A. (TORONTO), PH.D. (SOUTHAMPTON); P.M. Lafleur, B.SC. (BRANDON), M.SC. (TRENT), PH.D. (MCMASTER); R. Ponce-Hernandez, B.ENG., M.SC. (CHAPINGO), D.PHIL. (OXFORD)

Physics

K. De Bell, M.SC., PH.D. (LONDON); J.W. Jury, M.SC., PH.D. (TORONTO); A.J. Slavin, M.SC. (TORONTO), PH.D. (CAMBRIDGE)

Psychology

P.T.P. Wong, B.A. (CARLETON). M.A., PH.D.
(TORONTO)

Courses

Trent does not offer single discipline graduate programs in Chemistry or Physics. However, approved graduate courses listed below may be available for credit in Trent's Applications of Modelling Program, the Trent-Queen's Co-operative Program in Graduate Studies, or through other special arrangements such as the Ontario Graduate Visiting Student Plan. If taken in the Modelling Program, these courses would be given an AM501a or AM502b designation.

Chemistry

Chemistry 500a/b: Advanced topics in physical chemistry

Chemistry 501a/b: Electrochemistry

Chemistry 502a/b: Chemical processes

Chemistry 511a/b: Synthetic organic chemistry

Chemistry 520a/b: Selected topics in inorganic chemistry

Chemistry 530a/b: Plant metabolism

Physics

Physics 500a/b: Quantum mechanics

Physics 501a/b: Advanced quantum mechanics

Physics 510a/b: Surface science

Physics 520a/b: Nuclear physics

Physics 530a/b: Statistical mechanics

Physics 540a/b: Solid state physics

Physics 550a/b: Electromagnetism

Physics 551a/b: Electrodynamics

Physics 590: Advanced topics

Financial Support

All graduate students enrolled at Queen's University and resident at Trent are eligible for financial support from funds normally available at Queen's.

Financial support may be available to graduate students as compensation for assistance in teaching and research. Details are arranged individually by the supervisor of each graduate student.

For further information write to the graduate studies officer.

Watershed Ecosystems

The Watershed Ecosystems Graduate Program offers instruction leading to either a M.Sc. or a Ph.D. degree. Applicants should hold undergraduate Honours degrees in Biology, Geography, or Environmental Science. A qualifying year can be arranged for those who do not meet minimum standards, but no guarantee of subsequent admission to the program is implied. Prospective Ph.D. students will normally have a M.Sc. degree. Applicants who have achieved excellent standing at the honours baccalaureate level, and who wish to proceed directly to Doctoral study, will enrol, in the first instance, in a Master's degree. If the student achieves a superior academic record and shows particular aptitude for research, the Graduate Studies Committee, on the recommendation of the Watershed Ecosystems Program executive, may authorize transfer to the Ph.D. program without requiring completion of the M.Sc. degree.

The program offers instruction in three areas of emphasis: toxicology and fate of contaminants; ecological processes and ecosystem structure; and physical and chemical environmental processes. Candidates will be required to undertake research on a topic that relates to the interests of a member of the faculty as outlined below. They will be encouraged to concentrate on interdisciplinary topics and to utilize the expertise and resources of each of the departments involved in the program.

Program Director

J.M. Buttle, B.A. (TORONTO), PH.D.
(SOUTHAMPTON)

Faculty and Research Areas

W.P. Adams, B.A. (ENGLAND), M.Sc., PH.D.

(MCGILL): *Hydrometeorology, snow and ice*;

M. Berrill, B.Sc. (MCGILL), M.Sc.

(HAWAII), PH.D. (PRINCETON): *Behavioural ecology*;

J.M. Buttle, B.A. (TORONTO), PH.D.

