Languages, Literatures and Linguistics – Arts

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The Department of Languages, Literatures and Linguistics offers courses in linguistics leading to an Honours BA or BA degree in Linguistics. For course listings in linguistics, please see the *Linguistics* section. For specific requirements of these programs, please consult the "Programs of Study" section, Faculty of Arts.

Courses in Language, Literature and Culture

Note: For specific requirements of degree programs in German, Italian, Russian, and Spanish, please consult the "Programs of Study" section, Faculty of Arts.

General Regulations

1. Entry to Language Courses

Any student may enrol in a language course at any level, subject to the conditions enumerated below.

a)   Admission to a student's first course in a language at York is by placement questionnaire and/or interview, or departmental authorization slip.

b)   In most cases, students who have completed a 1000-level language course with a grade of at least C are automatically admissible to a course at the next level in the same language, but may be pre-tested for purposes of course or section placement.

c)   Registration in any language course may be limited at the discretion of the department.

d)   Students intending to major or minor in German, Italian, Russian, or Spanish are encouraged to begin study of the relevant language in their first year.

2. Credit for Language Courses

A language course may be taken for credit in any year of any undergraduate program. Credit is given for a course if a grade of D or better is achieved. However, to advance from one level to another level, a student must achieve at least a grade of C.

3. Entry to departmental literature and culture courses, and to the degree programs in Greek and Latin Literature

a)   In literature and culture courses of the department instruction is normally given in the relevant language, and entry to courses and programs depends upon the student's ability to function in that language. The department may require a student to demonstrate language competence before granting admission to a course. For details, please consult the department's supplemental calendar.

b)   For regulations concerning entry to courses in Greek or Latin literature, consult a member of the Program in Classical Studies.

Note: Not all courses will necessarily be offered in any given year; consult the department's supplemental calendar for details of courses to be offered.

Note: For a list of Atkinson courses which are degree credit exclusions, students should consult the degree credit exclusion/equivalent tables in the Lecture Schedule or the departmental/divisional supplemental calendars.

I. Chinese

AS/CH 1000 6.0 Elementary Modern Standard Chinese. Presents three aspects of Modern Standard Chinese - pronunciation, grammar, writing system - lectures, drills, audial tapes and interactive computer programs. Pinyin (Chinese romanization) is used in teaching. Students learn approximately 500 characters by the end of the course.

Prerequisite: Permission of the Chinese Section.

Language of instruction: Chinese.

AS/CH 2000 6.0 Intermediate Modern Standard Chinese. Continues the work of AS/CH 1000 6.0 so that students can hold discussions on contemporary China and can read and write approximately 1100 characters.

Prerequisite: AS/CH 1000 6.0 or permission of the department.

Language of instruction: Chinese.

AS/CH 2010 6.0 Chinese for Beginners With Background. Students learn standard (Mandarin) pronunciation and the pinyin romanization system. They study basic conversational Chinese and learn to read and write enough Chinese characters to equip them for the third-year level.

Prerequisite: Permission of the instructor. Not open to those with no Chinese-speaking experience or Chinese students with formal education in Chinese.

Language of instruction: Chinese.

AS/CH 2700 6.0 Introduction to Chinese Literature. Surveys the many genres of Chinese literature from its origins to the present to show the evolution of the literary tradition and its interplay with history, philosophy and politics. Focus is on major works and how to discover their meaning.

Prerequisite: None.

Language of instruction: English.

AS/CH 3000 6.0 Advanced Modern Standard Chinese. Reading, writing, discussion, use of dictionaries and translation practice. The student should, with the aid of dictionaries, be able to read and translate newspaper articles from the People's Republic, modern fiction, and non-specialist articles.

Prerequisite: AS/CH 2000 6.0 or AS/CH 2010 6.0 or permission of the department.

Language of instruction: Chinese.

AS/CH 3010 6.0 Modern Standard Chinese for Speakers of Cantonese or other Dialects. Training in the standard pronunciation, phonetic system and simplified script, and discussions of the debate on language reform and style as embodied in the classics of modern vernacular literature.

Prerequisite: Permission of the department; not open to speakers of Mandarin.

Language of instruction: Chinese.

AS/CH 3600 6.0 Lu Xun: Representative Works. This course deals with the creative works of Lu Xun, China's leading twentieth century writer. It focuses on textual analysis of his short stories, prose poems and selected satirical essays. Modern Standard Chinese (Mandarin) is used in class.

Prerequisites: AS/CH 3010 6.0 or AS/CH 3000 6.0 plus any of the 2000 level literature courses or permission of the Department.

Language of instruction: Chinese.

AS/CH 3610 6.0 Oral Literature in Contemporary China. This course explores the oral stream of Chinese literature, which has a long history and a growing audience.

Students learn to appreciate and analyze such genres as storytelling, pattersongs, comic dialogues and monologues that are rarely studied outside China.

Note: Classes are conducted in modern standard Chinese (Mandarin).

Prerequisite: AS/CH 3010 6.0 or permission of the department.

Language of instruction: Chinese.

AS/CH 3710 6.0 Women Writers in Modern China. A study of the fiction of the major women writers from the literary revolution of the early 1920s to the present; the development of themes, forms and styles seen in the context of modern Chinese literature and against the background of China's patriarchal tradition.

Prerequisite: Any 2000-level Chinese literature course or AS/HUMA 2930 6.0-AS/SOSC 2180 6.0.

Language of instruction: English.

AS/CH 3750 6.0 Order and Chaos in China and the West: Great Ideas of Two Civilizations. Contrasting concepts - of the origin of civilization, of the forces of history, of humankind and nature, and of the relation between individual and state - are revealed by comparing texts of history, literature, science and philosophy basic to each world.

Prerequisite: None.

Cross-listed to: AS/HUMA 3990G 6.0.

Language of instruction: English.

AS/CH 3790 6.0 Contemporary Chinese Culture Through Literary Texts and Film. Primarily concentrating on representative "new wave" written works and films, this course explores the relationship between ideology and art in post-Modern China and stresses new literary/cinematic sensibilities in contemporary Chinese culture.

Prerequisite: None.

Language of instruction: Chinese.

AS/CH 4010 6.0 Translation: English-Chinese/Chinese-English. The course emphasizes the development of written translation skills by considering English and Chinese texts in a range of topics and styles. Training in translation strategies enables the production of a text equivalent to the original meaning and style.

Prerequisite: AS/CH 3000 6.0 or AS/CH 3010 6.0 or permission of the department.

Language of instruction: English.

AS/CH 4712 6.0 Confucian or Daoist? The Skeptical Novel. Two novels - traditional: Rulin waishi (The Scholars), and early modern: Laocan youji (Travels of Lao Ts'an) - radically question the role of intellectuals and women in Chinese society. Comparison highlights the emergence of a modern worldview. Students may read in English or Chinese.

Prerequisite: Any AS/CH 3000-level course or permission of the Department.

Language of instruction: English.

II. English as a Second Language

AS/ESL 1000 9.0 Canadian Language and Culture. This course develops the linguistic/ academic skills of students from English as a Second Language backgrounds, using themes such as, Language and Communication, Culture and Identity, the Immigrant/Refugee experience, Multiculturalism, Canada's aboriginal peoples, and Quebec. Course activities focus on developing English proficiency while exploring these themes. (This course is affiliated with Stong College.)

Cross-listed to: AS/HUMA 1220 9.0.

Degree credit exclusions: AS/ESL 1000 6.0, AS/HUMA 1220 6.0.

Note: This course is normally open only to students in their first academic session.

AS/ESL 2000 6.0 English in Use. This course provides opportunities for students to develop their English language skills while learning more about the varieties of written and spoken English. Students learn to analyze both spoken and written texts as connected discourse and become familiar with some of the ways in which literary and nonliterary texts can be examined.

Prerequisite: AS/ESL 1000 9.0 or permission of the department.

III. German

AS/GER 1000 6.0 Elementary German. In this course students acquire basic functional competence in oral and written German. This course also introduces students to aspects of contemporary German culture. No previous knowledge of German is assumed.

Language of instruction: German.

AS/GER 1020 6.0 Elementary German for Reading Knowledge. A study of German grammar with the aim of developing a reading knowledge of the language. Translation practice from German into English of texts drawn from a variety of disciplines. No previous knowledge of German is assumed.

Note: This course does not qualify as a prerequisite for AS/GER 1050 6.0.

Language of instruction: English.

AS/GER 1050 6.0 Intermediate German. This course continues the communicative approach used in AS/GER 1000 6.0 and helps students acquire a level of competence in oral and written German which enables them to function comfortably in a German speaking environment. The cultural component of the course is designed to broaden students' understanding of contemporary German society.

Prerequisite: AS/GER 1000 6.0 or OAC-German (or equivalent, with appropriate score on departmental placement test).

Note: May be taken in conjunction with AS/ GER 2200 6.0.

Language of instruction: German.

AS/GER 2040 6.0 Advanced German, Level I. This course aims to develop further the student's ability to write and speak correct and idiomatic German. Through reading and discussion, in German, of materials on current affairs, the student is also given an understanding of the cultural context of modern German.

Prerequisite: AS/GER 1050 6.0 or permission of the department.

Language of instruction: German.

AS/GER 2200 6.0 Introduction to German Literature and Culture. An introduction to German literary texts in their cultural context. The course provides the basis for further work in German literature and the broader field of German Studies

Prerequisite: AS/GER 1000 6.0 with a minimum grade of "B" and concurrent registration in AS/ GER 1050 6.0; or AS/GER 1050 6.0, or permission of the department.

Degree credit exclusion: AS/GER 2201 6.0.

Note: AS/GER 2201 6.0 does not count for major/ minor credit towards a degree in German. Either AS/GER 2200 6.0 or AS/GER 2201 6.0 will count for major credit towards a degree in German Studies.

Note: Students have the option to write essays, assignments and tests in either English or German; however, students are required to write several assignments as well as respond to several test and exam questions in German.

Language of Instruction: German.

AS/GER 2201 6.0 Introduction to German Literature and Culture (in translation). An introduction to German literary texts in their cultural context. The course provides the basis for further work in German literature and the broader field of German Studies.

Prerequisite: No knowledge of German is necessary.

Degree credit exclusion: AS/GER 2200 6.0.

Note: AS/GER 2201 6.0 does not count for major/ minor credit towards a degree in German. Either AS/GER 2200 6.0 or AS/GER 2201 6.0 will count for major credit towards a degree in German Studies.

Language of Instruction: English.

AS/GER 3043 3.0 Advanced German, Level IIA. Review of aspects of grammar and idiomatic expressions; introduction to the principles and practice of essay writing; oral reports on assigned readings on current affairs, with an emphasis of vocabulary building.

Prerequisite: AS/GER 2040 6.0 or permission of the Department.

Degree credit exclusion: AS/GER 3040 6.0.

Language of instruction: German.

AS/GER 3045 3.0 Advanced German, Level IIB. Further review of aspects of grammar and idiomatic expressions; translation; class discussions on topics of general interest and current affairs, with an emphasis on vocabulary building.

Prerequisite: AS/GER 3043 3.0 or permission of the Department.

Degree credit exclusion: AS/GER 3040 6.0.

Language of instruction: German.

AS/GER 3100 3.0 German Regional Linguistic Varieties. Different German regional linguistic varieties or dialects are examined and their similarities to and differences from modern standard German are analyzed. The course also gives an overview of the historical development of the German dialects.

Prerequisite/corequisite: AS/GER 2040 6.0 or equivalent, or permission of the Department.

Degree credit exclusion: AS/GER 4100 3.0.

Language of instruction: German.

AS/GER 3110 3.0 Syntactic Structure of Modern German. Analysis of the linguistic structure of Modern German, especially in contrast to the structure of English. Models used for analysis will be the Transformational and Case Grammar models.

Prerequisite: AS/GER 2040 6.0 or equivalent, or permission of the Department.

Degree credit exclusion: AS/GER 4110 3.0.

Language of instruction: German.

AS/GER 3130 3.0 Words and meaning in German and English. This course deals with the elements of meaning: how they are combined into word-level structures in German and English and how words are structured as entries in bilingual dictionaries.

Prerequisite/corequisite: AS/GER 2040 6.0 or equivalent, or permission of the Department.

Language of instruction: German.

AS/GER 3310 3.0 A Survey of German Literature From 1400-1700. The literature of German Humanism, from the Reformation period and from the time of the Thirty Years' War. Representative authors such as Luther, Sachs, Gryphius, Lohenstein and Grimmelshausen will be studied.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusion: AS/GER 4310 3.0.

Language of instruction: German.

AS/GER 3580 6.0 German Prose and Poetry in the Nineteenth and Twentieth Centuries. Studies in the development of German prose and poetry from Hoffman to Günter Grass, including the works of such authors as Kleist, Heine, Thomas Mann, Hesse, Kafka, and Rilke.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Language of instruction: German.

AS/GER 3590 3.0 The German Drama in the Late Eighteenth and the Nineteenth Century. A study of selected major dramas from Lessing to Hauptman, with attention to the development of the drama as a genre, and to the relation of the works to their historical background.

Prerequisite: AS/GER 2200 6.0 or the permission of the Department.

Language of instruction: German.

AS/GER 3600 3.0 Berlin in German Literature: Texts and Contexts. Berlin's unique position at the crossroads of East and West makes it politically and socially the most interesting city in the German-speaking countries today. This course examines the presentation of Berlin in German literature from imperial capital to divided city.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusion: AS/GER 4600 3.0.

Language of instruction: German.

AS/GER 3610 3.0 The German Drama in the Twentieth Century. A study of major dramas from Wedekind to Brecht, with attention to the development of the drama as a genre, and to the relation of the works to their historical background.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusion: AS/GER 4610 3.0.

Language of instruction: German.

AS/GER 3660 3.0 The German Drama and Radio Play (since 1945). The development of the drama and radio play in all German speaking areas since the end of the Second World War.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusions: AS/GER 3800B 3.0, AS/GER 4800B 3.0 (effective Fall/Winter 2000).

Language of instruction: German.

AS/GER 3670 3.0 Contemporary German Prose and Poetry (since 1945). The development of German prose and poetry in all German speaking areas since the end of the Second World War.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusions: AS/GER 3800B 3.0 and AS/GER 4800B 3.0 (effective Fall/Winter 2000).

Language of instruction: German.

AS/GER 3790 6.0 Germany in Film: Literary and Historical Perspectives. This course examines major films of contemporary German cinema, including screen adaptations of works of German literature and films that address central concerns of recent German history

Prerequisite: None.

Cross-listed to: AS/HUMA 3990K 6.0.

Language of instruction: English.

AS/GER 4100 3.0 German Regional Linguistic Varieties. Different German regional linguistic varieties or dialects are examined and their similarities to and differences from modern standard German are analyzed. The course also gives an overview of the historical development of the German dialects.

Prerequisite/corequisite: AS/GER 3043 3.0 and AS/GER 3045 3.0 or equivalent, or permission of the Department.

Degree credit exclusion: AS/GER 3100 3.0.

Language of instruction: German.

AS/GER 4110 3.0 Syntactic Structure of Modern German. Analysis of the linguistic structure of Modern German, especially in contrast to the structure of English. Models used for analysis are the Transformational and Case Grammar models.

Prerequisite: AS/GER 3043 3.0 and AS/GER 3045 3.0 or equivalent, or permission of the Department.

Degree credit exclusion: AS/GER 3110 3.0.

Language of instruction: German.

AS/GER 4120 3.0 Theory and Practice of Translation: German-English, English-German. The course concerns itself with the theory and practice of translation, more especially, from German to English and English to German, with texts for translation drawn from general interest fields. Detailed knowledge of syntactic differences between German and English, modern German usage, stylistics, and semantics are applied to practical translation experience.

Prerequisite/corequisite: AS/GER 3043 3.0 and AS/GER 3045 3.0, or equivalent, or permission of the Department.

Language of instruction: German.

AS/GER 4290 3.0 The Drama of the German Democratic Republic. This course provides an overview of the drama of the former G.D.R. and includes not only a study of the formal aspects of the works in question but of their social and political context as well.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Language of instruction: German.

AS/GER 4300 3.0 Medieval German Literature. An introduction to the Middle High German language. Reading of representative works of the period such as the Nibelungenlied and the poetry of Walther von der Vogelweide.

Prerequisite: AS/GER 2040 6.0 or permission of the Department.

Language of instruction: German.

AS/GER 4310 3.0 A Survey of German Literature from 1400 to 1700. The literature of German Humanism, from the Reformation period and from the time of the Thirty Years' War. Representative authors such as Luther, Sachs, Gryphius, Lohenstein and Grimmelshausen are studied.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusion: AS/GER 3310 3.0.

Language of instruction: German.

AS/GER 4510 3.0 Goethe's Faust. Close textual analysis of Goethe's Faust. The relation of the work to its historical background.

Introduction to the Faust legend and the varied history of the Faust theme in German literature.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Language of instruction: German.

AS/GER 4600 3.0 Berlin in German Literature and Culture: Texts and Contexts. Berlin's unique position at the crossroads of East and West makes it politically and socially the most interesting city in the German-speaking countries today. This course examines the presentation of Berlin in German literature from imperial capital to divided city.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusion: AS/GER 3600 3.0.

Language of instruction: German.

AS/GER 4610 3.0 The German Drama in the Twentieth Century. A study of major dramas from Wedekind to Brecht, with attention to the development of the drama as a genre, and to the relation of the works to their historical background.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Degree credit exclusion: AS/GER 3610 3.0.

Language of instruction: German.

AS/GER 4620 3.0 Bertolt Brecht: Literature, Culture, and Politics (in Translation). Using an interdisciplinary approach, the course examines Brecht's understanding of the interplay of literature, culture and politics, as shown in his dramatic, poetical and theoretical works.

Prerequisite: AS/GER 2200 6.0 or permission of the Department.

Cross-listed to: AS/HUMA 4881 3.0.

Language of instruction: English.

AS/GER 4700 3.0 The Works of Franz Kafka (in Translation). Through an extensive and intensive study of Kafka's novels, stories, diaries and letters, as well as a consideration of relevant works by other authors (e.g. Buber, Dostoevsky, Nietzsche), the course seeks to arrive at a balanced and coherent understanding of Kafka's work.

Degree credit exclusions: AS/GER 4700 6.0, AS/VC 4040 6.0, AS/HUMA 4880D 6.0.

Cross-listed to: AS/HUMA 4880D 3.0.

Language of instruction: English.

Note: As the course is taught in translation, no knowledge of the German language is required. Students taking the course for major or minor degree credit in German will be required to do some work in German. For these students AS/GER 2200 6.0 is a prerequisite.

IV. Greek

AS/GK 1000 6.0 Elementary Classical Greek. This course is an introduction to Classical Greek. No knowledge of the language is assumed.

Note: Further courses in Greek Literature are listed under Classical Studies.

Language of instruction: English.

V. Hebrew

Entry to Hebrew courses: Students will be placed in classes at a level that suits their previous experience. No student may take both AS/HEB 1000 6.0 and AS/HEB 1010 6.0.

AS/HEB 1000 6.0 Elementary Modern Hebrew, Level I. A course in beginning Hebrew, teaching elementary speaking and writing skills, emphasizing oral production and comprehension. This course is not open to anyone who has studied Hebrew before, either formally or informally.

Language of instruction: Hebrew/English.

AS/HEB 1010 6.0 Elementary Modern Hebrew, Level II. This course is for students who have at some time in the past learned to read and write Hebrew, but who have not pursued their previous studies to the point where they have a basic command of the language. It teaches elementary oral and writing skills.

Prerequisite: One or two years of Hebrew at elementary day school or equivalent.

Language of instruction: Hebrew.

AS/HEB 1030 3.0 Elementary Biblical Hebrew, Level I. This course introduces students to the basic vocabulary, grammar, and syntax of Biblical Hebrew. The class also reads simple narrative prose from the Bible, such as segments from the Joseph story in Genesis.

Prerequisite: None.

Language of instruction: English.

AS/HEB 1040 3.0 Elementary Biblical Hebrew, Level II. This course builds on the skills that the students acquired in HEB 1030 3.0. More advanced issues of grammar and syntax are addressed and students acquire a much larger vocabulary thus allowing more extensive readings of biblical texts.

Prerequisite: AS/HEB 1030 3.0 or equivalent.

Language of instruction: English.

AS/HEB 2010 6.0 Intermediate Modern Hebrew. Review and consolidation of grammar topics to achieve a balance in the students' competence in written and oral skills. Further development in speaking, reading and writing. Course material deals with everyday situations, Jewish history, culture and aspects of life in Israel.