(SOUTHAMPTON): *Hydrology, fluvial geomorphology*;

J.G. Cogley, M.A. (OXFORD), M.Sc., PH.D. (MCMASTER): *Fluvial geomorphology, hydrology, Arctic*;

R.D. Evans, B.Sc. (TORONTO), PH.D. (MCGILL):

Environmental biogeochemistry, trace metal cycling;

W. Evans, B.A., M.A., PH.D. (SASKATCHEWAN):

Ozone depletion, global warming;

M. Fox, B.A. (PENNSYLVANIA), M.E.D.S. (CALGARY), PH.D. (QUEEN'S):

Fish ecology, pond culture;

M. Havas, B.Sc., PH.D. (TORONTO):

Acid precipitation,

toxicity of metals and acidification; T. Hutchinson, B.Sc. (MANCHESTER), Ph.D. (SHEFFIELD): *Forest decline, terrestrial impacts*; R. Jones B.Sc. (WALES), M.Sc. (KANSAS), Ph.D. (WALES): *Plant ecology, biogeochemistry, disturbed habitats*; P.M. Lafleur, B.Sc. (BRANDON), M.Sc. (TRENT), Ph.D. (MCMASTER): *Forest-atmosphere energy interactions, impacts of climatic change*; D.C. Lasenby, B.Sc. (TRENT), Ph.D. (TORONTO): *Limnology; biological, physical and chemical aspects of lakes*; C. Kapron-Bras, B.Sc. (WATERLOO), M.Sc., Ph.D. (MCGILL): *Cellular and molecular mechanisms of embryonic toxicity and teratogenicity*; D. Mackay, B.Sc. (GLASGOW), Ph.D. (GLASGOW): *Fate and effects of contaminants in the environment*; C.L. McKenna Neuman, M.Sc. (GUELPH), Ph.D. (QUEEN'S): *Process geomorphology, mechanics of sediment transport, periglacial/coastal aeolian geomorphology*; C.D. Metcalfe, B.Sc. (MANITOBA), M.Sc. (NEW BRUNSWICK), Ph.D. (MCMASTER): *Aquatic organic contaminants*; E. Nol, B.Sc. (MICHIGAN), M.Sc. (GUELPH), Ph.D. (TORONTO): *Behavioural and evolutionary ecology of birds*; R. Ponce-Hernandez, B.Eng. (UNIVERSIDAD, CHAPINGO), M.Sc. (COLEGIO DE POSTGRADUADOS), D.Phil. (OXFORD): *Geographical information systems, geostatistics and remote sensing techniques applied to suitability and impact assessments in agricultural and forest ecosystems*; J. Sutcliffe, B.Sc. (WATERLOO), M.Sc., Ph.D. (TORONTO): *Ecology and sensory physiology of biting flies*; C.H. Taylor, M.A. (CANTERBURY), Ph.D. (MCGILL): *Hydrology, fluvial geomorphology*; T.H. Whillans, B.A. (GUELPH), M.Sc., Ph.D. (TORONTO): *Fisheries, wetland ecology, renewable resource management*.

Conjunct Professors

[Conjunct professors have full academic appointments in the Watershed Ecosystems Program and are able to act as principal supervisor of graduate students.]

M. Bardecki, Ph.D. (YORK): *Wetland management and environmental impact assessment* (Ryerson Polytechnical Institute); J. Casselman, Ph.D. (TORONTO): *Physiology and ecology of coolwater fish* (Ontario Ministry of Natural Resources); R.J. Cornett, B.Sc. (TORONTO), Ph.D. (MCGILL): *Interactions of radioisotopes with ground water and lakes* (Atomic Energy of Canada); P.J. Dillon, Ph.D. (TORONTO): *Nutrient cycling, trace metals,*

acid precipitation studies (Ontario Ministry of Environment and Energy); R.J. Hall, Ph.D. (MINNESOTA): *Invertebrate ecology* (Ontario Ministry of Environment and Energy); B.E. Hickie, B.Sc.AGR. (GUELPH), M.Sc., Ph.D. (WATERLOO): *Environmental toxicology, pharmacokinetic modelling* (Trent); M.L. Jones, B.Sc., Ph.D. (BRITISH COLUMBIA): *Research, fisheries, ecology and modelling* (Ontario Ministry of Natural Resources); B. LaZerte, B.A., M.A., Ph.D. (MICHIGAN): *Biogeochemistry and toxicology of forest soils, wetlands, streams and lakes* (Ontario Ministry of Environment and Energy); D.R.S. Lean, Ph.D. (TORONTO): *Phosphorus cycling, nutrient dynamics* (Environment Canada); R. Norstrom, B.Sc., Ph.D. (ALBERTA): *Analytical chemistry, pharmacokinetics* (Canadian Wildlife Service); T.D. Prowse, M.Sc. (TRENT), Ph.D. (CANTERBURY): *Northern rivers, particularly ice jams* (Environment Canada); T. Scheuhammer, B.Sc., B.Ed., Ph.D. (WESTERN ONTARIO): *Toxicology of non-essential metals in birds and mammals* (Canadian Wildlife Service); P. Welbourn, Ph.D. (BRISTOL): *Cycling of metals in lakes, algal toxicity, lake acidification* (Trent); A. Zobel, M.Sc., Ph.D. (WARSAW): *Phenolic compounds in plant cells as bioindicators of environmental stress* (Trent).

Regulations

The general regulations and requirements of Trent University for graduate degrees apply to the Watershed Ecosystems Program. Candidates for both the M.Sc. and the Ph.D. degree will be required to complete the equivalent of two full courses and to submit a thesis on an approved topic within a period of two years (four for part-time students) for the M.Sc. degree and four years (eight for part-time studies) for the Ph.D. degree. Candidates must attain at least a second class standing in all course work to remain registered in their program, and must pass an oral examination in defence of their thesis research. *WE500a* is compulsory for all first-year M.Sc. students. Students without training in advanced statistics are strongly recommended to take *WE501a* as well.

Ph.D. candidates must undertake an oral qualifying examination, normally within the first year of study. The examination will establish, to the satisfaction of the program, that the student has an effective grasp of her/his research area.

Courses Available to Graduate Students

(Note: not all courses are offered every year.)

WE500a

Approaches to science. This course, which is mandatory for all first year M.Sc. students, will challenge participants to examine their philosophy of science with particular reference to their own research.

Current paradigms in watershed research will be examined and students will be encouraged to develop their understanding of the systems within which their research is conducted. Evaluation is on the basis of the presentation of a seminar on the student's thesis proposal and a written development of ideas presented during the seminar.

Staff

WE501b

Research design and data analysis. The course will emphasize advanced statistical techniques of use in field and laboratory studies in watershed research, including applications of linear and non-linear models, analysis of variance and multivariate statistics. An effort will be made to assist graduate students in planning the statistical design of their own research projects. The course will rely heavily on workshops and tutorials.

This course is highly recommended for students who have not taken an advanced statistics course (e.g. analysis of variance, multivariate statistics) as an undergraduate. An introductory statistics course is required as a prerequisite.

Staff

WE504a

Ecosystem response to changes in the hydrosphere. The course will examine the responses of biological communities to changes in the physical, chemical and biological parameters of aquatic ecosystems. Discussions may include forest clear-cutting, waterlevel fluctuations, habitat rehabilitation, exotic species introductions, eutrophication, and acid rain. The course will be seminar-based, with an emphasis on examining case histories related to individual student's research. Not open to students who have taken *ES481a/b*.

WE505a

Measurement techniques for hydrochemical fluxes. The course will examine techniques for monitoring hydrochemical fluxes within the hydrological cycle. The curriculum will cover problems relating to the measurement of variables such as discharge, soil moisture, organic and inorganic constituents in the saturated and unsaturated zones, atmospheric vapour fluxes, precipitation and snowcover. The focus of the lectures and labs will be on measurement, sampling techniques, and instrumentation. Course material will complement statistical concepts covered in *WE501a*. Not open to students who have taken *GO404a/b*.

J. Buttle

WE506a

The geochemistry of natural waters. The course will examine the chemical and physical properties of water, snow and ice. An emphasis will be placed on those parameters which influence the distribution of biota, nutrients and contaminants in the aquatic environment. Topics for discussion will include the hydrologic cycle, the carbonate system and pH control, weathering and water chemistry, redox equilibria, hydrologic transport, and the properties of snow and ice. Not open to students who have taken *BI/ES/G0406a*.

D. Evans

WE507b

The fate of contaminants in the aquatic environment. The course will emphasize the mathematical modelling of the fate and distribution of aquatic contaminants, including models for toxic metals, organic xenobiotics and groundwater contaminants. The course will examine the basic algorithms and assumptions of contaminants models, and will give the students hands-on experience in applying existing models (e.g. MINTEQA, QWASI). An emphasis will be placed on using models to determine the dominant pathways influencing the fate of inorganic and organic contaminants in the aquatic environment. Not open to students who have taken *BI/ES/G0407b*.