Prerequisite: AS/HEB 1000 6.0 or AS/HEB 1010 6.0, or equivalent; not normally open to students with more than seven years of elementary school level Hebrew or equivalent

Language of instruction: Hebrew.

AS/HEB 3000 6.0 Advanced Modern Hebrew. A course in modern Hebrew, emphasizing the study of contemporary Israeli language as seen in a wide variety of writings (education, business, military, and religious

literature, as well as newspapers, periodicals, and some belles lettres). This course includes practice in writing and composition.

Prerequisite: AS/HEB 2010 6.0 or equivalent. Not normally open to students with two or more years of high school level Hebrew, or to native speakers.

Language of instruction: Hebrew.

AS/HEB 3210 3.0 Selections from Hebrew Legal-Religious Texts: Reading and Analysis. This course presents the structure of the core texts of the Jewish legal and religious traditions, using selections from major Hebrew legal codes, responsa literature and exegetical texts.

Prerequisite: AS/HEB 3000 6.0 or permission of the department.

Language of instruction: Hebrew.

AS/HEB 3220 3.0 Hebrew Liturgical Texts: Origins, Contexts and Analysis. This course introduces a specialized genre of Hebrew literature: liturgical texts. The texts analyzed include a variety of ancient, medieval and modern Jewish liturgies.

Prerequisite: AS/HEB 3000 6.0 or permission of the department.

Language of instruction: Hebrew.

AS/HEB 3230 3.0 The Literature of Celebration and Commemoration. This course analyzes a variety of texts, classical and modern, in which aspects of major Jewish festivals and memorial days are explored.

Prerequisite: AS/HEB 3000 6.0 or permission of the department.

Language of instruction: Hebrew.

AS/HEB 3320 3.0 Exodus: Text and Classical Interpretation. A close textual analysis of the book of Exodus in the original Hebrew and of interpretations of the book written in Hebrew throughout the ages. Language of instruction and readings: Hebrew.

Prerequisite: AS/HEB 3000 6.0 or equivalent.

Language of instruction: Hebrew.

AS/HEB 3330 3.0 Deuteronomy: Text and Classical Interpretation. A close textual analysis of the book of Deuteronomy and of interpretations of the book written in Hebrew throughout the ages. Language of instruction and readings: Hebrew.

Prerequisite: AS/HEB 3000 6.0 or equivalent.

Language of instruction: Hebrew.

AS/HEB 3360 3.0 Prophetic Literature: Text and Classical Interpretation. A close textual analysis of selected passages from the biblical literary prophets and of interpretations of these passages written in Hebrew throughout the ages. Language of instruction and readings: Hebrew.

Prerequisite: AS/HEB 3000 6.0 or equivalent.

Language of instruction: Hebrew.

AS/HEB 3370 3.0 The Hagiographical Literature: Text and Classical Interpretation. Text and Classical Interpretation. A close textual analysis of selected passages from the later

books of the Bible - Esther, Lamentations and Ecclesiastes - and interpretations of these books written in Hebrew throughout the ages. Language of instruction and readings: Hebrew.

Prerequisite: AS/HEB 3000 6.0 or equivalent.

Language of instruction: Hebrew.

AS/HEB 3500 6.0 The Hebrew Revival: Language and Literature. Readings and discussion of the language and literature of the Hebrew Revival of the eighteenth and nineteenth centuries. Readings and discussions are in Hebrew.

Prerequisite: AS/HEB 3000 6.0 or equivalent.

Language of instruction: Hebrew.

AS/HEB 3600 6.0 Themes in Modern Israeli Literature and Society. An examination of some major intellectual questions and literary currents of modern Israel Canaanism; the cult of the strong; the kibbutz; the Holocaust; the clash of East and West. Included is a study of literary, historical, philosophical and sociological writings. Classes are conducted in Hebrew.

Prerequisite: AS/HEB 3000 6.0 or equivalent.

Language of instruction: Hebrew.

AS/HEB 3710 3.0, Diaspora, Home, Nostalgia: Modern Jewish Women's Literature. What is "Jewish" and "modern" about "Modern Jewish Women's Literature," and how does it reflect the experiences and perceptions of women? Examining a variety of literary genres, the course compares Israeli women's literature in translation with contemporary writing by other Jewish women.

Language of Instruction: English.

AS/HEB 3770 3.0, Inventing Israel: Culture, Crisis and Continuity in Israeli Literature. Modern Hebrew writers faced the challenge of reinventing a language and culture during a century of upheaval and change. Examining fiction, poetry, memoirs, and film (in translation), this course addresses such issues as personal and collective identities, and relationships with the past.

Language of instruction: English.

AS/HEB 4000 6.0 Advanced Modern Hebrew, Level II. An intensive course designed to acquaint students with advanced aspects of Hebrew grammar, to improve their reading skills and their ability to express themselves fluently in conversation and in written form.

Prerequisite: AS/HEB 3000 6.0 or equivalent. Not open to native speakers who have completed Grade 8 in Israel.

Language of instruction: Hebrew.

AS/HEB 4300 6.0 Talmudic Literature. A literary, historical and philosophical analysis of the classics of rabbinic law and legend in the original Hebrew from the Mishnah to early modern times. Particular emphasis is placed on the problem of turning an oral law into works of literature. Classes are conducted in Hebrew.

Prerequisite: AS/HEB 3000 6.0 or equivalent.

Language of instruction: Hebrew.

VI. Italian

AS/IT 1000 6.0 Elementary Italian. This course is designed for students with no previous formal training in standard Italian. This course teaches speaking and writing skills through the study of elementary grammar, the practice of vocabulary, intonation, and pronunciation.

Degree credit exclusions: AS/IT 1010 6.0, AK/IT 0200 6.0.

Language of instruction: Italian/English.

AS/IT 2000 6.0, Intermediate Italian. This course is intended for students with background knowledge of Italian. Emphasis is placed on oral competence and writing skills.

Prerequisite: OAC Italian (or equivalent) or AS/IT 1000 6.0 (with a minimum grade of C) or equivalent.

Degree credit exclusions: AS/IT 1040 6.0, AS/IT 1050 6.0, AS/IT 1060 6.0, AK/IT 1200 6.0.

Language of instruction: Italian.

AS/IT 2200 6.0 Introduction to Italian Literature. General historical and thematic survey from the medieval period to the present. The basic tools of literary analysis are emphasized. The languages of instruction are Italian and English.

Prerequisite: AS/IT 2000 6.0 or equivalent, or permission of the Department.

Corequisite: With permission of the department, students who have successfully completed AS/IT 1000 6.0 or equivalent may enrol in AS/IT 2200 6.0 only if they are concurrently enrolled in AS/IT 2000 6.0.

Language of instruction: Italian.

AS/IT 2751 9.0 Aspects of Italian Culture. This course aims to present and analyze some of the most interesting themes underlying the development of Italian intellectual life from the fourteenth century to the nineteenth century. (This course is affiliated with Founders College.)

Degree credit exclusions: AS/IT 2751 6.0, AS/HUMA 2990A 6.0.

Cross-listed to: AS/HUMA 2990A 9.0.

Note: No knowledge of Italian is required. Students taking Italian as their major or minor subject may take this course, but it does not count towards a major or minor in Italian nor does it fulfill the Faculty of Arts elective requirements of students in Italian.

Language of instruction: English.

AS/IT 2761 9.0 Italian Cinema, Literature and Society. The course focuses on twelve of the most significant films since World War II in the context of the radical changes that have taken place in Italy from the fall of Fascism to the present, and as critical statements on the phenomena connected with the rapid transformation of Italian society: industrialization and the "economic miracle", urbanization, the crisis of traditional values, and postmodern fragmentation. (This course is affiliated with Founders College.)

Cross-listed to: AS/HUMA 2761 9.0.

Language of instruction: English.

AS/IT 2791 9.0 Italian: A Minority Culture and Language in North American Society. This course investigates the effects North American culture and language have on the lives of Italian immigrants and their descendants. (This course is affiliated with Stong College.)

Degree credit exclusions: AS/SOSC 2990C 6.0, AS/IT 2791 6.0, AS/IT 2790 6.0.

Cross-listed to: AS/SOSC 2960 9.0.

Language of instruction: English.

AS/IT 3000 6.0, Advanced Italian, Level I. This course develops the students' command of Italian through the further study of difficult areas of morphology and syntax. Readings from contemporary sources expose students to Italian cultural trends and provide a basis for discussions and short essays.

Prerequisite: AS/IT 2000 6.0 (or equivalent), or permission of the Department.

Degree credit exclusions: AS/IT 2040 6.0, AS/IT 2060 6.0.

Language of instruction: Italian.

AS/IT 3130 3.0 Linguistic Structures in Italian and English. The aim of this course is to describe and analyze those aspects of linguistic structure of Italian which differ from English. This is *not* a translation course: students analyze differences between structures of the two languages.

Prerequisite: AS/IT 3000 6.0 or equivalent, or permission of the Department.

Language of instruction: Italian.

AS/IT 3150 3.0 Italian Regional Linguistic Varieties. This course deals with the complex linguistic situation of Italy. The different languages or dialects are analyzed and classified with respect to their similarities to and differences from the standard language.

Prerequisite: AS/IT 3000 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 3200 6.0 Italian Opera from Monteverdi to Puccini. This course studies selected librettos by the most celebrated Italian dramatic poets from the early Baroque to the early twentieth century, in the context of the theatrical and aesthetic developments in Europe, and against the background of the cultural and political history of the chief centres of theatrical life.

Language of instruction: English.

AS/IT 3201 6.0 Italian Philosophical and Political Thought: From Pre-Humanism to Postmodernism. An exploration of Italian philosophical and political thought from the medieval to the contemporary period. Topics include humanism, cosmology, philosophy of history, Marxism, existentialism, phenomenology and postmodernism.

Language of instruction: English.

AS/IT 3210 3.0 Twentieth Century Italian Theatre. Study of modern Italian theatre with special emphasis on authors such as D'Annunzio, Pirandello and Betti.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 3340 3.0 Italian Humanism. The main aspects of Quattrocento thought from Petrarch to the age of Lorenzo de' Medici; its importance in the development of Renaissance culture as manifested in the new concepts of humanity, history, politics, education and art.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 3350 6.0 The Literature of the Italian Renaissance. Study of main authors and literary trends from the age of Lorenzo de' Medici to the death of Tasso. This may include the revolutionary political concepts elaborated by Machiavelli and Guicciardini, as well as new approaches to literary theory and practice.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 3360 6.0 Petrarch: Love, Women and Power in the Middle Ages. An exploration of Petrarch's Canzoniere and its influence on European poetry. This courses analyzes the way the life of women at the end of the Middle Ages is represented by Petrarch and by the different traditions of European poetry.

Note: This course counts for Italian major/minor credit.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Degree credit exclusions: AS/IT 3360 3.0, AS/IT 3361 6.0.

Language of instruction: English/Italian.

AS/IT 3361 6.0 Petrarch: Love, Women and Power in the Middle Ages (in Translation). An exploration of Petrarch's Canzoniere and its influence on European poetry. This courses analyzes the way the life of women at the end of the Middle Ages is represented by Petrarch and by the different traditions of European poetry.

Note: This course does not count for Italian major/minor credit.

Degree credit exclusions: AS/IT 3360 3.0, AS/IT 3360 6.0.

Language of instruction: English/Italian.

AS/IT 3370 6.0 The Italian Short-Story From Boccaccio to Basile. This course examines the development of the Italian novella from the Middle Ages to the Baroque period. Among the authors studied are: Boccaccio, Bandello and Basile.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Note: This course counts for Italian major/minor credit.

Degree credit exclusions: AS/IT 3371 6.0, AS/IT 3370 3.0.

Language of instruction: English/Italian.

AS/IT 3371 6.0 The Italian Short-Story from Boccaccio to Basile (in Translation). This course examines the development of the Italian novella from the Middle Ages to the Baroque period. Among the authors studied are: Boccaccio, Bandello and Basile.

Note: This course does not count for Italian major/minor credit.

Degree credit exclusions: AS/IT 3370 3.0, AS/IT 3370 6.0.

Language of instruction: English/Italian.

AS/IT 3550 6.0 Nineteenth Century Italian Literature. The main trends in Italian literature of the nineteenth century from the Pre-Romantics to Verismo. Works by major authors such as Foscolo, Leopardi, Manzoni, Carducci and Verga are studied in depth.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 3721 6.0 Mapping the Italian Experience in Canada: The Literary and Cultural Perspective. The study of the Italian experience in Canada as expressed in representative works from various genres: narrative, poetry, theatre and film. The significance of these works is examined in the social and political context.

Cross-listed to: AS/EN 3721 6.0.

Language of instruction: English.

AS/IT 3750 6.0 Modern Italian Culture. This course introduces students to cultural, social, and political issues which form the fabric of Italian civilization from unification to the present.

Prerequisite: No knowledge of Italian necessary

Degree credit exclusion: AS/IT 3250 6.0.

Note: Students who are taking Italian as a major or minor subject are required to do the readings and assignments for this course in Italian. Students may take only one of the following courses for credit towards a degree in Italian: AS/IT 3750 6.0 or AS/IT 3790 6.0 or the combination of AS/IT 3760 3.0 and AS/IT 3770 3.0.

Language of instruction: English.

AS/IT 3760 3.0 Italian Medieval and Renaissance Civilization. The main elements of Italian civilization from the age of the republican city-states to the end of the Renaissance. The arts, literature and society; changing concepts of the state; the papacy, the Reformation and Counter-Reformation.

Degree credit exclusions: AS/IT 3250 6.0, AS/IT 3761 3.0.

Note: Students who are taking Italian as a major or minor subject are required to do the readings and assignments in Italian. Students may take only one of the following courses for credit towards a degree in Italian: AS/IT 3750 6.0 or AS/IT 3790 6.0 or the combination of AS/IT 3760 3.0 and AS/IT 3770 3.0.

Language of instruction: English.

AS/IT 3761 3.0 Italian Medieval And Renaissance Civilization. The main elements of Italian civilization from the age of the republican city-states to the end of the Renaissance. The arts, literature and society; changing concepts of the state; the papacy, the Reformation and Counter-Reformation.

Degree credit exclusions: AS/IT 3250 6.0, AS/IT 3760 3.0.

Note: Knowledge of Italian not necessary. Students who are taking Italian as a major or minor subject are required to do the readings and assignments in Italian. Students may take only one of the following courses for credit towards a degree in Italian: AS/IT 3750 6.0 or AS/IT 3790 6.0 or the combination of AS/IT 3760 3.0 and AS/IT 3770 3.0.

Language of instruction: English.

AS/IT 3770 3.0 Modern and Contemporary Italian Culture. Key issues in contemporary Italian society are studied in their historical development, with the focus on the following: unification and its aftermath; regionalism; Fascism and the Resistance; political parties and intellectuals; the Church; art and literature.

Degree credit exclusions: AS/IT 3750 6.0, AS/IT 3771 3.0.

Note: Students who are taking Italian as a major or minor subject are required to do the readings and assignments for this course in Italian. Students may take only one of the following courses for credit towards a degree in Italian: AS/IT 3750 6.0 or AS/IT 3790 6.0 or the combination of AS/IT 3760 3.0 and AS/IT 3770 3.0.

Language of instruction: English.

AS/IT 3771 3.0 Modern and Contemporary Italian Culture. Key issues in contemporary Italian society are studied in their historical development, with the focus on the following: unification and its aftermath; regionalism; Fascism and the Resistance; political parties and intellectuals; the Church; art and literature.

Degree credit exclusions: AS/IT 3750 6.0, AS/IT 3770 3.0.

Note: Knowledge of Italian not necessary.

Language of instruction: English.

AS/IT 4000 6.0 Advanced Italian, Level II. This course concentrates on the study of vocabulary and style. Different levels of language use (academic, formal, colloquial, slang) and different "specialized languages" are explored through readings from contemporary sources. Advanced training in composition. Extensive use of videos and feature films.

Prerequisite: AS/IT 3000 6.0 (or equivalent), or permission of the Department.

Degree credit exclusion: AS/IT 3040 6.0.

Language of instruction: Italian.

AS/IT 4120 6.0 Written Translation, Italian-English/English-Italian. Translation from and into Italian of non-literary texts on a variety of topics (politics, economics, arts, music, psychology, travel).

Prerequisite: AS/IT 3000 6.0 (or equivalent), or permission of the Department.

Degree credit exclusion: AS/IT 3120 6.0.

Language of instruction: Italian.

AS/IT 4140 3.0 Sociopragmatic Competence in Italian. This course deals, both at the theoretical and applied level, with some important aspects of sociolinguistic interaction in Italian. Students learn about rules of speaking, speech acts, the notion of "face," pragmatic transfer, and pragmatic failure as they apply to the Italian language.

Prerequisite: AS/IT 3000 6.0 or equivalent, or permission of the Department.

Language of instruction: Italian.

AS/IT 4150 3.0 The Study of the Italian Lexicon: A Course in Applied Semantics. The course examines the Italian lexicon using the concepts and analytical tools of modern Semantics.

Prerequisite: AS/IT 4000 6.0 or AS/IT 4120 6.0 or equivalent, or permission of the Department.

Language of instruction: Italian.

AS/IT 4180 3.0 Selected Topics in Italian Linguistics. The purpose of this course is to acquaint students with a selected number of topics in Italian linguistics. Topics may include selected areas of phonetics, phonology, morphology, syntax, English-Italian contrastive grammar and pragmatics.

Prerequisite: AS/IT 3000 6.0 or equivalent, or permission of the Department.

Language of instruction: Italian.

AS/IT 4190 3.0 History of the Italian Language. This course traces the history of the Italian language from its Indo-European roots to the present. Topics analyzed include, among others, linguistic aspects of pre-Roman Italy, the transformation of Latin, the 16th century linguistic controversy ("la questione della lingua"), borrowings from other languages, the standardization of modern Italian.

Note: Not open to students who have completed AS/IT 3180 3.0.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 4200 6.0 Modern Literary Criticism In Italy. The methodologies of literary criticism as they have developed in Italy through a theoretical and practical approach. Emphasis is given to the stylistic, structural, sociological and psychoanalytical methods.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: English.

AS/IT 4210 3.0 Renaissance Theatre. A study of the major works of the Italian Renaissance theatre in its development from classical forms; tragedy, comedy and the theoretical discussions related to them; the pastoral drama and Tasso's Aminta.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 4330 6.0 Dante and Medieval Italian Literature. This course centres on the Divine Comedy, its roots in the European literary and philosophical tradition, and the critical problems of the medieval mind. Key aspects of that tradition through selected readings. Some of Dante's minor works are also studied.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 4350 3.0 Women Poets of the Italian Renaissance. In this course emphasis is placed on the self-awareness of Sixteenth Century women writers in a predominately male world, and their intellectual and social self-understanding in relation to the Renaissance concept of the individual.

Language of instruction: English/Italian.

AS/IT 4550 3.0 Seventeenth Century Italian Literature. The poetry and prose of the seventeenth century, focusing on Marino and the "marinisti;" selections from the theoretical texts of the period; the links, where appropriate, with the visual arts.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

AS/IT 4620 6.0 Twentieth-Century Italian Poetry. Modern Italian poetry from Pascoli to the present. Outstanding works of authors such as D'Annunzio, Gozzano, Ungaretti, Montale, Quasimodo, Pasolini, Sanguineti, Zanzotto, Rosselli, Niccolai and others.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Degree credit exclusion: AS/IT 4620 3.0.

Language of instruction: Italian.

AS/IT 4650 6.0 Twentieth-Century Italian Novel. The modern Italian novel from D'Annunzio to the neo-avant-garde. Outstanding works of authors such as Svevo, Moravia, Vittorini, Pavese, Calvino and Pasolini.

Prerequisite: AS/IT 2200 6.0 or permission of the Department.

Language of instruction: Italian.

VII. Japanese

AS/JP 1000 6.0 Elementary Modern Standard Japanese. Basics of spoken Japanese, with strong emphasis on immediate practical usefulness in everyday situations, the two kana syllabaries, approximately 150 Kanji (Sino-Japanese characters) and elementary reading are covered. Simple sentence grammar is focused on. No previous knowledge of the language is assumed.

Language of instruction: Japanese/English.

AS/JP 2000 6.0 Intermediate Modern Standard Japanese. Further study of common grammatical forms and structures; items covered in AS/JP 1000 6.0 are reviewed and expanded. Situation and task oriented conversation, strategy-centered reading and structure-based writing are involved with emphasis on complex sentence grammar. Approximately 300 additional Kanji (Sino-Japanese characters) are introduced.