D. Evans

WE508a

Research in physical geography. This is a seminar course on themes, methodologies and approaches of current major interest. Individual presentations based on directed readings and study. Not open to students who have taken *GO440*.

Staff

WE509b

Trends in behavioural ecology. This course examines new developments in behavioural ecology, based upon the current journal literature. Topics range from sexual selection, game theory, and optimality to assessing alternate ways of interpreting behaviour. Students will take an active role in the presentation of course material. Specific choice of topics will be determined by course participants. Students should have taken one course in animal behaviour. A familiarity with population genetics, ecology and basic evolutionary theory will be assumed.

E. Nol, M. Berrill

WE510b

Instrumental analysis. Course material includes instruction on the theory and practical applications of instrumentation commonly used for analysis in the aquatic sciences. Lecture material includes sections on electroanalytical methods, atomic and molecular spectroscopy and analytical chromatography. Students will have the opportunity to be trained on specific analytical instruments by working in research laboratories under the supervision of WEGP faculty.

J.M. Parnis, C.D. Metcalfe

WE511b

Geographical information systems: techniques and applications. This course will provide familiarization with the theoretical and applied aspects of geographical information systems relevant to studies in Watershed Ecosystems. Lectures will focus on various approaches to analysis of spatial information. The applied portion of the course will involve students in the formulation of a GIS applications project related to the students' research.

R. Ponce-Hernandez

WE590 (or WE590a/b)

Reading course. This course option is available for graduate students who wish to receive instruction in a more discipline-specific course. The exact format of the course is designed by the student in consultation with the supervisory committee. A written justification for the need for this course must be made to the program director and must be arranged prior to registration for the course. The reading course can be a literature review or a small research project. Under exceptional circumstances, and subject to program approval, a student can also register under the *WE590* course number to take a course from another academic institution for credit. In the case of an undergraduate course taken for credit, a graduate student would normally have to complete an additional graduate-level assignment.

Financial Support

Full financial support is provided for a minimum of six terms for M.Sc. students and nine terms for Ph.D. students, through teaching assistantships, research assistantships or scholarships. Candidates are encouraged most strongly to apply for scholarships on their own behalf. Information on available scholarships is available from the Office of Research and Graduate Studies.

Further Information

More detailed information about the program is contained in the program handbook. Inquiries should be addressed to the director of the program.

Financial Assistance

Financial assistance for individual full-time graduate students may be available from the following sources:

1. Scholarships, fellowships and other merit awards from governmental, industrial and other granting bodies in Canada.
2. Graduate assistantships for a maximum of four terms - M.A./M.Sc. (maximum six terms - Ph.D.), normally spanning two (three - Ph.D.) consecutive undergraduate academic years, in teaching and demonstrating.
3. Research assistantships with staff members who hold research grants.
4. Non-competitive awards and loans from the Ontario Student Awards Program.

All student support received through awards, research or graduate assistantships is taxable according to the federal and provincial tax regulations. Tax will be deducted by Trent's accounting department from any payments made to students for assistantships.

Teaching assistantships and research assistantships administered by Trent University will be paid through the university payroll office, on a monthly basis. Scholarships awarded for the calendar year are ordinarily paid in three equal instalments in September, January and May and may be picked up in the Office of Research and Graduate Studies.

Information on the more important scholarships and fellowships follows:

Ontario Graduate Scholarships

The Government of Ontario offers up to 1,300 Ontario Graduate Scholarships per year which are tenable at the Ontario university of the student's choice. The awards are tenable in all disciplines and the scholars must have a high level of academic achievement. The awards are intended primarily for Canadian citizens as well as those who hold permanent resident status at the time of application; however, up to 60 awards may be made to students who, by the application deadline, have been admitted to Canada as visitors with student authorization. Awards will be for two or three consecutive terms; one-term awards will not be made. Application deadline is mid November. All eligible candidates who are interested in studying at Trent are urged to apply for one of these awards. For further information write to: Student Support Branch, Ontario Ministry of Education and Training, P.O. Box 4500, 189 Red River Road, 4th Floor, Thunder Bay, Ontario P7B 6G9.

Natural Science and Engineering Research Council Awards

Postgraduate scholarships from the Natural Science and Engineering Research Council (NSERC) are tenable in departments offering graduate studies in science. These awards are offered to assist students in undertaking graduate study and research leading to advanced degrees, and a limited number of postdoctoral fellowships for those wishing to add to their experience by specialized training. The scholarships are open to Canadian citizens or permanent residents and are awarded on the

basis of high scholastic achievement and evidence of capacity to do research. For further information write to: Postgraduate Scholarships Officer, Natural Science and Engineering Research Council of Canada, Constitution Square, Tower II, 350 Albert Street, Ottawa, Ontario K1A 1H5.

Commonwealth Scholarship and Fellowship Plan

The Commonwealth Plan provides opportunities for Commonwealth students to pursue advanced studies in other Commonwealth countries. The fellowships are awarded to graduates of recognized universities for a period of two academic years and the intervening summer, and are intended to cover the holder's travel, living, and study expenses during the period of tenure. Application forms and full information concerning details of the award may be obtained from the Canadian Scholarship and Fellowship Plan, c/o Canadian Bureau for International Education, 85 Albert Street, Suite 1400, Ottawa, Ontario K1P 5N1, or through the Canadian high commissioner in those countries. Persons intending to apply are advised to enquire not later than September, approximately one year prior to the date of tenure.

Note:

The Office of Research and Graduate Studies prepares a booklet annually for use by Trent undergraduates planning to apply to graduate schools and for scholarships and by graduate students planning further study. This includes a list of scholarships available and application deadlines. The office also makes available on gopher the University of Waterloo scholarships database.

In the case of major scholarship competitions, students currently registered at Trent must meet an earlier deadline set by Trent University.

Graduate Assistantships

The Graduate Studies Committee, acting on the recommendations of the programs awards a number of assistantships to full-time graduate students each year. In return for the stipend involved, the students are required to work for up to ten hours per week in the department, generally assisting with some aspect of the undergraduate teaching program.

A full-time graduate student may be eligible for support for a maximum of four terms (six terms - Ph.D.), normally spanning two (three - Ph.D.) consecutive undergraduate academic years.

Graduate Awards

Trent University Graduate Entrance Awards

Approximately fifteen (15) awards will be made annually to eligible students entering the first year of a full-time graduate degree program at Trent University. The awards are valued at \$300 each and are intended for students with an average of A- (80%) or better in their last two years of study.

Ontario Graduate Scholarship (OGS) Program "Institutional Awards"

The province of Ontario provides up to ten (10) OGS institutional awards tenable only at Trent University. Only first- and second-year students may hold awards. In order to be eligible, a student must meet the eligibility criteria and fulfil all scholarship conditions applicable to candidates in the open OGS completion. Nominees can be those who were on reversion or unsuccessful in the open competition, or have not yet applied. Students who were unranked for an OGS are not eligible.

The recommended candidates from Trent are decided when results of the open competition are known.

The Governor-General's Academic Gold Medal

The Governor-General's Gold Medal will be awarded to the graduate student who achieves the highest academic standing in his/her degree program. The medal will be awarded on the recommendation of the Committee on Graduate Studies which solicits nominations from the graduate program directors, and will be presented each year at Spring Convocation to a student among those who are graduating.

The R.B. Johnston Fund for Archaeology

The gift of an anonymous donor, this fund recognizes the contribution of the late Prof. Richard B. Johnston to Ontario archaeology. The fund supports thesis research by graduate students in the Anthropology program. Projects in the archaeology of

northeastern North America are preferred, and one or more grants are awarded annually.

The David and Joyce Woods Graduate Scholarship

This scholarship, to honour David M. Woods, chairman of the Board of Governors of Trent University from 1975 to 1980, and his wife, Joyce Woods, has been established by their children and friends and is to be awarded to a student in the Watershed Ecosystems Graduate Program. This is the first graduate scholarship to be established at the University.

International Graduate Students

In order to cover fees, books and living expenses, an international student in a graduate school in Ontario will need a minimum of \$25,000 per year. If this amount is not covered by independent means or financial support from his/her own country, and if he/she is therefore in need of fellowship support, he/she should be aware of the following facts. Because of government restriction on the money available, students from other countries entering Canada on student authorizations and proceeding to a graduate school in the province of Ontario are restricted in most cases to teaching assistantships involving no more than 10 paid hours per week. Eligibility for most scholarships and teaching assistantships from university and Canadian sources is restricted to Canadian citizens or permanent residents. However, as noted in the previous section, a small number of Ontario Graduate Scholarships are available to non-Canadian students.