Prerequisite: AS/JP 1000 6.0 or equivalent.

Language of instruction: Japanese/English.

AS/JP 3000 6.0 Advanced Modern Standard Japanese. The course focuses on continuous texts; edited texts on various topics are read, summarized, translated and discussed with emphasis on discourse grammar. All Kanji (Sino-Japanese characters) in Education Characters (881) will be covered.

Prerequisite: AS/JP 2000 6.0 or equivalent.

Language of instruction: Japanese/English.

AS/JP 3720 6.0 Japanese Culture, Literature and Film. By comparing works by Japanese authors with related films, this course explores basic patterns and themes of Japanese culture.

Prerequisite: None.

Cross-listed to: AS/HUMA 3420 6.0, FA/FILM 3710 6.0.

Language of instruction: English.

AS/JP 4000 6.0 Advanced Reading in Contemporary Japanese. Readings in unannotated original essays and articles on current issues taken from periodicals; interpretation, translation, summarization and discussion of readings enable students to use a wide variety of Japanese materials independently. Recognition of Characters for Daily Use (1,945).

Prerequisite: AS/JP 3000 6.0 or equivalent.

Language of instruction: Japanese.

AS/JP 4100 6.0 Teaching of Japanese as a Foreign/Second Language. This course offers comprehensive teacher education and training for the Japanese language. The main objective is to familiarize teachers with current theories, methodologies, and their practical applications developed in the relevant areas, with strong focus on the communicative approach, and computer assisted language learning and teaching.

Prerequisites: AS/JP 4000 6.0 or equivalent (for non-native speakers of Japanese); TOEFL score: 580 or equivalent (for non-native speakers of English); BA or BA expected within a year (may be waived at the instructor's discretion); teaching experience preferred; AS/LING 3230 3.0 strongly recommended.

Language of instruction: Japanese.

A concentration in Japanese can fulfill the degree requirements for the East Asian Studies Program. Please consult the 'Programs of Study' section, Faculty of Arts.

VIII. Latin

AS/LA 1000 6.0 Elementary Latin. This course is intended for students with no previous training in Latin.

Language of instruction: English.

Note: Further courses in Latin are listed under Classical Studies.

IX. Linguistics

For a list of course offerings, see *Linguistics.*

X. Portuguese

AS/POR 1000 6.0, Elementary Portuguese. This course introduces the Portuguese language within its cultural contexts. The four skills of listening, speaking, reading and writing are emphasized. Students will acquire a functional competence in elementary written and spoken Portuguese. No previous knowledge of Portuguese is assumed.

Degree credit exclusion: AS/POR 1010 6.0.

Language of instruction: Portuguese/English.

AS/POR 1010 6.0 Portuguese for Beginners with Background. This course is intended for students who have some understanding but no formal training in Portuguese. Development of reading, speaking, writing and grammar; oral and written exercises; written compositions; guidance in basic problems of interference from English.

Prerequisite: Some understanding of Portuguese or permission of the Department.

Degree credit exclusion: AS/POR 1000 6.0.

Language of instruction: Portuguese.

AS/POR 1050 6.0 Intermediate Portuguese. This course is intended for students with some oral and written knowledge of Portuguese, who wish to improve their command of the formal language. Development of speaking, listening and reading and writing skills; further study of grammar; vocabulary building; translation into Portuguese.

Prerequisite: AS/POR 1000 6.0 or AS/POR 1010 6.0 or equivalent, or permission of the department.

Language of Instruction: Portuguese.

XI. Russian

Note: In AS/RU 2700 6.0, AS/RU 2750 6.0AS/RU 3720 3.0, AS/RU 3730 3.0, AS/RU 3740 6.0, AS/RU 3770 6.0, AS/RU 3780 3.0, AS/RU 3790 6.0, AS/RU 4740 6.0, AS/RU 4770 6.0 and AS/RU 4760 3.0, students majoring in Russian who are at the 3000-language level or above will be required to do a portion of the reading in Russian, the amount depending on their language level.

AS/RU 1000 6.0 Elementary Russian. Basic elements of Russian for beginners. Students receive training in the four skills of listening comprehension, speaking, reading and writing, by means of dialogues, drills and language laboratory sessions.

Note: Native and near-native speakers are ineligible for this course.

Language of instruction: Russian/English.

AS/RU 2000 6.0 Intermediate Russian. The aim of this course is to develop students' reading skills, oral comprehension and ability to express themselves in Russian both in written and in oral form. Special attention is devoted to a review and further study of grammar, vocabulary building, translation from and into Russian and conversation.

Prerequisite: AS/RU 1000 6.0, or OAC-Russian (or equivalent) with appropriate score on departmental placement test, or permission of the department.

Note: Native and near-native speakers are ineligible for this course.

Language of instruction: Russian/English.

AS/RU 2700 6.0 The Russian Novel in the Nineteenth Century. A survey of Russian literature from its beginnings until 1880 with special emphasis on Pushkin, Lermontov, Gogol, Turgenev, Goncharov, Dostoevsky, and Tolstoy. The relationship of Russian literature to other important European literatures of the nineteenth century is discussed.

Note: No knowledge of Russian required. Russian majors normally begin their literature studies with this course.

Language of instruction: English.

AS/RU 2750 6.0 Russian Culture: Continuity and Conflict (in translation). This course examines Russian culture in an historical and social context focusing on Kievan Rus', the rise of Muscovy, the expansion of the Russian Empire and its revolutionary mutation into the Soviet Union, and the post-Soviet contemporary scene.

Prerequisite: No knowledge of Russian required. (Same as AS/HIST 2310 6.0 and AS/HUMA 2990D 6.0)

Language of instruction: English.

AS/RU 3000 6.0 Advanced Russian, Level I. A systematic review of grammar and an introduction to prose composition and translation. Conversation and discussion will be based on reading materials presenting various aspects of Russian culture.

Prerequisite: AS/RU 2000 6.0 or equivalent.

Note: Native and near-native speakers are ineligible for this course.

Language of instruction: Russian/English.

AS/RU 3720 3.0 Tolstoy. Detailed examination of the major fiction of Tolstoy, with special stress on the novels *War and Peace* and *Anna Karenina.*

Note: No knowledge of Russian required.

Language of instruction: English.

AS/RU 3730 3.0 Dostoevsky. Detailed examination of the major fiction of Dostoevsky, with special stress on the novels Crime and Punishment, The Idiot, The Possessed and The Brothers Karamozov.

Note: No knowledge of Russian required.

Language of instruction: English.

AS/RU 3740 6.0 Chekhov and his Contemporaries: Russian Literature from 1880-1917. A survey of Russian literature of the Silver Age featuring Chekhov (stories and plays), Tolstoy, Gorky, Bunin, and the great Russian symbolists, Sologub and Bely.

Note: No knowledge of Russian required.

Degree credit exclusion: AS/RU 4740 6.0.

Language of instruction: English.

AS/RU 3770 6.0 Russian Literature After 1917. A survey featuring such writers as Gorky, Mayakovsky, Zamiatin, Babel, Olesha, Bulgakov, Ilf and Petrov, Zoshchenko, Evtushenko, Voznesensky, and the Nobel prize winners Sholokhov, Pasternak, and Solzhenitsyn, plus Five-year Plan novels and works of socialist realism.

Note: No knowledge of Russian required.

Degree credit exclusion: AS/RU 4770 6.0.

Language of instruction: English.

AS/RU 3790 6.0 Russian and East Central European Film and Culture. A study of the film masterpieces of the countries of Eastern Europe and the former USSR from silent cinema to the present. The films are examined in their aesthetic and cultural context, thereby introducing students to the culture and society of this area.

Cross-listed to: AS/HUMA 3990H 6.0.

Note: all readings, lectures and written work are in English; English sub-titles on films.

Language of instruction: English.

AS/RU 4000 6.0 Advanced Russian, Level II. Intensive review of the more difficult areas of morphology; further study of syntax; additional training in translation and free composition; an introduction to practical stylistics; and discussions based on assigned readings on a wide range of topics.

Prerequisite: AS/RU 3000 6.0 or equivalent.

Note: Native and near-native speakers are ineligible for this course. This course is reserved for Russian majors.

Language of instruction: Russian/English.

AS/RU 4550 3.0 Russian Prose of the Nineteenth Century. A thematic and stylistic analysis of Russian prose works in the original, including selections from Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov etc.

Prerequisite: (or corequisite with permission of the department) AS/RU 4000 6.0 with a minimum grade of C or equivalent.

Language of instruction: Russian.

AS/RU 4560 3.0 Russian Poetry of the Nineteenth Century. A study of themes and techniques of Russian poetry in the original, including works by Pushkin, Lermontov, Tyutchev, Nekrasov, Fet and others.

Prerequisite: (or corequisite with permission of the Department) AS/RU 3000 6.0 with a minimum grade of C.

Language of instruction: Russian.

AS/RU 4650 3.0 Russian Prose of the Twentieth Century. A thematic and stylistic analysis of Russian prose works in the original, including selections from such authors as Bely, Sologub, Gorky, Andreev, Bunin, Zamyatim, Babel, Olesha, Leonov, Sholokhov, Bulgakov, Pasternak and Solzhenitsyn.

Prerequisite: (or corequisite with permission of the Department) AS/RU 4000 6.0 with a minimum grade of C or equivalent.

Language of instruction: Russian.

AS/RU 4660 3.0 Russian Poetry of the Twentieth Century. A study of themes and techniques of Russian poetry in the original, including works by Blok, Akhmatova, Mandel'shtam, Mayakovsky, Esenin, Tsvetaeva, Pasternak, Brodsky and others.

Prerequisite (or corequisite with permission of the department): AS/RU 4000 6.0 with a minimum grade of C or equivalent.

Language of instruction: Russian.

AS/RU 4740 6.0 Chekhov and his Contemporaries: Russian Literature from 1880-1917. A survey of Russian literature of the Silver Age featuring Chekhov (stories and plays), Tolstoy, Gorky, Bunin, and the great Russian symbolists, Sologub and Bely.

Note: No knowledge of Russian required.

Degree credit exclusion: AS/RU 3740 6.0.

Language of instruction: English.

AS/RU 4760 3.0 Solzhenitsyn. Detailed examination of the writings of one of the twentieth century's great Russian writers, including such works as *First Circle*, *Cancer Ward* and *Gulag Archipelago*.

Note: No knowledge of Russian required.

Language of instruction: English.

AS/RU 4770 6.0 Russian Literature After 1917. A survey featuring such writers as Gorky, Mayakovsky, Zamiatin, Babel, Olesha, Bulgakov, Ilf and Petrov, Zoshchenko, Evtushenko, Voznesensky, and the Nobel prize winners Sholokhov, Pasternak, and Solzhenitsyn, plus Five-year Plan novels and works of socialist realism.

Note: No knowledge of Russian required.

Degree credit exclusion: AS/RU 3770 6.0.

Language of instruction: English.

XII. Spanish

AS/SP 1000 6.0 Elementary Spanish. This is an intensive introductory course to the language and culture of the Hispanic world. Equal attention is paid to the four skills: listening, speaking, reading and writing. In addition, students acquire a command of all the essential grammatical structures of Spanish and a vocabulary of a minimum of 2,500 items. This course is designed for students with no knowledge of Spanish.

Language of instruction: Spanish/English.

AS/SP 1050 6.0 Intermediate Spanish. This course is an extensive review of the fundamentals of Spanish grammar and emphasizes the four skills, listening, speaking, reading and writing through compositions, written exercises, oral presentations and conversations.

Prerequisite: AS/SP 1000 6.0, or OAC-Spanish, or equivalent, or placement through testing.

Language of instruction: Spanish.

AS/SP 2040 6.0 Advanced Spanish Language and Grammar. This course develops the student's command of Spanish grammar through the writing of multiple drafts of essays, the discussion of advanced and subtle aspects of grammar and style, and the analysis of selected readings.

Prerequisite: AS/SP 1050 6.0 with a minimum grade of C, or equivalent.

Language of instruction: Spanish.

AS/SP 2200 6.0 Introduction to Spanish Literature. This course provides a general background in literature from the medieval period to the twentieth century and in literary criticism. It is required for all students who intend to major or minor in Spanish. Students should take this course during their first 10 courses.

Prerequisite: AS/SP 1050 6.0 or equivalent, or AS/SP 1000 6.0 with a minimum grade of A and concurrent enrolment in AS/SP 1050 6.0, or permission of the Department.

Language of instruction: Spanish.

AS/SP 3040 6.0 A Sociocultural Approach to Spanish for Commerce. This course examines the cultural concepts that inform the world of business within Spanish-Speaking Societies. Short stories, journalistic prose and historical and geographic materials are read and communicative skills appropriate for a Spanish-speaking commercial environment are developed.

Prerequisite: AS/SP 2040 6.0 with a minimum grade of "B" or permission of the Department.

Language of instruction: Spanish.

AS/SP 3110 3.0 Spanish Stylistics. This course is designed to teach students of the Spanish language some basic aspects of stylistics and to provide practice in stylistic analysis of both literary and non-literary texts. The language of instruction is Spanish.

Prerequisite: AS/SP 2040 6.0 (preferably with a minimum grade of B) or permission of the Department.

Language of instruction: Spanish.

AS/SP 3120 3.0 English-Spanish and Spanish-English Translation. This course helps students to learn some of the skills necessary for accurate written translation from English to Spanish and vice-versa.

Prerequisite: AS/SP 2040 6.0 (preferably with a minimum grade of B) or permission of the Department.

Language of instruction: Spanish.

AS/SP 3210 6.0 Introduction to Spanish-American Literature. An intensive study of prose and poetry from colonial times to the twentieth century, with some reference to historical and social influences on the development of literature.

Prerequisite: AS/SP 2200 6.0 or permission of the department.

Language of instruction: Spanish.

AS/SP 3360 3.0 Spanish Poetry of the Golden Age. A study of selected poetry from the Renaissance and Baroque periods. Works by Garcilaso, Fray Luis de Leon, Herrera, San Juan de la Cruz, Gongora, Lope de Vega and Quevedo.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 3370 3.0 Spanish Theatre of the Golden Age. The rise and development of the Spanish theatre in the Renaissance and Baroque periods.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 3540 3.0 Nineteenth-Century Spanish Poetry. A study of representative works of the more important Spanish poets from the Romantic period to the end of the nineteenth century.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 3560 3.0 Nineteenth-Century Spanish Theatre. A study of representative works of the most important Spanish playwrights of the Romantic, Post-Romantic and Realistic schools.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 3570 6.0 Nineteenth- and Early Twentieth-Century Spanish Prose. A study of novels and short stories by outstanding Spanish writers including Larra, Valera, Galdos, Blasco Ibanez and Unamuno.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 3580 6.0 The Generation of 1898 and Modern Spain. A study of major Spanish writers and thinkers from the generation of 1898 up to the present and their response to the problems facing the Spanish nation. Among the authors to be studied are Unamuno, Machado, Baraja, Zorin, Lorca, J. Ortega y Gasset, and contemporary women writers.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 3660 6.0 Twentieth-Century Spanish Poetry and Theatre. This course explores the development of poetry and theatre in twentieth century Spain and acquaints students with the literary and aesthetic values of poetic and dramatic works of the period.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 4150 6.0 History of the Spanish Language. The evolution of the Spanish language from Vulgar Latin to the present time. First Spanish texts. Spanish as a Romance language. Arabic and other foreign influences on the formation of Spanish.

Prerequisite: AS/SP 2040 6.0 and AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 4220 6.0 The Spanish-American Essay and Short Story. Close reading of the Spanish-American essay and short story mainly of the twentieth century including among the essayists Rodo, Mariategui, Pedro Henriquez Urena, Vasconcelos, Reyes, and among the cuentistas Dario, Borges, Rulfo, Garcia-Marquez and Carpentier.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 4300 6.0 Medieval Spanish Literature (from 1100 to 1400). An exploration of the origins and development of Medieval Spanish Poetry and Prose with particular emphasis on major works such as Poema de Mio Cid, Los Milagros, and El Libro de Buen Amor.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 4350 6.0 Spanish Prose of the Golden Age. This course covers important aspects of Spain's intellectual life during the Golden Age. While most of the texts to be read are works of literature, some are expository works which reflect religious, philosophical and political ideas of the period.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 4580 3.0 Spanish-American Modernismo. A survey of the poetry of the major Spanish-American modernists Jose Marti, Ruben Dario, Julian del Casal and Manuel Gutierrez Najera. In addition, the course considers the social and literary milieu of the period.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 4640 6.0 The Spanish-American Novel of the Twentieth Century. A close study of the novel in twentieth-century Spanish America, based on works of some of the major novelists.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

AS/SP 4660 6.0 Contemporary Spanish Prose (Since 1939). Detailed examination of the Spanish novel and short story written after the Civil War (1936-1939), including such authors as Cela, Delibes, Matute, Ayala Martin-Gaite.

Prerequisite: AS/SP 2200 6.0 or permission of the Department.

Language of instruction: Spanish.

XIII. Special Topics

AS/XX 1800 6.0, AS/XX 1800 3.0, AS/XX 2800 6.0, AS/XX 2800 3.0, AS/XX 3800 6.0, AS/XX 3800 3.0, AS/XX 4800 6.0, AS/XX 4800 3.0, AS/XX 4810 3.0, AS/XX 4820 3.0 Special Topics in Languages, Literatures and Linguistics. Under this heading the department will, from time to time, offer courses in languages, literatures or linguistics which are not usually taught in the department. These courses may focus on new aspects of, or approaches to, subject matter which is already being taught.

XIV. Individualized Reading Courses

AS/XX 4900 3.0, AS/XX 4900 6.0 Individualized Reading Courses in Languages and Literatures. This course will only be offered under special circumstances and by agreement among a faculty member, the department, and the student.

Note: Please consult the Enrolment and Registration section, Faculty of Arts, for regulations on independent reading courses.

Latin American and Caribbean Studies – Arts

Program Office:
  217 Founders, (416) 736-2100 ext. 66909
Coordinator of the Program:
  E. Canel
Faculty Members:
  W.W. Anderson, D. Barndt, F. Birbalsingh, J. Buttrick, R.E. Chace, R. Cox, H.E. Daugherty, E. Dosman, G.V. Doxey, C. Duran, Z. Ellis, M. Feliciano, W.C. Found, D. Freeman, K. Golby, G. Gold, L. Goldring, M.J. Goodman, R.W. Grant, R. Grinspun, J.A. Hellman, F. Henry, M. Kellman, P. Landstreet, S. Lanfranco, L. Lefeber, J. Lliambias-Wolff, P.E. Lovejoy, M. Magnotta, J.M. Maiguashca, R. Marcus, E. Melville, L.L. North, L. Pena, A. Sekyi-Otu, M. Silverman, A. Simmons, D. Smaller, P.D.M. Taylor, D. Trotman, P. Valle-Garay, D. Yon

The Latin American and Caribbean Studies Program (LACS) allows students interested in the Latin American/Caribbean area to pursue this interest by taking a set of carefully programed courses taught in different Departments and Divisions in the Faculty of Arts. The LACS Program offers introductory core courses in Latin American and Caribbean Studies as well as other introductory and upper-level courses in the area. The purpose of the core courses is to introduce and develop interdisciplinary ways of looking at the regions while at the same time integrating knowledge obtained in other courses. Program courses provide shared intellectual meeting grounds for LACS majors and other students. The interdisciplinary nature of the LACS Program ensures a broader and deeper understanding of the Latin American and Caribbean regions.

The LACS Program works together with Founders College and the Center for Research on Latin America and the Caribbean (CERLAC) to offer students a wide variety of events related to the Latin American and Caribbean regions. These include guest lectures by internationally renowned academics, workshops and conferences, and cultural and social events. Events are announced in classes or in special mailings to majors, and are regularly posted on the LACS bulletin board (besides the LACS Program office). Students are encouraged to participate in these events. LACS majors may also use the Documentation Centre of the Centre for Research on Latin America and the Caribbean (CERLAC, 240 York Lanes).

LACS is housed at Founders College, which is also the home of two other interdisciplinary area studies Programs, African Studies and East Asian Studies. The Development Studies Resource Centre, which LACS co-sponsors with African Studies, Founders College and the Faculty of Arts, is also located at Founders (202C Founders College). We strongly recommend that LACS majors become members of Founders College, so that they can fully participate in the events co-sponsored by the area studies Programs and the College.

LACS majors are also encouraged to join the LACS Students Association (LACSA), which provides students with an opportunity to meet together and set their own agenda. Its office is in 201B Founders College.

Study Abroad Programs: York University has a formal Student Exchange Agreement with the University of the West Indies (UWI) which allows York students to study at UWI and get credit from York. LACS majors may also get academic credit for other courses taken at other universities in the Latin American and Caribbean area. For further information contact York International or the LACS Coordinator.

Note: For specific requirements of this program, please consult the "Programs of Study" section, Faculty of Arts.

Departmental and Divisional Courses in Latin American and Caribbean Studies

Note: For purposes of meeting program requirements, all Foundations courses will count as 6 credits towards the major.

Note: Not all courses listed will be offered in any one academic year. For information about specific offerings and special topics courses on Latin America and the Caribbean, students should consult the supplementary calendars available in the spring.

AS/ECON 3310 3.0 Development Economics I.
AS/ECON 3320 3.0 Development Economics II.
AS/EN 4230D 3.0 Studies in Post-Colonial Literature: Derek Walcott.
AS/FR 2052 3.0 Music & Identity in the French Caribbean.
AS/FR 2053 3.0 Literature and Identity in the French Caribbean.
AS/GEOG 3020 6.0 Geography of the Caribbean.
AS/HIST 2720 6.0 Modern Latin America, 1810 to the present.
AS/HIST 3700 6.0 African, Caribbean and Latin American Connections: The Making of the South Atlantic World.
AS/HIST 3730 6.0 Mexican History from the Aztecs to the Mexican Revolution (1325-1911).
AS/HIST 4755 6.0 Cultural and Social History of Colonial Latin America.
AS/HUMA 2310 9.0 Introduction to Caribbean Studies.
AS/HUMA 4300 6.0 Aspects of Modern Latin American and Caribbean Studies. (Cross-listed to: AS/SOSC 4450 6.0)
AS/POLS 3790 6.0 The Political Economy of Latin America and the Caribbean. (Cross-listed to: AS/SOSC 3410 6.0)
AS/POLS 4225 3.0 Canada and the Americas.
AS/POLS 4540 6.0 Caribbean Politics.
AS/SOSC 2460 6.0 Contemporary Latin America.
AS/SOSC 2470 6.0 Caribbean Society in Transition: Emancipation to Independence.
AS/SOSC 3270 6.0 The Caribbean Experience in Multi-Cultural Canada.
AS/SOSC 3410 6.0 The Political Economy of Latin America and the Caribbean. (Cross-listed to: AS/POLS 3790 6.0)
AS/SOSC 4450 6.0 Aspects of Modern Latin American and Caribbean Studies. (Cross-listed to: AS/HUMA 4300 6.0)
AS/SOCI 3330 6.0 Politics and Society in Latin America.
AS/SOCI 4350 3.0 Sociology of International Migration.
AS/SP 3210 6.0 Introduction to Spanish-American Literature.
AS/SP 4220 6.0 The Spanish American Essay and Short Story.
AS/SP 4580 3.0 Spanish-American Modernismo.
AS/SP 4640 6.0 The Spanish-American Novel of the Twentieth Century.

Note: The following courses provide the opportunity for advanced students to undertake directed reading and/or research projects under the guidance of a member of the Latin American and Caribbean Studies Program. Please consult the 'Enrolment and Registration' section, Faculty of Arts, for regulations on independent reading courses.

AS/HUMA 4050 6.0 Independent Studies.

Prerequisite: Permission of the Humanities division.

AS/SOSC 4090 6.0 Directed Reading.

Prerequisite: Permission of the Social Science division.

Note: The following courses are offered through Atkinson College. Students should consult the Atkinson Calendar for details.

AK/ECON 3550 3.0 The Economics of Developing Countries, Part I.
AK/ECON 3560 3.0 The Economics of Developing Countries, Part II.

AK/POLS 3460 6.0 Latin America and the Caribbean: Development and Underdevelopment.
AK/POLS 3620 6.0 Racism and Colonialism.
AK/SOSC 2430 6.0 Introduction to Comparative Third World Studies.
AK/SOCI 4240 6.0 Health Society and Human Resources.

Other Courses

Courses that are not listed above as part of the LACS Program (i.e. courses in the Faculty of Arts, Faculty of Atkinson College, Faculty of Environmental Studies, Fine Arts etc.) but that have enough Latin American and/or Caribbean content may be counted for credit in the LACS Program subject to approval by the LACS coordinator. Please consult the Atkinson College Calendar for further information about Atkinson College courses, or talk to the LACS coordinator.

Law and Society – Arts

Program Office (Division of Social Science):
 S741 Ross, (416) 736-5054
Associate Professor and Coordinator of the Program:
 Richard Weisman, Sociology/Social Science
 e-mail: rweisman@yorku.ca
Advisors:
 M. Beare, Department of Sociology;
 P. Harries-Jones, Department of Anthropology; J. Landa, Department of Economics; P. Oliver, Department of History;
 L. Jacobs, Department of Philosophy;
 I. Greene, Department of Political Science;
 R. Schuller, Department of Psychology

Law is one of the most significant expressions of a society's social and political development. In recent years social scientists from many disciplines have begun to analyze the interplay between law and society. We live in a period of widespread public interest in law that arises from a concern with problems of social justice, social control, and social deviance. Academic disciplines such as anthropology, economics, history, philosophy, political science, psychology, and sociology have increasingly focused on such issues as the nature and origin of law; law-making and law-breaking; rights and obligations; freedom and responsibility and law as social policy. These are matters of increasing concern to teachers, social workers, businessmen, doctors, and public servants whose professional responsibilities demand a knowledge of the relationship of law to their own fields.

The goals of the program may be stated briefly: to affirm the intellectual importance of the study of law and society and law in society; to provide a framework within which faculty and students may explore, within disciplines and between them, descriptive and analytic approaches to the subject; and to sharpen appreciation of law as part of the active daily life of the student.

The program must be seen within the context of a liberal education. It is not a pre-law school program or a prerequisite for law school

admission. It is designed for interested undergraduate students, whatever their future career orientation.

Note: For a list of degree requirements please consult the "Programs of Study" section, Faculty of Arts.

Departmental and Divisional Courses in Law and Society

Descriptions of the content and format of these courses are contained in the appropriate departmental and divisional listings in this Calendar. Not all courses will necessarily be offered in any given year; details of courses to be offered, as well as complete descriptions and reading lists are available in the Law and Society section of the supplementary calendar for Interdisciplinary Programs available each spring from the Division of Social Science, Faculty of Arts.

AS/ANTH 4200 M 6.0 A Socio-Cultural Perspective on Local-Level Politics.
AS/ECON 3240 3.0 Labour Economics – Theory.
AS/ECON 3250 3.0 Labour Economics – Institutions.
AS/ECON 4309 3.0 Law and Economics.
AS/HIST 2500 6.0 Canadian History.
AS/HIST 3415 6.0 Law, Property and Freedom in Britain and its Empire.
AS/HIST 3591 6.0 Politics, Law and the Constitution in Modern Canada.
AS/LING 2450 3.0 Language and the Law.
AS/PHIL 2050 6.0 Philosophy of Law.
AS/PHIL 2060 3.0 Social and Political Philosophy.
AS/PHIL 2070 3.0 Introduction to Ethics.
AS/PHIL 2075 3.0 Introduction to Applied Ethics.
AS/PHIL 3110 3.0 Political Philosophy.
AS/PHIL 4190 3.0 Topics in the Philosophy of Law.
AS/POLS 2040 6.0 Introduction to Political Theory.
AS/POLS 3075 3.0 Law, Justice and Jurisprudence.
AS/POLS 3165 6.0 Problems in Canadian Business Law. (Cross-listed to: AS/SOSC 3165 6.0)
AS/POLS 3600 3.0 Public Law I.
AS/POLS 3605 3.0 Public Law II.
AS/POLS 4015 3.0 Theories of Justice.
AS/POLS 4440 3.0 Human Rights in Europe.
AS/POLS 4445 3.0 European Union.
AS/POLS 4600 3.0 Judicial Administration in Canada.
AS/PSYC 2120 3.0 Social Psychology.
AS/PSYC 3140 3.0 Abnormal Psychology.
AS/SOSC 1210 9.0 Human Rights and Canadian Minorities.
AS/SOSC 1350 9.0 Women and the Law.
AS/SOSC 2330 9.0 The Economics of Law, Policy and Organizations.

AS/SOSC 2350 6.0 Law and Society. This course examines the interrelationship between law and the social sciences with emphasis on types of legal thought, the function of law in society, legal systems, and a variety of specific issues involving Canadian society and law,

such as the legal profession, the criminal process, civil and political rights, and family law.

Note: This course is required of students registered in the Law and Society Program, but also is open to others.

AS/SOSC 3030 6.0 Crime and Punishment in Western Societies.
AS/SOSC 3165 6.0 Problems in Canadian Business Law. (Cross-listed to: AS/POLS 3165 6.0)
AS/SOSC 3360 6.0 The Charter of Rights and Freedoms.
AS/SOSC 3370 6.0 Social Justice and Law.
AS/SOSC 3380 6.0 Law, Labour and the State.
AS/SOSC 3381 6.0 Criminal Justice System.
AS/SOSC 3390 6.0 Special Topics in Law and Society.
AS/SOSC 3990B 6.0 Popular Trials.
AS/SOSC 3990C 3.0 Strategies of Social Science Research.

AS/SOSC 4350 6.0 Law and Society Seminar. This course, limited to and required of Law and Society students, examines theories and practice relating to the interaction of law and society, depending on student and faculty interest in one or other specific topics.

AS/SOCI 2070 6.0 Social Order and Social Organization.
AS/SOCI 3430 6.0 Ethnicity, Power and Identity.
AS/SOCI 3810 6.0 Sociology of Crime and Delinquency.
AS/SOCI 4440 6.0 Race, Minorities and the Legal Order.
AS/SOCI 4810 6.0 Women and the Criminal Justice System.
AS/SOCI 4840 6.0 Sociology of Policing.
AS/SOCI 4850 3.0 Organized Crime.

Atkinson College

AK/POLS 3209G 6.0 Law & Society: Legal Institutions & Social Justice.
AK/PSYC 3210 3.0 Social Psychology.
AK/PSYC 3215 3.0 Abnormal Psychology.

Note: Other courses may be added to this list of recognized and approved courses from time to time. For the current full list, see the supplementary calendar for Interdisciplinary Programs available through the Division of Social Science office.

Seneca College of Applied Arts and Technology offers a one year diploma program in Court and Tribunal Administration for York graduates who have completed the Honours (Double Major) Interdisciplinary BA Program in Law and Society and one of the affiliated departments. For information about the Seneca College Program, contact the Director, Court and Tribunal Administration Program, Seneca College, 1750 Finch Avenue East, Toronto, M2J 2X5, (416) 491-5050, ext. 2816.

Students applying for admission to York University on the basis of their Seneca College diploma in Court and Tribunal Administration would be expected to satisfy the usual admission requirements as specified in the University Undergraduate Calendar for the session to which they are applying.

General Certificate in Law and Society

The Law and Society Program offers a certificate to students who take SOSC 2350 6.0 and an additional 18 credits from the list of approved courses. Six of these credits must be at the 4000-level. Students who apply for a Certificate will be asked to indicate whether they are eligible for the Certificate on the application form they fill out (Application to Graduate form) prior to their graduation. For further information, please contact the secretary or coordinator of the Law and Society Program.

Linguistics – Arts

Department Office:
  S561 Ross, (416) 736-5016
Program Coordinator:
  P. Avery

Linguistics is concerned with discovering the principles in terms of which natural languages are organized and applying these principles to the description of individual languages. Using systematic descriptions of language and language usage, linguists also investigate how language interacts with our intellectual life.

Because language mediates virtually all forms of human endeavour, the study of linguistics can provide new perspectives on almost every aspect of the humanities and social sciences. In addition, it has applications to primary and secondary education, speech-language pathology and the applied sciences of communication engineering and computer science.

Note: For degree requirements, please consult the "Programs of Study" section, Faculty of Arts.

Courses in Linguistics

Note: Not all courses will necessarily be offered in any given year; consult the department's supplementary calendar for details of courses to be offered.

AS/LING 1000 6.0 Introduction to Linguistics. An examination of fundamental principles of language organization including the study of phonetics, phonology, morphology and syntax from both practical and theoretical points of view with illustrations from English and a variety of other languages. Brief survey of the areas of sociolinguistics, child language acquisition, historical linguistics and psycholinguistics.

AS/LING 2060 6.0 The Grammatical Structure of English. An investigation of the grammatical structure of modern English, including phonology, morphology, syntax and semantics, within a linguistic framework.

Cross-listed to: AS/EN 2060 6.0.

AS/LING 2110 3.0 Articulatory Phonetics. An investigation of speech sounds in terms of anatomy and physiology. Practice in discrimination and production of speech sounds.

Prerequisite: AS/LING 1000 6.0 or permission of the Department.

AS/LING 2120 3.0 Fundamentals of Phonological Analysis. Practical techniques of phonological analysis exemplified by data taken from a variety of languages. Practice in the use of distinctive features and rule formalisms.

Prerequisite: AS/LING 1000 6.0 or equivalent, with a grade of C.

AS/LING 2140 3.0 Fundamentals of Grammatical Analysis. Practical techniques of grammatical analysis exemplified by data taken from a variety of languages.

Prerequisite: AS/LING 1000 6.0 or equivalent, with a grade of C.

AS/LING 2400 3.0 Language in its Social Context. An introduction to the study of language as a social phenomenon. Topics covered include language varieties; stereotypes and social identity; language, culture and thought; communicative competence; bilingualism and diglossia; languages in contact; language and social deprivation; and language planning and language policy.

Prerequisite: None.

AS/LING 2410 3.0 Language and Gender. This course explores the relationship between language and sex/gender systems from a feminist perspective. The main areas dealt with are language and sex stereotypes; language, power and women's status; and male vs female communicative style in different sociocultural contexts.

Prerequisite: None.

Cross-listed to: AS/AK/GL/WMST 2501 3.0, GL/SOSC 2900E 3.0.

AS/LING 2430 3.0 Language, Power and Persuasion. This course investigates the language of power and persuasion. The language used by powerful and powerless groups is analyzed to determine how it reinforces positions of dominance and subordination. The role of language in public persuasion is also considered.

Prerequisite: None.

AS/LING 2440 3.0 Languages and Societies. The study of the distribution, spread and interaction of language varieties; language and cultural conflict; and language and cultural change. The course surveys past and present language situations in major culture-areas, such as Europe, East Asia, the Arab world and South Asia.

Prerequisite: AS/LING 2400 3.0 or permission of the Department.

AS/LING 2450 3.0 Language and the Law. This course explores ways in which the discipline of linguistics can shed light on the use of language in the legal system. Topics include the special characteristics of written legal language, spoken language in the courtroom, and linguists as expert witnesses.

AS/LING 3040 3.0 Historical Linguistics. An introduction to the study of the development of language systems through time, including the principles of genetic classification of languages, comparative grammar and internal reconstruction.

Prerequisite: AS/LING 2120 3.0 with a grade of C+ or better, or permission of the Department.

AS/LING 3050 3.0/3050 6.0 Special Topics in Linguistics. A half-year course or full-year seminar on particular topics not ordinarily available. Requests for such offerings and information about courses or seminars available in a given year should be addressed to the departmental office.

AS/LING 3060 3.0 Linguistic History of English. A study of the principal changes in the English language from Anglo-Saxon times to the present day.

Prerequisite: AS/LING 2120 3.0 and AS/LING 2140 3.0 with a grade of C or better, or permission of the Department.

Degree credit exclusion: AS/LING 4060 3.0.

AS/LING 3110 3.0 Topics in Phonetics. This course continues and complements the work of AS/LING 2110 3.0 Articulatory Phonetics. It includes further study of speech physiology, further practice in sound production and recognition, especially of 'exotic' sounds and lexical tone; examination of one or more complete phonetic systems; and work in linguistic phonetics.

Prerequisite: Completion of AS/LING 2110 3.0 Articulatory Phonetics, with a grade of at least C+, or equivalent work in phonetics satisfactory to the Department.

AS/LING 3120 3.0 Phonology. Theoretical principles and practical techniques of phonological analysis exemplified by data taken from a variety of languages.

Prerequisite: AS/LING 2110 3.0 and AS/LING 2120 3.0 or equivalent.

AS/LING 3140 3.0 Syntax. This course provides a basic introduction to generative syntax, in particular to the recent work of Noam Chomsky and his followers. Although most of the data analyzed will be English, syntactic patterns of some other languages will be discussed.

Prerequisite: AS/LING 2140 3.0 or equivalent.

AS/LING 3150 3.0 Semantics. This course provides an introduction to sentence-level semantics. Some topics in word-level semantics are also considered. Issues are examined primarily from the perspective of a version of Truth-Conditional Semantics.

Prerequisite: AS/LING 2140 3.0 or permission of the Department.

Degree credit exclusion: AS/LING 4800C 3.0.

AS/LING 3160 3.0 Discourse Analysis. This course provides an analysis of spoken and written texts in context. Specific topics include spoken vs. written discourse; the role of context in the interpretation of utterances; cohesion and coherence; and the relationship between information structuring and grammatical forms.

Prerequisite: AS/LING 1000 6.0 or AS/LING 2060 6.0.

AS/LING 3210 3.0 First Language Acquisition. This course surveys first language acquisition from a variety of approaches, including social interactionist, innatist, and information processing.

Prerequisite: AS/LING 1000 6.0 or AS/LING 3220 3.0 (cross-listed to AS/PSYC 3290 3.0).

AS/LING 3220 3.0 Psycholinguistics. A survey of psycholinguistic research and theory; topics include language acquisition, psychological correlates of transformational grammars, information-processing approaches to language.

Prerequisite: AS/LING 1000 6.0 or AS/PSYC 1010 6.0.

Cross-listed to: AS/PSYC 3290 3.0.

Degree credit exclusion: AK/PSYC 3250 3.0.

AS/LING 3240 3.0 Second Language Acquisition. This course deals with the main issues of second language acquisition. Topics treated include similarities and differences between first and second language acquisition, bilingualism, and various theories such as interlanguage, the contrastive analysis hypothesis, and the monitor model.

Prerequisite: AS/LING 1000 6.0 or AS/LING 3220 3.0.

Degree credit exclusion: AS/LING 3230 3.0.

AS/LING 3410 3.0 Writing Systems. This course deals with the interaction of spoken language and writing structure; functioning and cultural spread of writing systems; historical relationships; and orthographic change, reform and design. Systems studied include Roman, Greek, Cyrillic, Arabic, and Hebrew alphabets, and systems of the Indian sub-continent, Korea, China and Japan.

Prerequisite: AS/LING 1000 6.0, or AS/LING 2060 6.0 or permission of the Department.

AS/LING 3600 3.0 Socio-Political Issues in Second Language Teaching. Teaching English to speakers of other languages (TESOL) takes place within a complex socio-political context. Selected issues are used to consider how this context influences the teaching/learning process.

Prerequisite: None

Note: This course does not count towards Linguistics major credit.

AS/LING 4050 3.0 Topics in Historical Linguistics. This course includes further study of the comparative method and internal reconstruction, the role of typology, and the weighing of different types of evidence, using these as a springboard to consideration of topics of current interest to practising historical linguists.

Prerequisite: AS/LING 3040 3.0 with a minimum grade of C+, or permission of the Department.

AS/LING 4070 3.0 A History of the Romance Language Family. A study of the evolution of the various members of the Romance family from Latin to the present day, with emphasis on French, Spanish and Italian.

Prerequisite: Completion of AS/LING 3040 3.0 with a grade of C+ or better, or permission of the Department.

AS/LING 4120 3.0 Phonological Theories. This course concentrates on recent developments in phonological theory within a generative framework. Specific topics include the representation of segments, autosegmental phonology, syllable structure, metrical phonology and lexical phonology.

Prerequisite: AS/LING 3120 3.0 with a grade of C+ or better, or permission of the Department.

AS/LING 4140 3.0 Grammatical Theories. This course examines the metatheoretical issues and assumptions underlying the development of different linguistic theories. The foundations and formal framework of Government-Binding Theory, the most recent version of Chomsky's Extended Standard Theory, will be introduced and later compared with a competing linguistic theory.

Prerequisite: AS/LING 3140 3.0 with a grade of C+ or better, or permission of the Department.

AS/LING 4210 3.0 Theoretical Issues in First Language Acquisition. This course treats the acquisition of linguistic structures as seen from the perspectives of principles and parameters theory, the competition model, and current theories of phonological development.