Therefore if you are not a Canadian citizen or permanent resident, you will not be eligible for most of the awards. On the other hand, to obtain permanent resident status, a student who is not resident in Canada must have long range plans which include an intention to settle permanently in Canada. If the Canadian immigration authorities refuse permanent resident status, it is then extremely difficult to obtain a student authorization as an alternative means of permission to study in Canada.

Entry into Canada without either status will result in a deportation order, and if the deportation order is not successfully appealed, any further application for landed immigrant status will almost certainly be denied. Application for such status there-

fore should not be made simply in the hope of obtaining more fellowship support.

Note:

Students who have been admitted to Canada on student authorizations must obtain a work permit from the Department of Immigration before taking on any type of work for which they receive payment.

Student Services

Graduate Students' Association

All registered graduate students, full- or part-time and including those enrolled under the Trent-Queen's agreement become, by virtue of the fee paid, a member of the Graduate Students' Association (GSA). This association exists separately from the Trent Student Union (TSU). It has four elected officers (president, vice-president, treasurer and secretary) who organize social and informal academic events. Elections take place yearly. Graduate students are also represented on the University Senate, and the Research, Graduate Studies, Educational Development (COED), Animal Care, Academic Computer Services, Graduate Studies, Library Services, Nature Areas, Research (NSERC), Research (SSHRC), Special Appeals, Teaching Awards and Teaching Effectiveness committees. Those interested in serving either on the GSA executive or on one of the committees should contact the current GSA President.

The GSA publishes a newsletter throughout the year passing on information of direct concern to graduate students both from within the university and from other graduate associations or from the National Union of Students (NUS) newsletters. As well as organizing social events such as wine and cheese parties, Christmas parties, and end-of-the-year banquets, the GSA presents informal slide and talk shows presenting current research by graduate students or faculty at Trent.

Conference travel allowances are made available through the GSA to qualifying graduate students on a first come/first served basis.

The aim of these programs is to provide opportunities for graduate students to communicate with each other, and with the entire University community about issues and problems of particular concern to graduate students.

The current executive welcomes the interest and assistance of all graduate students.

Other Services and Facilities

Full descriptions on colleges, athletics, health service, computing facilities and the Thomas J. Bata Library are to be found elsewhere in this Calendar.

For further information please write to:

The Office of Research
and Graduate Studies
Trent University
Peterborough, Ontario, Canada
K9J 7B8

or telephone:
(705) 748-1245

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Nancy E.S. Smith

University Secretariat*University Secretary*

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(To be named)

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Paul S.B. Wilson, B.A.

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(To be named)

Catharine Parr Traill College

(To be named)

Champlain College

Stephen W. Brown, M.A., PH.D., F.S.A.

Lady Eaton College

(To be named)

Otonabee College

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(To be named)

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 Elbl, I. *History*
 Ernest, C.H. *Psychology*
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 Evans, W. *Env. & Res. St., Physics*

Fekete, J.A. *English Lit./Cultural St.*
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 Fox, M. *Env. & Res. St./Biology*

Gallagher, S.F. *English Literature*
 García-Sánchez, F., *M.L. & L. (Spanish)*
 Garrido, R.M. *M.L. & L. (Spanish)*
 Genoe, M. *Librarian, History*
 Germain-Rutherford, A. *M.L. & L. (French)*
 Glassco, D. *English Literature*
 Greene, C.M. *History*
 Gunther, M. *Political Studies*

Hagman, R.S. *Anthropology*
 Hamilton, G.F. *Mathematics*
 Harris-Stoertz, F. *History*
 Harrison, J. *Anthropology*
 Havas, M. *Env. & Res. St./Science*
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 Heitlinger, A. *Sociology*
 Helleiner, E. *Political Studies*
 Helleiner, F.M. *Geography*
 Helmuth, H.S. *Anthropology*
 Henniger, J. P. *Mathematics*
 Hepburn, S. *Anthropology*
 Hillman, J. *Comp. Dev. St./Sociology*
 Hobbs, M. *Women's Studies*
 Hodgson, B.J. *Philosophy*
 Holdsworth, D. *Env. & Res. St.*
 Hollinger, V. *Cultural Studies*
 Hurley, R. *Computer Studies*
 Hutchinson, T. *Env. & Res. St./Biology*
 Huxley, C.V. *Sociology/Comp. Dev. St.*

Jamieson, S. *Anthropology*
 Jennings, J.N. *History*
 Johnson, R.G. *Physics*
 Johnston, G.A. *English Literature*
 Jones, E.H. *History*
 Jones, R. *Biology*
 Jury, J.W. *Physics/Computer Studies*

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 Kapron-Bras, C. *Biology*
 Katz, S. *Sociology*
 Kay, C. *History*
 Keefer, S. *English Literature*
 Kennett, D. *Psychology*
 Kinzl, K.H. *Anc. Hist. & Clas./History*
 Kitchen, H.M. *Economics*
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 Kulchyski, P. *Native Studies*

Lacombe, M. *Canadian Studies*
 Lafleur, P. *Geography*
 Lapointe, H.B. *M.L. & L. (French)*
 Lapointe, J.-P. *M.L. & L. (French)*
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 Lewars, E.G. *Chemistry*
 Lowe, D.G. *Psychology*

Mackay, D. *Env. & Res. St./Chemistry*
 Manitowabi, E. *Native Studies*
 March, R.E. *Chemistry*
 Marsh, J.S. *Geography*
 Marshall, B. *Sociology/Women's Studies*
 Matthews, T.R. *Biology*
 Maxwell, C.D. *Biology*
 Maxwell, E.A. *Mathematics*
 McCalla, A. *Librarian*
 McCalla, D. *History*
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 McKinnon, C. *Philosophy*
 McLachlan, I. *English Lit./Cultural St.*
 Metcalfe, C. *Env. & Res. St.*
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 Milloy, J.S. *Native Studies/History*
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 Morrison, D.R. *Political St./Comp.Dev.St.*
 Morton, P.M. *History*
 Muldoon, J. *Economics*
 Murphy, T.N. *Mathematics*
 Murthy, K.S.R. *Economics*

Nader G.A. *Geography*
 Neufeld, J.E. *English Literature*
 Neufeld, M. *Political Studies*
 Neumann, R.M. *Philosophy*
 Newhouse, D. *Native St./Admin. St.*
 Nol, E. *Biology*
 Noriega, T.A. *M.L. & L. (Spanish)*
 Nutch, F. *Sociology*

O'Connor, A. *Cultural Studies*

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 Poole, D. *Mathematics*
 Popham, E. *English Literature*
 Powell, D. *Comp.Dev.St./Anthropology*

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Regoczei, S. *Computer Studies*
Reker, G.T. *Psychology*
Robson, S.T. *History*

Sandeman, I.M. *Biology*
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Sheinin, D. *History*
Slavin, A.J. *Physics*
Smith, C.T. *Psychology*
So, J. K.-F. *Anthropology*
Solway, J. *Comp.Dev.St./Anthropology*
Sproule, C. *Psychology*
Standen, S.D. *History*
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Storey, I.C. *Ancient History & Classics*
Struthers, J.E. *Canadian Studies/History*
Sutcliffe, J. *Biology*
Syrett, J. *History*

Tamplin, M. J. *Anthropology/Comp. St.*
Taylor, C.H. *Geography*
Thibault, G. *Sociology*
Thomas, Y. *M.L. & L. (French)*

Tindale, C. *Philosophy*
Todd, E.M. *Anthropology*
Topic, J.R. *Anthropology*
Torgerson, D. *Admin.St./Political St.*
/Environmental & Resource Studies
Treadwell J.M. *English Literature*
Tromly, F.B. *English Literature*

Vastokas, J.M. *Anthropology*
Verduyn, C. *Canadian St./Women's St.*

Wadland, J.H. *Canadian Studies*
Walden, K. *History*
Watson, P. *Psychology*
Wearing, J. *Political Studies*
Wernick, A.L. *Cultural Studies*
Whillans, T. *Env. & Res. St.*
Williams, S. *Native Studies*
Winocur, G. *Psychology*
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Zhou, B. *Mathematics*
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