Prerequisite: AS/LING 3120 3.0, AS/LING 3140 3.0 and AS/LING 3210 3.0 with grades of C+ or better, or permission of the Department.

AS/LING 4220 3.0 Acoustic Phonetics. An investigation of acoustic-phonetic aspects of speech and their relation to speech perception and recognition. Practical experience in techniques of acoustic-phonetic research.

Prerequisite: AS/LING 2110 3.0 and AS/LING 2120 3.0 with grades of C+ or better, or permission of the Department.

AS/LING 4230 3.0 Language Disorders. This course surveys a variety of language disorders, among them aphasia, delayed language development, dyslexia and language dissolution in old age. Specific disorders are discussed within a psycholinguistic framework. There will be some discussion of basic strategies for therapy.

Prerequisites: Completion of AS/LING 3120 3.0, AS/LING 3140 3.0 and AS/LING 3220 3.0(Cross-listed to: AS/PSYC 3290 3.0) with grades of C+ or better, or permission of the Department.

AS/LING 4240 3.0 Theoretical Issues in Second Language Acquisition. An examination of the relationship between linguistic theory and second language acquisition including the nature of second language learners' linguistic representations from both linguistic and neurolinguistic

perspectives, the role of Universal Grammar, and elicitation and interpretation of second language data.

Prerequisite: Completion of AS/LING 3240 3.0 (formerly AS/LING 3230 3.0) with a grade of B+ and AS/LING 3120 3.0 and AS/LING 3140 3.0 with grades of B, or permission of the Department.

AS/LING 4320 6.0 Field Methods. This course provides students with the skills and techniques necessary to conduct independent linguistic field work.

Prerequisites: Completion of AS/LING 2110 3.0, AS/LING 3120 3.0 and AS/LING 3140 3.0 with grades of C+ or better, or permission of the Department.

AS/LING 4400 3.0 Sociolinguistic Variation and Change. This course examines language variation and change. Sociolinguistic variation is not random, but systematically reflects both social organization and features of the sociolinguistic context. Students will gain experience in all stages of sociolinguistic research and do an original research paper.

Prerequisites: AS/LING 2120 3.0, AS/LING 2140 3.0 and AS/LING 2400 3.0 with grades of C+ or better, or permission of the Department.

Degree credit exclusion: AS/LING 3400 3.0.

AS/LING 4440 3.0 Topics in Grammatical Change. This course deals with morphosyntactic change from a broadly generative perspective. It focuses on large-scale changes, changes resulting in dialectal variation, and changes in progress. Both language-internal and language-external mechanisms by which change takes place are considered.

Prerequisites: AS/LING 2140 3.0 and AS/LING 3140 3.0, both with grades of C+ or better. AS/LING 2400 3.0 and AS/LING 3040 3.0 are recommended.

Degree credit exclusion: AS/LING 4800B 3.0.

AS/LING 4900 3.0/4900 6.0 Independent Study. Students may arrange to undertake independent study with a member of the Linguistics Program. This allows students and instructors to work on topics of mutual interest which lie outside the usual course offerings. Contact the undergraduate coordinator for details.

Note: Please consult the 'Enrolment and Registration' section, Faculty of Arts, for regulations on independent reading courses.

Mathematics and Statistics – Arts, Pure and Applied Science

Department Office:
  N520 Ross, (416) 736-5250
Professor and Chair of the Department:
  T. Salisbury
Professors:
  M. Abramson, R.G. Burns, S. Guiasu, C. Hruska, I. Kleiner, S. Kochman, J. Laframboise, N.N. Madras, K.R. Maltman, H. Massam, M.E. Muldoon, G.L. O'Brien, P. Olin, J. Wick Pelletier, S.D. Promislow, P. Rogers, A.D. Stauffer, J. Steprans, P.A. Taylor, W. Tholen, S. Watson, A. Weiss, W.J. Whiteley, M.W. Wong, J. Wu
Professors Emeriti:
  D.A.S. Fraser, L. Lorch, R.P. McEachran, D.C. Russell, A. Shenitzer, D. Solitar
Associate Professors:
  N. Bergeron, J.-C. Bouhénic, J.M.N. Brown, R.L.W. Brown, K. Bugajska, S.R. Chamberlin, C. Czado, G.E. Denzel, R.A. Ganong, L.S. Hou, A. Kushniruk, S. MacKenzie, G.A. Monette, D.H. Pelletier, P.H. Peskun, A. Pietrowski, N. Purzitsky, A.M.K. Szeto, D. Tanny, E.J.J. van Rensburg, A. Wong, Y. Wu
Associate Professors Emeriti:
  D.W.T. Bean, J.H. Grant, S.W. Lee, T. MacHenry, R.A. Schaufele
Assistant Professors:
  M.D. Asgharian, Y. Gao, H. Huang, E. Lartey, D. Liang, D.M. Salopek, P. Song
NSERC Women's Faculty Awardee:
  F. Vinette

The Department of Mathematics and Statistics offers a wide range of courses in both pure and applied mathematics and statistics. These meet the needs of students who wish to major in mathematics or statistics as well as those who require some knowledge of mathematics or statistics in other disciplines. In addition, there are courses for those who have a general interest in these subjects.

Actuarial Profession. Students interested in the actuarial profession should consult the Department of Mathematics and Statistics for guidance. The department will be glad to suggest a program of courses which will be helpful in preparing for examinations of the Society of Actuaries.

Operations Research. The Canadian Operational Research Society (CORS) has recognized that graduation from a program in Applied Mathematics, Mathematics, or Statistics with a prescribed set of courses will qualify a student for the Diploma in Operations Research awarded by CORS. Interested students should consult the Department of Mathematics and Statistics for guidance.

For specific requirements of programs offered by this department, see the Faculty of Arts "Programs of Study" section of this Calendar for BA and BA (Hons.) programs and Science section V for BSc and BSc (Hons.) programs.

Courses in Mathematics and Statistics

When selecting courses, please note the following:

1. A student taking lower-level mathematics courses may wish to make use of the services provided by the department's Mathematics Laboratory.

2. AS/SC/MATH 1510 6.0 is intended for students who, despite having one or more OACs in mathematics (or equivalents), have a weak mathematical background. AS/MATH 1520 6.0 is designed for students who do not have credit in any OACs in mathematics. Both AS/SC/MATH 1510 6.0 and AS/MATH 1520 6.0 can serve as preparation for AS/SC/MATH 1515 3.0 and from there entrance to further calculus courses.

3. Note on calculus courses for first-year students.

a) BBA (Hons.) students who wish to take only a minimum amount of mathematics should take both AS/MATH 1530 3.0 and AS/MATH 1540 3.0, or AS/AK/MATH 1550 6.0. The prerequisite for these courses is AS/SC/MATH 1515 3.0 or OAC Calculus or equivalent.

b) Science students (particularly those majoring in Biology, Geography, Kinesiology and Health Science, or Psychology) who do not require other specific calculus courses to satisfy degree requirements or as prerequisites for higher-level courses, may take SC/MATH 1505 6.0 to satisfy the Faculty of Pure and Applied Science 1000-level mathematics requirement.

Other students should be guided by paragraphs (c) and (d) below.

c) A student with at least one OAC in mathematics or equivalent, but without previous calculus, must begin the study of calculus with AS/SC/MATH 1515 3.0.

d) A student with OAC Calculus or equivalent can begin with AS/SC/MATH 1000 3.0 or AS/SC/MATH 1013 3.0 or AS/SC/AK/MATH 1300 3.0 and then take AS/SC/MATH 1010 3.0 or AS/SC/MATH 1014 3.0 or AS/SC/AK/MATH 1310 3.0.

4. Course numbering. Courses with second digit 5 cannot be used to satisfy departmental degree requirements except (i) by students in the Bachelor Program in Mathematics for Commerce; and (ii) by students in other programs in a few cases as noted in program descriptions.

With the exception of AS/MATH 1530 3.0, MATH courses with third digit 3 involve statistics.

Unless otherwise specified, courses whose numbers end in "6.0" (i.e. 6-credit courses) have three lecture hours per week for two terms, while those whose numbers end in "3.0" (i.e. 3-credit courses) have three lecture hours per week for one term. In addition, problem sessions or tutorials are scheduled for many courses.

5. Arts students should note that some **Atkinson College courses** are out-of-Faculty and there are restrictions on the number of out-of-Faculty courses that may be taken. Science students should note that some Atkinson College courses are out-of-department - see the restrictions in note 2. under "Mathematics and Statistics" in Science section V.

Atkinson College MATH courses which are cross-listed with MATH courses offered by the Faculties of Arts and Pure and Applied Science are identified in the course outlines below. For a list of other Atkinson College courses which are equivalent to and/or degree credit exclusions for MATH courses in this Calendar, Arts students should consult the Lecture Schedules. Science students should consult the "Atkinson Equivalence/Exclusion Table for Science Students" available in the Office of Science Academic Services beginning in March each year.

AS/SC/MATH 1000 3.0 Differential Calculus (Honours Version). Axioms for real numbers, limits, continuity and differentiability. This course covers slightly fewer topics than AS/SC/AK/MATH 1300 3.0, but covers them in greater depth. It should be taken by all those planning an Honours degree in Mathematics or a Specialized Honours degree in Statistics.

Prerequisite: AS/SC/MATH 1515 3.0 or OAC Calculus or equivalent.

Degree credit exclusions: AS/SC/MATH 1013 3.0, AS/SC/AK/MATH 1300 3.0, AS/SC/MATH 1505 6.0, AS/MATH 1530 3.0, AS/AK/MATH 1550 6.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0, AS/ECON 1530 3.0.

AS/SC/MATH 1010 3.0 Integral Calculus (Honours Version). Riemann integral, fundamental theorems of calculus, transcendental functions, integration techniques, sequences, series. This course covers fewer topics than AS/SC/AK/MATH 1310 3.0, but covers them in greater depth. It should be taken by all those planning an Honours degree in Mathematics or a Specialized Honours degree in Statistics.

Prerequisite: AS/SC/MATH 1000 3.0 or permission of the department.

Degree credit exclusions: AS/SC/MATH 1014 3.0, AS/SC/AK/MATH 1310 3.0, AS/SC/MATH 1505 6.0, AS/SC/AK/MATH 3110 3.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0.

AS/SC/MATH 1013 3.0 Applied Calculus I. The first half of this course deals with differentiation and the second half with integration. Topics include derivatives of algebraic and transcendental functions, indefinite integrals, techniques of integration, the definite integral and its interpretation as an area.

Prerequisite: AS/SC/MATH 1515 3.0 or OAC Calculus.

Degree credit exclusions: AS/SC/MATH 1000 3.0, AS/SC/AK/MATH 1300 3.0, AS/SC/MATH 1505 6.0, AS/MATH 1530 3.0, AS/AK/MATH 1550 6.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0, AS/ECON 1530 3.0.

AS/SC/MATH 1014 3.0 Applied Calculus II. Applications of differential and integral calculus (e.g. maxima and minima, areas, volumes of revolution, moments and centroids etc.), indeterminate forms, improper integrals, Taylor series, simple ordinary differential equations and an introduction to multivariate calculus.

Prerequisite(s): One of AS/SC/MATH 1000 3.0, AS/SC/MATH 1013 3.0, AS/SC/AK/MATH 1300 3.0, or, for non-Science students only, one of AS/MATH 1530 3.0 and AS/MATH 1540 3.0, AS/AK/MATH 1550 6.0, AS/ECON 1530 3.0 and AS/ECON 1540 3.0.

Degree credit exclusions: AS/SC/MATH 1010 3.0, AS/SC/AK/MATH 1310 3.0, AS/SC/MATH 1505 6.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0.

AS/SC/MATH 1016 1.0 Applied Mathematics Module I. Designed for students in Applied Mathematics to complement and enrich the material in AS/SC/MATH 1013 3.0. The module treats the theory in greater depth, and explores extended applications and modelling. One lecture hour per week. One term. One credit.

Prerequisite: OAC Calculus or AS/SC/MATH 1515 3.0.

Prerequisite or corequisite: AS/SC/MATH 1013 3.0.

Note: AS/SC/MATH 1016 1.0 must be taken within the first 60 credits of a student's program.

AS/SC/MATH 1017 1.0 Applied Mathematics Module II. Designed for students in Applied Mathematics to complement and enrich the material in AS/SC/MATH 1014 3.0. The module treats the theory in greater depth, and explores extended applications and modelling. One lecture hour per week. One term. One credit.

Prerequisites: AS/SC/MATH 1013 3.0; AS/SC/MATH 1016 1.0.

Prerequisite or corequisite: AS/SC/MATH 1014 3.0.

Note: AS/SC/MATH 1017 1.0 must be taken within the first 60 credits of a student's program.

AS/SC/MATH 1025 3.0 Applied Linear Algebra. Topics include spherical and cylindrical coordinates in Euclidean 3-space, general matrix algebra, determinants, vector space concepts for Euclidean n-space (e.g. linear dependence and independence, basis, dimension, linear transformations etc.), an introduction to eigenvalues and eigenvectors.

Prerequisite: OAC Algebra and Geometry.

Degree credit exclusions: AS/SC/MATH 2000 6.0, AS/SC/MATH 2021 3.0, AS/SC/AK/MATH 2221 3.0, SC/ACMS 1020 6.0, SC/ACMS 1050 6.0.

AS/SC/AK/MATH 1090 3.0 Introduction to Logic for Computer Science. The syntax and semantics of propositional and predicate logic. Applications to program specification and verification. Optional topics include set theory and induction using the formal logical language of the first part of the course.

Prerequisite: One OAC in mathematics or equivalent, or AK/MATH 1710 6.0.

Degree credit exclusion: This course may not be taken for degree credit by any student who has passed AS/SC/AK/MATH 4290 3.0.

AS/SC/AK/MATH 1131 3.0 Introduction to Statistics I. Displaying and describing distributions; relations in categorical data; Simpson's paradox and the need for design; experimental design and sampling design; randomization; probability laws and models; central limit theorem; statistical inference including confidence intervals and tests of significance; matched pairs; simulation.

Prerequisite: At least one OAC in mathematics is recommended.

Degree credit exclusions: AS/SC/AK/MATH 2560 3.0, SC/BIOL 2060 3.0, SC/BIOL 3080 3.0, SC/BIOL 3090 3.0, AS/ECON 2500 3.0, AS/SC/GEOG 2420 3.0, AS/SC/KINE 2050 3.0, AS/SC/PHED 2050 3.0, AS/POLS 3300

6.0, AS/SC/PSYC 2020 6.0, AS/SC/PSYC 2021 3.0, AS/SOCI 3030 6.0. Not open to any student who has successfully completed AS/SC/MATH 2030 6.0.

AS/SC/AK/MATH 1190 3.0 Introduction to Sets and Logic. Sets, functions, relations, induction, proof techniques, logic and logic circuits, basic combinatorics and some basic graph theory.

Prerequisite: One OAC in mathematics or equivalent, or AK/MATH 1710 6.0.

Degree credit exclusions: This course may not be taken for degree credit by any student who has passed AS/SC/AK/MATH 1090 3.0 or AS/SC/MATH 1120 3.0 or any 3000- or higher-level MATH course.

Note: Students who plan to major or minor in Computer Science must take AS/SC/AK/MATH 1090 3.0 instead of this course.

AS/SC/AK/MATH 1300 3.0 Differential Calculus with Applications. Limits, derivatives with applications, antiderivatives, fundamental theorem of calculus, beginnings of integral calculus.

Prerequisite: AS/SC/MATH 1515 3.0 or AK/MATH 1710 6.0 or OAC Calculus or equivalent.

Degree credit exclusions: AS/SC/MATH 1000 3.0, AS/SC/MATH 1013 3.0, AS/SC/MATH 1505 6.0, AS/MATH 1530 3.0, AS/AK/MATH 1550 6.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0, AS/ECON 1530 3.0.

AS/SC/AK/MATH 1310 3.0 Integral Calculus with Applications. Transcendental functions, differential equations, techniques of integration, improper integrals, infinite series.

Prerequisite(s): One of AS/SC/MATH 1000 3.0, AS/SC/MATH 1013 3.0, AS/SC/AK/MATH 1300 3.0, or, for non-Science students only, one of AS/MATH 1530 3.0 and AS/MATH 1540 3.0, AS/AK/MATH 1550 6.0, AS/ECON 1530 3.0 and AS/ECON 1540 3.0.

Degree credit exclusions: AS/SC/MATH 1010 3.0, AS/SC/MATH 1014 3.0, AS/SC/MATH 1505 6.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0.

AS/SC/MATH 1505 6.0 Mathematics for the Life and Social Sciences. A presentation of the elements of single-variable differential and integral calculus, elementary linear algebra and introductory probability and statistics. This course is designed to provide a comprehensive mathematical background for students of the biological and social sciences. Emphasis is placed on basic mathematical skills and their applications.

Prerequisite: At least one OAC in mathematics or AS/SC/MATH 1510 6.0.

Degree credit exclusions: AS/SC/MATH 1000 3.0, AS/SC/MATH 1010 3.0, AS/SC/MATH 1013 3.0, AS/SC/MATH 1014 3.0, AS/SC/AK/MATH 1300 3.0, AS/SC/AK/MATH 1310 3.0, AS/MATH 1530 3.0, AS/MATH 1540 3.0, AS/AK/MATH 1550 6.0, SC/ACMS 1020 6.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0, AS/ECON 1530 3.0, AS/ECON 1540 3.0.

AS/SC/MATH 1510 6.0 Fundamentals of Mathematics. Designed for the student whose mathematical background is weak and who wishes to take further courses in mathematics. Topics include algebraic equations and inequalities; simple sequences and series; analytic geometry; trigonometry; functions, including algebraic, exponential, logarithmic and trigonometric functions.

Degree credit exclusions: AS/MATH 1520 6.0, SC/ACMS 1530 6.0. May not be taken by any student who has taken or is currently taking another university course in mathematics or statistics except for AS/SC/MATH 1500 3.0 or AS/SC/MATH 1515 3.0 or AS/SC/MATH 1525 3.0.

AS/SC/MATH 1515 3.0 Introduction to Calculus. Elements of differential calculus, antiderivatives and integrals, with applications. Designed for students who have not taken (or have performed inadequately in) OAC Calculus.

Prerequisite: One OAC in mathematics or AS/SC/MATH 1510 6.0 or AS/MATH 1520 6.0 or equivalent, or permission of the department. This course may be taken at the same time as the second half of AS/SC/MATH 1510 6.0 or AS/MATH 1520 6.0.

Degree credit exclusions: AS/SC/MATH 1500 3.0. May not be taken by any student who has taken or is currently taking another university course in calculus.

AS/MATH 1520 6.0 Fundamentals of Mathematics. Designed for the student whose mathematical background is weak and who wishes to gain some familiarity with mathematical techniques. Topics include algebraic equations and inequalities, simple sequences and series, analytic geometry, sets and functions, the binomial theorem. This course is given on a modularized, self-paced basis through the department's Mathematics Laboratory.

Degree credit exclusions: AS/SC/MATH 1510 6.0, SC/ACMS 1530 6.0. May not be taken by any student who has taken or is currently taking another university course in mathematics or statistics except for AS/SC/MATH 1500 3.0 or AS/SC/MATH 1515 3.0 or AS/SC/MATH 1525 3.0.

AS/MATH 1530 3.0 Introductory Mathematics for Economists I. This course introduces and develops topics in differential calculus, integral calculus, and their applications in economics. This course or equivalent is required for all Economics majors or minors; it also satisfies the mathematics requirement for the Schulich School of Business. It is suitable for the Bachelor Program in Mathematics for Commerce, but should not be taken by those who intend to major in any other Mathematics or Statistics program or in Computer Science. (Same as AS/ECON 1530 3.0.)

Prerequisite: AS/SC/MATH 1515 3.0 or OAC Calculus or equivalent.

Prerequisite or corequisite: AS/ECON 1000 3.0 or AS/ECON 1010 3.0.

Degree credit exclusions: AS/SC/MATH 1000 3.0, AS/SC/MATH 1013 3.0, AS/SC/AK/MATH 1300 3.0, AS/SC/MATH 1505 6.0, AS/AK/MATH 1550 6.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0, AS/ECON 1530 3.0.

AS/MATH 1540 3.0 Introductory Mathematics for Economists II. This course introduces and develops topics, including matrix algebra, optimization, comparative statics of general function models, and their applications in economics. This course or equivalent is required for all Economics majors or minors; it also satisfies the mathematics requirement for the Schulich School of Business. (Same as AS/ECON 1540 3.0.)

Prerequisite: One of AS/MATH 1530 3.0, AS/SC/MATH 1000 3.0, AS/SC/MATH 1013 3.0, AS/SC/AK/MATH 1300 3.0, AS/ECON 1530 3.0.

Prerequisite or corequisite: AS/ECON 1000 3.0 or AS/ECON 1010 3.0.

Degree credit exclusions: AS/SC/MATH 1505 6.0, AS/AK/MATH 1550 6.0, SC/ACMS 1020 6.0, SC/ACMS 1050 6.0, AS/ECON 1540 3.0. May not be taken by any student who has taken or is taking AS/SC/MATH 1025 3.0 or AS/SC/MATH 2000 6.0 or AS/SC/MATH 2021 3.0 or AS/SC/AK/MATH 2221 3.0 or equivalent.

AS/AK/MATH 1550 6.0 Mathematics with Management Applications. This course is designed to provide a mathematical background for students in the BBA (Hons.) Program. It is also suitable for the Bachelor Program in Mathematics for Commerce, but should not be taken by those who intend to major in any other program in Mathematics or Statistics or in Computer Science. It includes calculus, matrix algebra and elements of optimization with applications to management.

Prerequisite: AS/SC/MATH 1515 3.0 (may also be taken as a first-term corequisite) or OAC Calculus or equivalent.

Degree credit exclusions: AS/SC/MATH 1000 3.0, AS/SC/MATH 1013 3.0, AS/SC/AK/MATH 1300 3.0, AS/SC/MATH 1505 6.0, AS/MATH 1530 3.0, AS/MATH 1540 3.0, SC/ACMS 1030 6.0, SC/ACMS 1050 6.0, AS/ECON 1530 3.0, AS/ECON 1540 3.0. This course may not be taken by any student who has taken or is taking AS/SC/MATH 1025 3.0 or AS/SC/MATH 2000 6.0 or AS/SC/MATH 2021 3.0 or AS/SC/AK/MATH 2221 3.0 or equivalent.

AS/SC/MATH 1580 3.0 The Nature of Mathematics I. Designed to create a positive attitude towards mathematics through an examination of topics relevant to the study of mathematics at the elementary school level. Topics include numeral systems, number theory, nature of algebra and geometry. Intended primarily, but not exclusively, for Education students in the P/J stream.

Degree credit exclusion: Not open to any student who has taken or is taking another university mathematics course unless permission of the course coordinator is obtained.

AS/MATH 1581 3.0 Business Mathematics I. This course is an introduction to interest rates (simple, compound), annuities (ordinary, due, deferred), amortization (mortgages, other debts), sinking funds, bonds (face value, bond rate, price, yield rate) and depreciation (straight line, constant percentage).

Prerequisite: Ontario Grade 12 Mathematics or equivalent.

Degree credit exclusion: AS/AK/MATH 2580 6.0.

AS/SC/MATH 1590 3.0 The Nature of Mathematics II. A continuation of some of the themes explored in AS/SC/MATH 1580 3.0. Further topics include elements of probability and statistics, the nature of computers, elementary set theory and logic.

Prerequisite: AS/SC/MATH 1580 3.0 or permission of the course coordinator.

Degree credit exclusion: Not open to any student who has taken or is taking another university mathematics course (except AS/SC/MATH 1580 3.0) unless permission of the course coordinator is obtained.

AS/SC/MATH 2010 3.0 Vector Differential Calculus. Power series, partial derivatives, linear maps, differentiability of maps from n-space to m-space, chain rule, gradients, tangent lines to curves, tangent planes to surfaces, cross product, implicit function theorem, multidimensional Taylor's theorem with remainder, extrema, quadratic forms, Hessian, Lagrange multipliers.

Prerequisite: AS/SC/MATH 1010 3.0 or permission of the department.

Degree credit exclusions: AS/SC/MATH 2015 3.0, AS/SC/AK/MATH 2310 3.0.

AS/SC/MATH 2015 3.0 Applied Multivariate and Vector Calculus. Topics covered include grad, div, curl and Laplacian in polar coordinates; line and surface integrals; theorems of Gauss and Stokes; double and triple integrals in various coordinate systems; extrema and Taylor series for multivariate functions; differential geometry in Euclidean 3-space.

Prerequisite: One of AS/SC/MATH 1010 3.0, AS/SC/MATH 1014 3.0, AS/SC/AK/MATH 1310 3.0; or AS/SC/MATH 1505 6.0 plus permission of the course coordinator.

Degree credit exclusions: AS/SC/MATH 2010 3.0, AS/SC/AK/MATH 2310 3.0.

AS/SC/MATH 2018 1.0 Applied Mathematics Module III. Designed for students in Applied Mathematics to complement and enrich material in AS/SC/MATH 2015 3.0. The module treats the theory in greater depth, and explores extended applications and modeling. One lecture hour per week. One term. One credit.

Prerequisites: AS/SC/MATH 1014 3.0; AS/SC/MATH 1017 1.0.

Prerequisite or corequisite: AS/SC/MATH 2015 3.0.

Note: AS/SC/MATH 2018 1.0 must be taken within the first 90 credits of a student's program.

AS/SC/MATH 2021 3.0 Linear Algebra I (Honours Version). Linear equations, matrices, determinants, vector spaces and inner product spaces. This course covers material similar to that in AS/SC/AK/MATH 2221 3.0 but at a more advanced level. It is required in Honours Mathematics degrees.

Prerequisite: OAC algebra or any university mathematics course.

Degree credit exclusions: AS/SC/MATH 1025 3.0, AS/SC/AK/MATH 2221 3.0, SC/ACMS 1020 6.0.

AS/SC/MATH 2022 3.0 Linear Algebra II (Honours Version). Linear transformations, eigenvalues, diagonalization, quadratic forms, Markov chains and isometries. This course covers material similiar to that in AS/SC/AK/MATH 2222 3.0 but at a more advanced level. It is required in Honours degrees in Mathematics and in Specialized Honours degrees in Statistics.

Prerequisite: AS/SC/MATH 2021 3.0 or permission of the course coordinator.

Degree credit exclusion: AS/SC/AK/MATH 2222 3.0.

AS/SC/AK/MATH 2030 3.0 Elementary Probability. Introduction to the theory of probability as preparation for further study in either mathematical or applied probability and statistics. Topics include probability spaces, conditional probability, independence, random variables, distribution functions, expectation, Chebyshev's inequality, common distributions, moment-generating functions and limit theorems.

Prerequisite: One of AS/SC/MATH 1010 3.0, AS/SC/MATH 1014 3.0, AS/SC/AK/MATH 1310 3.0.

Degree credit exclusion: AS/SC/MATH 2030 6.0.

AS/SC/MATH 2041 3.0 Symbolic Computation Laboratory I. An introduction to symbolic computing in the Maple environment. Topics from single-variable differential and integral calculus, including simple ordinary differential equations, are covered. Both mathematical understanding and applications are emphasized. Three lecture hours, open laboratory hours. One term. Three credits.

Prerequisites: AK/AS/SC/COSC 1540 3.0 or equivalent computing experience; AS/SC/MATH 1010 3.0 or AS/SC/MATH 1014 3.0 or AS/SC/AK/MATH 1310 3.0.

Degree credit exclusion: AS/SC/MATH 2040 6.0.

AS/SC/MATH 2042 3.0 Symbolic Computation Laboratory II. Advanced symbolic computing with Maple. Topics from linear algebra, differential equations, multivariate calculus, integral theorems, are covered. Both mathematical understanding and applications are emphasized. Three lecture hours, open laboratory hours. One term. Three credits.

Prerequisites: AS/SC/MATH 2041 3.0; AS/SC/MATH 2010 3.0 or AS/SC/MATH 2015 3.0 or AS/SC/AK/MATH 2310 3.0; AS/SC/MATH 1025 3.0 or AS/SC/MATH 2021 3.0 or AS/SC/AK/MATH 2221 3.0.

Prerequisites or corequisites: AS/SC/AK/MATH 2270 3.0; AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0.

Degree credit exclusion: AS/SC/MATH 2040 6.0.

AS/SC/AK/MATH 2090 3.0 Applications of Logic to Discrete Mathematics. A continuation of AS/SC/AK/MATH 1090 3.0, this course uses formal logic to study topics in discrete mathematics, including sets, relations, functions, induction, the integers. Optional topics include program specification, sequences, recurrence relations.

Prerequisite: AS/SC/AK/MATH 1090 3.0 taken after Summer 1998.

AS/SC/AK/MATH 2131 3.0 Introduction to Statistics II. This course is a continuation of AS/SC/AK/MATH 2030 3.0. It provides students with an introduction to statistical methods with an emphasis on applications using continuous probability models.

Prerequisites: AS/SC/AK/MATH 2030 3.0; one of AS/SC/MATH 2010 3.0, AS/SC/MATH 2015 3.0, AS/SC/AK/MATH 2310 3.0.

Degree credit exclusion: Not open to any student who has passed or is taking AS/SC/AK/MATH 3131 3.0.

Note: Computer/Internet use may be required to facilitate course work.

AS/SC/AK/MATH 2221 3.0 Linear Algebra with Applications I. Systems of linear equations, linear and affine subspaces of Euclidean n-space, the Gauss-Jordan algorithm, matrices and matrix algebra, determinants, vector space concepts for Euclidean n-space (linear dependence and independence, basis, dimension etc.), various applications.

Prerequisite: OAC algebra or any university mathematics course.

Degree credit exclusions: AS/SC/MATH 1025 3.0, AS/SC/MATH 2021 3.0, SC/ACMS 1020 6.0.

AS/SC/AK/MATH 2222 3.0 Linear Algebra with Applications II. Linear transformations and their representation by matrices, change of basis and similarity, eigenvalues and eigenvectors, diagonalization, inner product spaces, orthogonality, the Gram-Schmidt algorithm, least squares approximations, abstract vector spaces, various applications.

Prerequisite: AS/SC/MATH 1025 3.0 or AS/SC/AK/MATH 2221 3.0.

Degree credit exclusion: AS/SC/MATH 2022 3.0.

AS/SC/MATH 2260 6.0 An Introduction to Combinatorics. Basic graph theory, permutations, combinations, inclusion-exclusion principle, recurrence relations, generating functions, occupancy problems, application to probability theory, geometry of the plane, maps on the sphere, colouring problems, finite structures, systems of distinct representatives, existence problems, magic squares, Latin squares.

Prerequisite: One OAC in mathematics or equivalent.

AS/SC/AK/MATH 2270 3.0 Differential Equations. Introduction to differential equations, including a discussion of the formation of mathematical models for real phenomena; solution by special techniques; applications; linear equations; solutions in series; other topics if time permits.

Prerequisites: AS/SC/MATH 2010 3.0 or AS/SC/MATH 2015 3.0 or AS/SC/AK/MATH 2310 3.0; AS/SC/MATH 1025 3.0 or AS/SC/MATH 2021 3.0 or AS/SC/AK/MATH 2221 3.0.

AS/SC/MATH 2280 3.0 The Mathematical Theory of Interest. Topics include measurement of interest, annuities, amortization of loans, bonds, sinking funds and depreciation. The course is at a level which will prepare students for the interest theory portion of the Society of Actuaries examinations.

Prerequisite: AS/SC/MATH 1010 3.0 or AS/SC/MATH 1014 3.0 or AS/SC/AK/MATH 1310 3.0.

Degree credit exclusions: AS/AK/MATH 2580 6.0, AS/MATH 2581 3.0.

AS/SC/AK/MATH 2310 3.0 Calculus of Several Variables with Applications. Vector functions, partial derivatives, gradient, multiple integrals, line integrals, optimization, applications.

Prerequisites: AS/SC/MATH 1010 3.0 or AS/SC/MATH 1014 3.0 or AS/SC/AK/MATH 1310 3.0. Students should have a knowledge of vector algebra in two and three dimensions.

Degree credit exclusions: AS/SC/MATH 2010 3.0, AS/SC/MATH 2015 3.0.

AS/SC/AK/MATH 2320 3.0 Discrete Mathematical Structures. Algebraic and combinatorial structures required in Computer Science and other disciplines. Review of sets; induction; combinatorics; graph theory, trees; big Oh-notation, complexity of algorithms; recursive definitions, recurrence relations; posets; congruence relations. This course emphasizes analysis, problem solving and proofs.

Prerequisites: AS/SC/AK/MATH 1190 3.0, or AS/SC/AK/MATH 1090 3.0, or AK/MATH 2441 3.0, or any 2000-level MATH course without second digit 5. Students who have not taken AS/SC/AK/MATH 1190 3.0 or AS/SC/AK/MATH 2090 3.0 are advised to review set theory, functions, relations and induction proofs, before the course begins.

AS/SC/AK/MATH 2500 3.0 An Introduction to the Basic Practice of Statistics. This course provides an introduction to the concepts of statistics with an emphasis on developing a critical attitude towards the use and misuse of statistics in business, health sciences and other areas.

Degree credit exclusions: AS/SC/KINE 2050 3.0, AS/SC/KINE 3150 3.0, AS/SC/PSYC 2020 6.0, AS/SC/PSYC 2021 3.0, AS/SC/PSYC 2022 3.0. May not be taken by students who have taken or are taking any university course in statistics.

Note: Computer/Internet use may be required to facilitate course work.

AS/SC/AK/MATH 2560 3.0 Elementary Statistics I. Displaying and describing distributions, normal distibution. Relationships between variables, regression and correlation. The need for design, experimental design and sampling design. Sampling distributions, bias, variability. Probability models, random variables, probability laws.

Prerequisite: Ontario Grade 12 Advanced Mathematics.

Degree credit exclusions: AS/SC/AK/MATH 1131 3.0, SC/BIOL 2060 3.0, SC/BIOL 3080 3.0, SC/BIOL 3090 3.0, AS/ECON 2500 3.0, AS/SC/GEOG 2420 3.0, AS/SC/KINE 2050 3.0, AS/SC/PHED 2050 3.0, AS/POLS 3300 6.0, AS/SC/PSYC 2020 6.0, AS/SC/PSYC 2021 3.0, AS/SOCI 3030 6.0. Not open to any student who has successfully completed AS/SC/MATH 2030 6.0.

AS/SC/AK/MATH 2570 3.0 Elementary Statistics II. Binomial distribution, sampling distribution of sample proportions and means, central limit theorem. Confidence intervals, tests and decisions, abuse of tests. Inference for a single mean, comparing two means, and for spread. Contingency tables. Simple regression and basic analysis of variance.

Prerequisite: AS/SC/AK/MATH 2560 3.0 or AS/SC/AK/MATH 1131 3.0.

Degree credit exclusions: AS/SC/MATH 1132 3.0, SC/BIOL 2060 3.0, SC/BIOL 3080 3.0, SC/BIOL 3090 3.0, AS/ECON 3210 3.0, AS/ECON 3500 3.0, AS/SC/GEOG 2420 3.0, AS/SC/KINE 3150 3.0, AS/POLS 3300 6.0, AS/SC/PSYC 2020 6.0, AS/SC/PSYC 2022 3.0, AS/SOCI 3030 6.0. Not open to any student who has successfully completed AS/SC/MATH 2030 6.0.

AS/AK/MATH 2580 6.0 Mathematics of Investment and Actuarial Science. Theory of interest; annuities certain; amortization and sinking funds; evaluation of bonds and other investments; depreciation, depletion and capital cost; insurance, including mortality tables, principles of life annuities, premiums and reserves.

Prerequisite: One full university mathematics course.

Degree credit exclusions: AS/MATH 1581 3.0, AS/SC/MATH 2280 3.0, AS/MATH 2581 3.0.

AS/MATH 2581 3.0 Business Mathematics II. Spreadsheets and their application to business mathematics; deepening of topics in Business Mathematics I, including continuous compound interest, perpetuities, annuities where payments vary, callable bonds, bond yield rate, capital budgeting; mortality tables, life annuities, life insurance.

Prerequisites: AS/MATH 1581 3.0; AK/AS/SC/COSC 1520 3.0 or permission of the course coordinator.

Degree credit exclusions: AS/SC/MATH 2280 3.0, AS/AK/MATH 2580 6.0.

AS/SC/AK/MATH 3010 3.0 Vector Integral Calculus. Integrability of continuous functions over suitable domains, iterated integrals and Fubini's theorem, counterexamples, change of variables, Jacobian determinants, polar and spherical coordinates, volumes, vector fields, divergence, curl, line and surface integrals, Green's and Stokes' theorems, differential forms, general Stokes' theorem.

Prerequisite: AS/SC/MATH 2010 3.0 or AS/SC/AK/MATH 2310 3.0; or AS/SC/MATH 2015 3.0 and written permission of the Mathematics Undergraduate Director (normally granted only to students proceeding in Honours programs in Mathematics or in the Specialized Honours Program in Statistics).

Prerequisite or corequisite: AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0.

AS/SC/AK/MATH 3020 6.0 Algebra I. Introduction to the basic concepts of abstract algebra, with applications: groups (cyclic, symmetric, Lagrange's theorem, quotients, homomorphism theorems); rings (congruences, quotients, polynomials, integral domains, principal-ideal and unique-factorization domains); fields (field extensions, constructions with ruler and compasses, coding theory).

Prerequisite: AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0.

AS/SC/MATH 3033 3.0 Classical Regression Analysis. General linear model. Properties and geometry of least-squares estimation. General linear hypothesis, confidence regions and intervals. Multicollinearity. Relationship between ANOVA models and linear models. Residual analysis, outliers, partial and added variable plots.

Prerequisites: AS/SC/AK/MATH 2131 3.0 or permission of the course director; AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0.

Degree credit exclusions: AS/SC/AK/MATH 3330 3.0, AS/SC/GEOG 3421 3.0, AS/SC/PSYC 3030 6.0.

AS/SC/AK/MATH 3034 3.0 Applied Categorical Data Analysis. Regression using categorical explanatory variables, one-way and two-way analysis of variance. Categorical response data, two-way and three-way contingency tables, odds ratios, tests of independence, partial association. Generalized linear models. Logistic regression. Loglinear models for contingency tables.

Prerequisite: AS/SC/MATH 3033 3.0 or AS/SC/AK/MATH 3330 3.0.

Degree credit exclusion: Not open to any student who has passed or is taking AS/SC/MATH 4130G 3.0.

Note: Computer/Internet use may be required to facilitate course work.

AS/SC/AK/MATH 3050 6.0 Introduction to Geometries. Analytic geometry over a field with vector and barycentric coordinate methods, affine and projective transformations, inversive geometry, foundations of Euclidean and non-Euclidean geometry, applications throughout to Euclidean geometry.

Prerequisite: AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0 or permission of the course coordinator.

AS/SC/MATH 3100 3.0 Famous Problems in Mathematics. An attempt to foster an appreciation of the history, the personalities and some of the content of different areas of mathematics, by means of a study of some specific problems which have exercised the minds of mathematicians.

Prerequisites: At least 12 credits from 2000-level MATH courses without second digit 5, or permission of the course coordinator.

AS/SC/AK/MATH 3110 3.0 Introduction to Mathematical Analysis. Proofs in calculus and analysis. Topics include sets, functions, axioms for R, applications of the completeness axiom, countability, sequences and their limits, monotone sequences, limits of functions, continuity.

Prerequisite: AS/SC/AK/MATH 1310 3.0 or AS/SC/MATH 1014 3.0.

Prerequisites or corequisites: AS/SC/AK/MATH 2310 3.0 or AS/SC/MATH 2010 3.0 or AS/SC/MATH 2015 3.0; AS/SC/MATH 2021 3.0 or AS/SC/AK/MATH 2221 3.0 or AS/SC/MATH 1025 3.0.

Degree credit exclusion: AS/SC/MATH 1010 3.0.

AS/SC/AK/MATH 3131 3.0 Mathematical Statistics I. Topics include common density functions, probability functions, principle of likelihood, the likelihood function, the method of maximum likelihood, likelihood regions, tests of hypotheses, likelihood ratio tests, goodness of fit tests, conditional tests, and confidence sets with a view towards applications.

Prerequisite: AS/SC/AK/MATH 2131 3.0 or permission of the course coordinator.

AS/SC/AK/MATH 3132 3.0 Mathematical Statistics II. Important examples and methods of statistical estimation and hypothesis testing are discussed in terms of their mathematical and statistical properties. Topics include sufficiency, Bayesian statistics, decision theory, most powerful tests, likelihood ratio tests.

Prerequisite: AS/SC/AK/MATH 3131 3.0.

AS/SC/AK/MATH 3140 6.0 Number Theory and Theory of Equations. A study of topics in number theory and theory of equations using relevant methods and concepts from modern algebra, such as Abelian groups, unique factorization domains and field extensions.

Prerequisite: AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0 or permission of the course coordinator.

AS/SC/AK/MATH 3170 6.0 Operations Research I. A study of linear programming; transportation problems, including network flows, assignment problems and critical path analysis; integer programming; dynamic programming and an introduction to stochastic models. Application to a set of problems representative of the field of operations research.

Prerequisites: AS/SC/MATH 1025 3.0 or AS/SC/MATH 2021 3.0 or AS/SC/AK/MATH 2221 3.0; AK/AS/SC/COSC 1520 3.0 or AK/AS/SC/COSC 1540 3.0 or AK/AS/SC/COSC 1020 3.0 or equivalent.

AS/SC/AK/MATH 3190 3.0 Set Theory and Foundations of Mathematics. The following topics are covered: paradoxes in naive set theory; functions and relations, transfinite numbers, their ordering and their arithmetic; well-ordered sets and ordinal numbers; Zorn's lemma; an introduction to axiomatic set theory.

Prerequisite: 6 credits from 2000-level MATH courses without second digit 5.

AS/SC/AK/MATH 3210 3.0 Principles of Mathematical Analysis. Rigorous presentation, with proofs, of fundamental concepts of analysis: limits, continuity, differentiation, integration, fundamental theorem, power series, uniform convergence.

Prerequisite: At least one of the following four courses or course combinations: (1) AS/SC/MATH 2010 3.0, (2) AS/SC/AK/MATH 3110 3.0, (3) AS/SC/AK/MATH 2310 3.0 and AS/SC/MATH 1010 3.0, (4) AS/SC/MATH 2015 3.0 and AS/SC/MATH 1010 3.0.

AS/SC/MATH 3241 3.0 Numerical Methods I. An introductory course in computational linear algebra. Topics include simple error analysis, linear systems of equations, non-linear equations, linear least squares and interpolation. (Same as AK/AS/SC/COSC 3121 3.0.)

Prerequisites: One of AS/SC/MATH 1010 3.0, AS/SC/MATH 1014 3.0, AS/SC/AK/MATH 1310 3.0; one of AS/SC/MATH 1025 3.0, AS/SC/MATH 2021 3.0, AS/SC/AK/MATH 2221 3.0; one of AK/AS/SC/COSC 1540 3.0, AK/AS/SC/COSC 2011 3.0, AK/AS/SC/COSC 2031 3.0, AS/AK/ITEC 2011 3.0.

Degree credit exclusion: AK/AS/SC/COSC 3121 3.0.

AS/SC/MATH 3242 3.0 Numerical Methods II. Algorithms and computer methods for solving problems of differentiation, integration, differential equations, and an introduction to systems of non-linear equations. (Same as AK/AS/SC/COSC 3122 3.0.)

Prerequisites: AS/SC/AK/MATH 2270 3.0; AS/SC/MATH 3241 3.0 or AK/AS/SC/COSC 3121 3.0.

Degree credit exclusion: AK/AS/SC/COSC 3122 3.0.

AS/SC/AK/MATH 3260 3.0 Introduction to Graph Theory. Introductory graph theory with applications. Graphs, digraphs. Eulerian and Hamiltonian graphs. The travelling salesman. Path algorithms; connectivity; trees; planarity; colourings; scheduling; minimal cost networks. Tree searches and sortings, minimal connectors and applications from physical and biological sciences.

Prerequisite: At least 6 credits from 2000-level MATH courses without second digit 5.

AS/SC/MATH 3271 3.0 Partial Differential Equations. Partial differential equations of mathematical physics and their solutions in various coordinates, separation of variables in Cartesian coordinates, application of boundary conditions; Fourier series and eigenfunction expansions; generalized curvilinear coordinates; separation of variables in spherical and polar coordinates.

Prerequisites: AS/SC/AK/MATH 2270 3.0; AS/SC/MATH 2010 3.0 or AS/SC/MATH 2015 3.0 or AS/SC/AK/MATH 2310 3.0; AS/SC/AK/MATH 3010 3.0 is also desirable, though not essential, as prerequisite for students presenting AS/SC/MATH 2010 3.0 or AS/SC/AK/MATH 2310 3.0.

AS/SC/MATH 3272 3.0 Special Functions. The special functions of mathematical physics: Bessel functions, Legendre functions, Gamma function, Hermite functions, Laguerre functions, Chebyshev polynomials, hypergeometric and confluent hypergeometric functions; boundary value problems, heat flow, wave motion in Cartesian and polar coordinates; Laplace and Fourier transforms.

Prerequisite: AS/SC/MATH 3271 3.0 or permission of the course coordinator.

AS/SC/MATH 3280 6.0 Actuarial Mathematics. Deterministic and stochastic models for contingent payments. Topics include survival distributions, life tables, premiums and reserves for life insurance and annuities, multiple life contracts, multiple decrement theory.

Prerequisites: AS/SC/AK/MATH 2030 3.0; AS/SC/MATH 2280 3.0.

AS/SC/AK/MATH 3330 3.0 Regression Analysis. Simple regression analysis, multiple regression analysis, matrix form of the multiple regression model, estimation, tests (t- and F-tests), multicollinearity and other problems encountered in regression, diagnostics, model building and variable selection, remedies for violations of regression assumptions.

Prerequisites: One of AS/SC/MATH 1132 3.0, AS/SC/AK/MATH 2131 3.0, AS/SC/AK/MATH 2570 3.0, AS/SC/PSYC 2020 6.0, or equivalent; some acquaintance with matrix algebra (such as is provided in AS/SC/MATH 1025 3.0, AS/SC/MATH 1505 6.0, AS/AK/MATH 1550 6.0, AS/SC/MATH 2021 3.0, or AS/SC/AK/MATH 2221 3.0).

Degree credit exclusions: AS/SC/MATH 3033 3.0, AS/ECON 4210 3.0, AS/SC/GEOG 3421 3.0, AS/SC/PSYC 3030 6.0.

AS/SC/AK/MATH 3410 3.0 Complex Variables. Analytic functions, the Cauchy-Riemann equations, complex integrals, the Cauchy integral theorem, maximum modulus theorem. Calculations of residues and applications to definite integrals, two-dimensional potential problems and conformal mappings.

Prerequisite: AS/SC/MATH 2010 3.0 or AS/SC/MATH 2015 3.0 or AS/SC/AK/MATH 2310 3.0. (AS/SC/AK/MATH 3010 3.0 is also recommended as a prerequisite for students who have taken AS/SC/MATH 2010 3.0.)

AS/SC/AK/MATH 3430 3.0 Sample Survey Design. Principal steps in planning and conducting a sample survey. Sampling techniques including simple random sampling, stratified random sampling, cluster sampling, and sampling with probabilities proportional to size. Estimation techniques including difference, ratio and regression estimation.

Prerequisite: AS/SC/AK/MATH 2131 3.0 or AS/SC/AK/MATH 3330 3.0.

AS/SC/MATH 3450 3.0 Introduction to Differential Geometry. Curves and surfaces in 3-space, tangent vectors, normal vectors, curvature, introduction to topology and to manifolds.

Prerequisites: AS/SC/AK/MATH 3010 3.0; AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0; or permission of the course coordinator.

Degree credit exclusion: AS/SC/AK/MATH 4250 6.0.

AS/MATH 3500 6.0 Mathematics in the History of Culture. An introduction to the history of mathematical ideas from antiquity to the present, with emphasis on the role of these ideas in other areas of culture such as philosophy, science and the arts.

Prerequisite: 6 credits in university-level mathematics (other than AS/SC/MATH 1500 3.0, AS/SC/MATH 1510 6.0, AS/SC/MATH 1515 3.0, AS/MATH 1520 6.0, or AS/SC/MATH 1525 3.0) is strongly recommended.

Degree credit exclusion: AS/HUMA 3990A 6.0.

AS/SC/MATH 4000 6.0 (4000 3.0) Individual Project. A project of a pure or applied nature in mathematics or statistics under the supervision of a faculty member. The project allows the student to apply mathematical or statistical knowledge to problems of current interest. A report is required at the conclusion of the project.

Prerequisites: Open to all students in Honours programs in the Department of Mathematics and Statistics. Permission of the Program Director is required. Applied Mathematics students can enrol only after they have completed the core program in Applied Mathematics.

AS/SC/AK/MATH 4010 6.0 Real Analysis. Survey of the real and complex number systems, and inequalities. Metric space topology. The Riemann-Stieltjes integral. Some topics of advanced calculus, including more advanced theory of series and interchange of limit processes. Lebesgue measure and integration. Fourier series and Fourier integrals.

Prerequisite: AS/SC/AK/MATH 3210 3.0 or permission of the course coordinator.

AS/SC/AK/MATH 4020 6.0 Algebra II.
Continuation of Algebra I, with applications: groups (finitely generated Abelian groups, solvable groups, simplicity of alternating groups, group actions, Sylow's theorems, generators and relations); fields (splitting fields, finite fields, Galois theory, solvability of equations); additional topics (lattices, Boolean algebras, modules).

Prerequisite: AS/SC/AK/MATH 3020 6.0 or permission of the course coordinator.

Degree credit exclusion: AS/SC/MATH 4241 3.0.

AS/SC/AK/MATH 4030 3.0 Probability Theory. Elementary measure theory, convergence of random variables, strong law of large numbers, convergence in distribution, stable laws, conditional expectation, martingales.

Prerequisite: AS/SC/AK/MATH 2030 3.0 or AS/SC/AK/MATH 3030 3.0.

AS/SC/AK/MATH 4080 6.0 Topology. Topological spaces, continuity, connectedness, compactness, nets, filters, metrization theorems, complete metric spaces, function spaces, fundamental group, covering spaces.

Prerequisite: AS/SC/AK/MATH 3210 3.0 or permission of the course coordinator.

AS/SC/MATH 4100 3.0 Topics in Mathematical Education. This course consists of a series of presentations, by the students, of mathematical topics chosen in consultation with the instructor. Suitability of the material for presentation in high schools is discussed.

Prerequisite: Permission of the course coordinator.

AS/SC/MATH 4110 3.0 Topics in Analysis. Possible topics include special functions, integral transforms, Fourier series, divergent series, asymptotic expansions, approximation theory, ordinary differential equations, partial differential equations, calculus of variations, calculus on manifolds, introduction to functional analysis, difference equations.

Prerequisite: Permission of the course coordinator.

AS/SC/MATH 4120 3.0 Topics in Algebra. One or two topics which may be chosen from the following: category theory, commutative algebra, infinite Abelian groups, non-associative algebras, advanced linear algebra, presentation theory, representations of finite groups, universal algebra.

Prerequisite: Permission of the course coordinator.

AS/SC/MATH 4130 3.0 Topics in Probability and Statistics. One or two topics which may be chosen from the following: statistical decision theory, statistical inference, sequential analysis, information theory, large sample theory, design of experiments, stochastic processes, time series.

Prerequisite: Permission of the course coordinator.

AS/SC/MATH 4140 3.0 Topics in Number Theory. Topics chosen from quadratic diophantine equations and infinite continued fractions, elements of algebraic number theory, p-adic numbers, other topics selected according to student interest.

Prerequisite: Permission of the course coordinator.

AS/SC/MATH 4141 3.0 Advanced Numerical Methods. Systems of non-linear equations: Newton-Raphson, quasi Newton methods; optimization problems: steepest descents, conjugate gradient methods; approximation theory: least squares, singular value decomposition, orthogonal polynomials, Chebyshev and Fourier approximation, Padé approximation; matrix eigenvalues: power method, householder, QL and QR algorithms.

Prerequisite: AS/SC/MATH 3242 3.0 or AK/AS/SC/COSC 3122 3.0.

AS/SC/MATH 4142 3.0 Numerical Solutions to Partial Differential Equations. Review of partial differential equations, elements of variational calculus; finite difference methods for elliptic problems, error analysis, boundary conditions, non-Cartesian variables, PDE-eigenvalue problems; hyperbolic and parabolic problems, explicit and implicit methods, stability analysis; Rayleigh-Ritz and Galerkin method for ODEs, finite element methods.

Prerequisites: AS/SC/AK/MATH 2270 3.0; AS/SC/MATH 3242 3.0 or AK/AS/SC/COSC 3122 3.0.

AS/SC/AK/MATH 4150 3.0 Topics in Geometry. One or two topics which may be chosen from the following: projective geometry, algebraic geometry, geometrical algebra, finite geometries, differential geometry, Riemannian geometry, discrete applied geometry.

Prerequisites: AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0; 6 credits from 3000-level MATH courses without second digit 5; or permission of the course coordinator.

AS/SC/MATH 4160 3.0 Combinatorial Mathematics. Topics from algebra of sets, permutations, combinations, occupancy problems, partitions of integers, generating functions, combinatorial identities, recurrence relations, inclusion-exclusion principle, Polya's theory of counting, permanents, systems of distinct representatives, Latin rectangles, block designs, finite projective planes, Steiner triple systems.

Prerequisites: AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0; 6 credits from 3000-level MATH courses without second digit 5; or permission of the course coordinator.

AS/SC/MATH 4170 6.0 Operations Research II. Selected topics from game theory, decision theory, simulation, reliability theory, queuing theory, non-linear programming, classification, pattern-recognition and prediction. Each chapter contains an optimization problem and methods and algorithms for solving it. The course is rich in examples.

Prerequisites: AS/SC/MATH 2010 3.0 or AS/SC/MATH 2015 3.0 or AS/SC/AK/MATH 2310 3.0; AS/SC/MATH 1132 3.0 or AS/SC/AK/MATH 2030 3.0; AS/SC/AK/MATH 3170 6.0; or permission of the course coordinator.

Degree credit exclusion: AS/MATH 4570 6.0.

AS/SC/MATH 4200 6.0 (4200 3.0) Special Topics. The department may offer courses or seminars on particular topics not ordinarily available. Some Special Topics courses may not be eligible for Science (SC) credit. Two terms. Six credits. One term. Three credits.

Prerequisite: Permission of the course coordinator.

AS/SC/MATH 4230 3.0 Non-Parametric Methods in Statistics. Order statistics; general rank statistics; one-sample, two-sample, and k-sample problems; Kolmogorov-Smirnov statistics; tests of independence and relative efficiencies.

Prerequisite: AS/SC/AK/MATH 3131 3.0; AS/SC/AK/MATH 3132 3.0 is recommended but not required.

AS/SC/MATH 4240 3.0 Independent Studies in Applied Mathematics. Independent studies under the direction of a faculty supervisor. Areas: applied and numerical analysis, discrete applied mathematics, operations research, mathematical physics, mathematical biology, mathematical modelling. The area is restricted by the availability of a supervisor.

Prerequisites: Permission of the Applied Mathematics Program Director; restricted to students who have completed the Applied Mathematics program core.

Note: Faculty of Arts students should see the Faculty of Arts section of this Calendar for regulations governing "Independent Reading Courses".

AS/SC/MATH 4241 3.0 Applied Group Theory. Introduction to group theory and its applications in the physical sciences. Finite groups. Compact Lie groups. Representation theory, tensor representations of classical Lie groups, classification of semi-simple Lie groups.

Prerequisites: AS/SC/MATH 2015 3.0; AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0; AS/SC/AK/MATH 2270 3.0.

Degree credit exclusion: AS/SC/AK/MATH 4020 6.0.

AS/SC/AK/MATH 4250 6.0 Differential Geometry. Curves and surfaces in 3-space, tangent vectors, normal vectors, curvature, introduction to topology, manifolds, tangent spaces, multilinear algebra and tensors. Normally offered in alternate years.

Prerequisites: AS/SC/AK/MATH 3010 3.0; AS/SC/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0; or permission of the course coordinator.

Degree credit exclusion: AS/SC/MATH 3450 3.0.

AS/SC/MATH 4270 3.0 Integral Transforms and Equations. This course studies the Laplace, Fourier, Hankel and Mellin transforms; the solution of integral equations; and the treatment of asymptotic expansions. The

applications are to problems in circuit theory, heat flow, elasticity, transport theory and scattering theory.

Prerequisites: AS/SC/AK/MATH 2270 3.0; AS/SC/AK/MATH 3410 3.0.

Prerequisite or corequisite: AS/SC/MATH 3271 3.0.

AS/SC/AK/MATH 4271 3.0 Dynamical Systems (formerly AS/SC/AK/MATH 3270 3.0 - before 1998-1999). Iterations of maps and differential equations; phase portraits, flows; fixed points, periodic solutions and homoclinic orbits; stability, attraction, repulsion; Poincaré maps, transition to chaos. Applications: logistic maps, interacting populations, reaction kinetics, forced Van der Pol, damped Duffing and Lorenz equations.

Prerequisites: AS/SC/AK/MATH 2270 3.0; AS/SC/MATH 2021 3.0 or AS/SC/AK/MATH 2221 3.0 or AS/SC/MATH 1025 3.0.

Degree credit exclusion: AS/SC/AK/MATH 3270 3.0.

AS/SC/MATH 4280 3.0 Risk Theory. Frequency and severity models in insurance, compound distributions, compound Poisson processes, ruin theory, non-proportional reinsurance, related topics in loss models and stochastic processes.

Prerequisite: AS/SC/AK/MATH 2030 3.0.

AS/SC/AK/MATH 4290 3.0 Mathematical Logic. Predicate logic, rules of inference, elimination of quantifiers, Tarski semantics, Godel's completeness, compactness and incompleteness theorems. Untrapowers. Non-standard analysis.

Prerequisite: AS/SC/AK/MATH 3020 6.0 or AS/SC/AK/MATH 3190 3.0 or AS/SC/AK/MATH 3210 3.0 or permission of the instructor; AS/SC/AK/MATH 1090 3.0 or AS/SC/AK/MATH 1190 3.0 is recommended.

AS/SC/MATH 4300 6.0 (4300 3.0) Directed Readings. A student may arrange to do independent study with a member of the Mathematics and Statistics Department. Such an arrangement must have prior approval of the department Chair. Two terms. Six credits. One term. Three credits.

Note: Faculty of Arts students should see the Faculty of Arts section of this Calendar for regulations governing "Independent Reading Courses". Some Directed Readings topics may not be eligible for Science (SC) credit.

AS/SC/MATH 4400 6.0 The History of Mathematics. Selected topics in the history of mathematics, discussed in full technical detail but with stress on the underlying ideas, their evolution and their context.

Prerequisites: 36 credits from MATH courses without second digit 5, including at least 12 credits at or above the 3000 level. (12 of the 36 credits may be taken as corequisites.)

AS/SC/AK/MATH 4430 3.0 Stochastic Processes. Basic Markov processes, including Markov chains, Poisson processes, birth-and-death processes, Brownian motion.

Prerequisite: AS/SC/AK/MATH 2030 3.0.

Corequisite: A MATH course at the 3000 level or higher, without second digit 5.

AS/SC/AK/MATH 4431 3.0 Probability Models . This course introduces the theory and applications of several kinds of probabilistic models, including renewal theory, branching processes and martingales. Additional topics may include stationary processes, large deviations, or models from the sciences.

Prerequisite: AS/SC/AK/MATH 2030 3.0.

Corequisite: A MATH course at the 3000 level or higher, without second digit 5.

AS/SC/MATH 4470 3.0 Gas and Fluid Dynamics. Fundamental laws; conservation of mass, momentum and energy; vortex motion; incompressible, compressible and viscous flows; turbulent flow; surface waves. (Same as SC/PHYS 4120 3.0.)

Prerequisites: AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0; SC/EATS 2470 4.0 or SC/EATS 2470 3.0 or SC/PHYS 2010 3.0.

Degree credit exclusions: SC/PHYS 3180 3.0, SC/PHYS 4120 3.0.

AS/MATH 4570 6.0 Applied Optimization. Topics chosen from decision theory, game theory, inventory control, Markov chains, dynamic programming, queuing theory, reliability theory, simulation, non-linear programming.

Prerequisites: AS/SC/AK/MATH 3170 6.0; AS/SC/AK/MATH 3330 3.0; AS/SC/AK/MATH 3230 3.0 or AS/SC/AK/MATH 3430 3.0.

Degree credit exclusion: AS/SC/MATH 4170 6.0.

AS/SC/MATH 4630 3.0 Applied Multivariate Statistical Analysis. The course covers the basic theory of the multivariate normal distribution and its application to multivariate inference about a single mean, comparison of several means and multivariate linear regression. As time and interest permit, further related topics may also be covered.

Prerequisites: AS/SC/AK/MATH 3131 3.0; AS/SC/AK/MATH 3034 3.0 or AS/SC/AK/MATH 3230 3.0; AS/SC/AK/MATH 2022 3.0 or AS/SC/AK/MATH 2222 3.0.

AS/SC/MATH 4730 3.0 Experimental Design. An examination of the statistical issues involved in ensuring that an experiment yields relevant information. Topics include randomized block, factorial, fractional factorial, nested, Latin square and related designs. Further topics as time permits. The emphasis is on applications.

Prerequisite: AS/SC/AK/MATH 3034 3.0 or permission of the course coordinator.

AS/SC/MATH 4830 3.0 Time Series and Spectral Analysis. Treatment of discrete sampled data by linear optimum Wiener filtering, minimum error energy deconvolution, autocorrelation and spectral density estimation, discrete Fourier transforms and frequency domain filtering and the Fast Fourier Transform algorithm. (Same as SC/EATS 4020 3.0 and SC/PHYS 4060 3.0.)

Prerequisites: AK/AS/SC/COSC 1540 3.0 or equivalent FORTRAN programming experience; AS/SC/AK/MATH 2270 3.0; AS/SC/MATH 2015 3.0 or AS/SC/AK/MATH 3010 3.0.

Degree credit exclusions: AK/AS/SC/COSC 4242 3.0, SC/EATS 4020 3.0, AS/SC/MATH 4130B 3.0, AS/SC/MATH 4930C 3.0, SC/PHYS 4060 3.0.

AS/SC/MATH 4930 3.0 Topics in Applied Statistics. Each time this course is given, it is on a topic chosen from the following:

    A   statistical quality control

    B   simulation and the Monte Carlo method

    C   forecasting and applied time series

    D   applied decision theory.

Prerequisites: AS/SC/AK/MATH 3330 3.0; AS/SC/AK/MATH 3034 3.0 or AS/SC/AK/MATH 3230 3.0 or AS/SC/AK/MATH 3430 3.0.

McLaughlin College – Arts

Academic Program Office:
  237 McLaughlin, (416) 736-5128
College Master:
  David Shugarman
Academic Advisor:
  Terry Conlin

Listed below are the 1000-level and 2000-level 9 credit Foundations courses which are part of the Faculty of Arts General Education requirement. These courses introduce students to interdisciplinary study and emphasize critical thinking, reading, and writing skills at the university level, and reflect the academic mandate of the College.

Students enrolling in McLaughlin College Foundation courses, in either the Division of Humanities or the Division of Social Sciences, will be members of McLaughlin College with access to academic advising, orientation programs, social and co-curricular events.

1000-Level Courses

AS/HUMA 1950 9.0 Concepts of the "Male" and "Female" in the West. An examination of the origins of, and the interrelationships among, gender, male and female concepts and roles through myth, literature, art, and artifacts from various Western cultures, past and present.

Degree credit exclusion: AS/HUMA 1950 6.0.

AS/HUMA 2960 9.0 The Body in Western Culture. From an interdisciplinary perspective this course explores the attitudes of Western culture to the body and to entities such as soul, spirit and mind which have been contrasted with it.

AS/SOSC 1130 9.0 International Migration. The course examines why people leave their native lands and what becomes of them in the countries to which they immigrate, with particular reference to the impact of the immigrant on the host country, using Canadian examples.

Degree credit exclusions: AS/SOSC 1130 6.0, AS/SOSC 1139 9.0.

AS/SOSC 1140 9.0 Self, Culture, and Society: The Problem of Personal Identity. The course concerns the development of concepts of culture by which individuals seek to understand themselves and the world about them, using materials from anthropology, sociology, and philosophy, and with the aim of developing a critique of our own situation.

Degree credit exclusion: AS/SOSC 1140 6.0.

AS/SOSC 1188 9.0 Women's Roles. The intersection of gender and culture is considered, with emphasis on women's issues. We explore the role of women in Canada and elsewhere, assessing how nation and culture shape gender discourses, and we examine aboriginal issues at home and abroad.

AS/SOSC 1200 9.0 Canadian Problems. The conceptual framework that has been developed out of this experience is used to examine a number of contemporary problems, selected each year on the basis of their topicality and relevance to a comprehensive understanding of current Canadian public policy.

Degree credit exclusion: AS/SOSC 1200 6.0.

AS/SOSC 1350 9.0 Women and the Law. This course explores the role of gender within the context of the legal system. Current issues that highlight the relationship between gender and law are examined by analyzing both legislation and case law. Topics include: divorce, rape, and equal pay.

Degree credit exclusion: AS/SOSC 1350 6.0.

AS/SOSC 1520 9.0 Markets and Democracy: The Development of Industrial Society. The development of industrial capitalism has entailed profound changes in ways of living. The course will consider the spread of the market economy, the industrialization of production and the associated transformation of social and political institutions and ideas.

Degree credit exclusions: AS/SOSC 1520 6.0, AS/SOSC 2510 6.0.

AS/SOSC 1535 9.0 Societies and Economic Systems. This course examines the 20th century's two dominant economic systems: Western capitalism and eastern European socialism. It provides a comprehensive understanding of the theory and practice of both systems, and discusses movement between them.

AS/SOSC 2150 9.0 Families in Crisis: Issues of Health Environments and Poverty. This course examines the crisis of the contemporary family. We use the family therapy literature to examine the crisis within the family system; and we also use the critical perspectives of Marxism, psychoanalysis and feminism to understand the position of the family in the surrounding social world.

Degree credit exclusions: AS/SOSC 2150 6.0, AS/SOCI 3660 6.0, AS/SOSC 3150 6.0.

AS/SOSC 2200 9.0 Loyalty, Sovereignty, Democracy: Canadian Identities in the 20th Century. An introduction to the Program in Canadian Studies. A critical assessment of the body of knowledge on Canada as it has developed in selected disciplines. Works of various scholars are examined to illustrate approaches used.

Degree credit exclusion: AS/SOSC 2200 6.0.

Note: This course is required of students in the Canadian Studies Program, but also is open to others.

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Music – Fine Arts

Department Office:
225 Winters, (416) 736-5186
Associate Professor and Chair of the Department:
M. Coghlan
Professors:
C. Petrowska, T. Sankaran
Professor Emeritus:
A. Clarkson, J. Tenney
Associate Professors:
R. Bowman, B. Diamond, D. Lidov, D. Mott, C. Sokol, P. Wait, R. Witmer
Associate Professor Emeritus:
R.S. Beckwith, P. Werren
Assistant Professors:
D. de Val, J. Gittins, G. Halls, S. Otto, R. Simms
Adjunct Professor:
O. Peterson

Programs of Study

The mandate of our students and faculty is to make and share music and to acquire, develop and disseminate musical knowledge. We understand musical study as interacting with nearly all studies pursued in the University - those of the humanities and the other fine arts, the social and natural sciences and the professions. From its inception, the Music Department has emphasized the study and performance of contemporary music in all its diversity, while bringing to bear a wide range of historical and social perspectives on the music of other times and places.

Students who major in music pursue either the BA Honours or BFA Honours degree. Each of these addresses both academic and practical concerns, combining the knowledge and skills needed for professional work in music with experience that will stimulate lifelong musical and personal growth. Undergraduate studies include courses in performance, composition, music history and ethnology, theory and pedagogy, with the emphasis largely depending on the student's own interests and abilities. Many of these courses are also available to non-majors, with opportunities for participation in various performances and musical events on and off campus organized by members of the department.

Both the BA Honours and BFA Honours degree programs comprise a total of 120 credits and may be completed in four years of full-time study or over a longer period of part-time study. The major program in Music may be combined with a second major in the Faculty of Arts, or with a minor in the Faculty of Arts, Environmental Studies, Pure and Applied Science or Fine Arts. A five-year program leading to two degrees (the BA Honours or BFA Honours in Music, and the Bachelor of Education degree) is also available. A minor in Music may be pursued by qualified honours degree students in the Faculties of Arts, Environmental Studies and Fine Arts.

Admission to the department is by audition. Further information on audition evaluations, admissions, degree requirements, and Faculty of Fine Arts regulations may be found in the Faculty of Fine Arts section of this Calendar.

In the area of performance, the qualified student may select one or more of a number of courses including chamber ensembles in Western art music (piano, percussion, winds, strings, voice, guitar), jazz, classical music of India, Philippine gong ensemble, and contemporary music both notated and improvised. Each course entails ensemble workshops, study of the history and literature of the instruments, and attention to individual problems of performance. Performance experience in large ensembles is provided by the Choir, String Orchestra, Jazz Orchestra, Jazz Choir, Wind Symphony, and Contemporary Improvisation Ensemble.

In the area of composition, instruction is given in the skills of writing in score, arranging and orchestration. In addition, fully equipped digital and MIDI studios provide facilities for learning all phases of the composition and production of music.

In the area of musical research (music history, area studies and ethnomusicology), the aim is to integrate musicianship with the history, theory, and anthropology of music. Intensive study may be pursued in the musics of Asia and the Americas as well as of Europe, past and present.

All Music majors complete a sequence of foundational courses which equips them with essential concepts and practical skills in ear-training, sight-singing, rhythm, theory, and awareness of the social, cultural, and historical contexts of music. These requirements include FA/MUSI 1000 6.0, FA/MUSI 1200 9.0, FA/MUSI 2200 6.0, FA/MUSI 2201 3.0, and FA/MUSI 2202 3.0. A student may be exempted from one or more of those courses by passing proficiency exams; otherwise, students who do not maintain enrolment in the foundation courses scheduled for their first and second years may not be enrolled in performance and composition courses. These foundation courses are prerequisite for all the department's upper-level offerings for majors, and both full and part-time students must complete them within their first 60 credits. All Music majors must complete 30 upper level Music credits (at or above the 3000 level), including at least 18 credits in studies courses for the BA Honours degree, and at least 12 credits in studies courses and at least 12 credits in studio courses for the BFA Honours degree. (See the lists of courses below.)

In addition to courses in Music, the BA Honours and BFA Honours degrees require 18 general education credits, and 12 credits from other departments in Fine Arts. Both degrees allow elective courses in addition to the requirements listed above.

For Degree Credit, Music Courses are Classified as Follows:

Non-Major Courses (not open to Music majors or minors):

FA/MUSI 1511 3.0, 1512 3.0, 1520 6.0, 1530 6.0 (In addition, many of the courses listed below are available to non-majors.)

Foundation Courses:

FA/MUSI 1000 6.0, 1200 9.0, 2200 6.0, 2201 3.0, 2202 3.0. (All other 1000- and 2000-level Music courses are counted as electives.)

Upper-Level Studies Courses:

FA/MUSI 3220 3.0, 3300 6.0, 3310 6.0, 3320 6.0, 3340 6.0, 3350 6.0, 3360 6.0, 3370 3.0, 3380 3.0, 3390 3.0, 3390 6.0, 3460 3.0, 3470 3.0, 4200 3.0, 4300 3.0, 4320 3.0, 4370 3.0, 4380 3.0, 4381 3.0, 4390 3.0, 4390 6.0, 4399 3.0, 4590 3.0, 4590 6.0, 4600 6.0.

Upper-Level Studio Courses:

FA/MUSI 3000 6.0, 3010 6.0, 3020 3.0, 3024 3.0, 3025 3.0, 3028 3.0, 3029 6.0, 3031 6.0, 3032 6.0, 3040 6.0, 3041 6.0, 3042 3.0, 3051 6.0, 3052 3.0, 3053 3.0, 3059 6.0, 3070 3.0/6.0, 3071 3.0, 3080 6.0, 3110 6.0, 3120 3.0, 3131 3.0, 3132 3.0, 3140 6.0, 3201 3.0, 3202 3.0, 3210 6.0, 3240 6.0, 3450 3.0, 3460 3.0, 3900 3.0/6.0, 4020 3.0, 4024 3.0, 4025 3.0, 4028 3.0, 4029 6.0, 4031 6.0, 4032 6.0, 4040 6.0, 4041 6.0, 4051 6.0, 4052 3.0, 4053 3.0, 4059 6.0, 4070 3.0/6.0, 4080 6.0, 4110 6.0, 4140 6.0, 4150 6.0, 4590 3.0, 4590 6.0, 4900 3.0/6.0.

Note: Some courses involve additional maintenance fees. Consult the Department's supplementary calendar for details.

Courses in Music

Note: For new courses, the list of courses offered in a given term, and detailed course descriptions, consult the supplementary calendar available from the Department office.

FA/MUSI 1000 6.0 Workshop in Musicianship I. An intensive course designed to develop musical sensitivity, imagination, and practical skills, through a variety of individual exercises in singing, playing, composing, and listening. Four hours plus tutorial.

Limited to Music majors and minors and required of all new majors. Available to students in Fine Arts Cultural Studies by entrance examination.

FA/MUSI 1020 3.0 Classical Performance: Individual Instruction. This course provides instruction in instrumental or vocal performance. Students enrol in the course corresponding to their instrument.

- A. Flute
- B. Oboe
- C. Clarinet
- D. Bassoon
- E. Saxophone
- F. French Horn
- G. Trumpet
- H. Trombone
- I. Tuba
- J. Percussion
- K. Piano
- L. Guitar
- M. Voice
- N. Violin
- O. Viola
- P. Cello
- Q. Double Bass

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 1024 3.0 or FA/MUSI 1025 3.0 or FA/MUSI 1026 3.0.

FA/MUSI 1022 3.0 York University Women's Chorus. This course is open to all qualified York University students. The York University Women's Chorus performs repertoire written especially for soprano and also voice ranges, and presents several concerts annually. Open to non-majors.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 1024 3.0 York University Concert Choir. This course is open to all qualified York University students and offers performance training in the environment of a large choir.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 1025 3.0 York University Wind Symphony. This course is open to all qualified York University students and offers performance training in the environment of a large ensemble.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 1026 3.0 Orchestra. This course is open to all qualified York University students and offers performance training in the environment of a large ensemble.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 1028 3.0 York Chamber Music Ensembles. This course provides training and experience in the performance of chamber music. Students enrol in one of the following ensembles:

- A. Accompanying
- B. York Brass Ensemble
- G. York Guitar Ensemble
- K. York Chamber Ensembles (Keyboard)
- P. York Percussion Ensemble
- S. York Chamber Strings
- V. York Vocal Ensembles
- W. York Woodwind Ensemble

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 1020 3.0.

FA/MUSI 1031 6.0 Piano Improvisation and Contemporary Styles. Designed for pianists of all backgrounds interested in exploring a variety of improvisational practices and twentieth century techniques and styles. Students learn to develop a compositional

orientation to improvisation which allows the free exploration and integration of materials and processes from all periods and cultures.

Prerequisite: Permission of the course director, by audition. Open to non-majors.

Prerequisites or corequisites: FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0.

FA/MUSI 1032 6.0 Contemporary Musicianship and Improvisation. Designed to integrate musicianship training with work in composition and improvisation. Development of the skills, strategies and sensibilities required to achieve fluency in spontaneous solo and ensemble music making, and the development and refining of one's own musical "voice" are among the main course objectives.

Prerequisite: Permission of the course director, by audition. Open to non-majors.

Prerequisites or corequisites: FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0.

FA/MUSI 1050 6.0 Introduction to Jazz Performance. Improvisation and ensemble playing in the jazz idiom, intended for students with instrumental proficiency and musical literacy, and some experience in jazz performance.

Prerequisite: Permission of the course director, by audition. All aspirants can receive further information on auditions from the Department office. Open to non-majors.

Prerequisites or corequisites: FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0.

FA/MUSI 1051 6.0 Jazz Workshop I. A systematic approach to improvising, and ensemble playing in the jazz idiom. The course is designed primarily for students with instrumental proficiency and basic experience in small group jazz performance and/or jazz theory. Hours vary.

Prerequisite: Permission of the course director, by audition. Open to non-majors.

Prerequisites or corequisites: FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0.

FA/MUSI 1052 3.0 Jazz Orchestra I. The York Jazz Orchestra performs traditional and contemporary jazz for large ensembles, including student compositions as well as music by noted jazz composers.

Prerequisite: Permission of the course director, by audition. Open to non-majors.

Note: The Jazz Orchestra meets from September to April.

FA/MUSI 1053 3.0 Jazz Choir I. This course provides instruction in jazz choral techniques and emphasizes the development of vocal performance skills within the Jazz tradition.

Prerequisite: Permission of the course director, by audition.

Note: The Jazz Choir meets from September to April.

FA/MUSI 1059 3.0 Jazz Theory and Musicianship I. A jazz theory course for students in the jazz performance stream. All students enrolled in FA/MUSI 1051 6.0 must be concurrently enrolled in FA/MUSI 1059 3.0.

However, qualified students may elect to take FA/MUSI 1059 3.0 without concurrent enrolment in FA/MUSI 1051 6.0.

Corequisite: FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0.

FA/MUSI 1080 6.0 Classical Piano. Instruction and recital preparation in classical piano through individual lessons and master classes.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 1110 3.0 Composition Studio I. An introduction to musical composition for acoustic instruments and voice, emphasizing clarity as attained by distinct decisions about all compositional variables and adequate notation of these. Students are expected to expand their idiomatic ranges.

Prerequisites or corequisites: FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0. Open to non-majors/minors by permission of the course director.

Degree credit exclusion: the former FA/MUSI 2110 3.0.

FA/MUSI 1140 6.0 Digital and Electronic Media I. This course deals with the historical, technical and aesthetic aspects of electronic music systems in theory, composition and performance. Work includes the theory and analysis of acoustics, sound recording, classical tape techniques, synthesizers, microphones, mixers and various digital and analogue devices and methods. Lab fee: $100.00.

Prerequisites or corequisites: For Music majors, FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0. Open to non-majors/minors by permission of the course director.

FA/MUSI 1200 9.0 Musics and Cultures I. Students are exposed to concepts underlying music as a whole, with emphasis upon the cultivation of listening skills and upon the aural recognition of particular kinds of musical materials. Topics include rhythm and meter, acoustics, melody, harmony, texture, musical form and basic techniques of analysis. Six hours. Open only to Music majors and minors, and required of all first year full time Music majors. Available to students in Fine Arts Cultural Studies by entrance examination.

FA/MUSI 1511 3.0 The Musical Experience I. This course teaches active, creative listening skills and explores the power and significance of music in human life, using illustrations from a broad range of musical practices including jazz, popular, world, and classical musics.

Note: This course is designed for students not majoring or minoring in music. No prior training in music is required. Not open to Music majors or minors. Equivalent to the first half of AK/MUSI 2210 6.0. Materials fee required.

FA/MUSI 1512 3.0 The Musical Experience II. A continuation of FA/MUSI 1511 3.0.

Note: This course is designed for students not majoring or minoring in music. No prior training

in music is required. Not open to Music majors or minors. Equivalent to the second half of AK/MUSI 2210 6.0. Materials fee applies.

Prerequisite: FA/MUSI 1511 3.0.

FA/MUSI 1520 6.0 Rhythm and Blues, Soul, Funk and Rap. This course explores in-depth the range of African-American popular musics that have come into existence since the end of World War II. All styles and genres are studied from both a musicological and sociological perspective. Designed for students not majoring or minoring in Music.

Prerequisite: None.

FA/MUSI 1530 6.0 Rock, Country and Popular Music. This course explores in-depth from both a musicological and sociological perspective the range of Euro-American popular musics as well as some styles of British popular music that have come into existence since the end of World War II. Designed for students not majoring or minoring in Music.

Prerequisite: None.

FA/MUSI 2020 3.0 Classical Performance. This course provides instruction in instrumental or vocal performance. Students enrol in the course corresponding to their particular instrument.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 2024 3.0 or FA/MUSI 2025 3.0 or FA/MUSI 2026 3.0.

FA/MUSI 2022 3.0 York University Women's Chorus. Continuation of FA/MUSI 1022 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2024 3.0 York University Concert Choir. Continuation of FA/MUSI 1024 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2025 3.0 York University Wind Symphony. Continuation of FA/MUSI 1025 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2026 3.0 Orchestra. Continuation of FA/MUSI 1026 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2028 3.0 York Chamber Music Ensembles. Continuation of FA/MUSI 1028 3.0.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 2020 3.0.

FA/MUSI 2031 6.0 Piano Improvision and Contemporary Styles. Continuation of FA/MUSI 1031 6.0. Hours vary.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2032 6.0 Contemporary Musicianship and Improvisation. Continuation of FA/MUSI 1032 6.0. Hours vary.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2040 6.0 South Indian Classical Music I. Practical training in performance styles, together with some of the appropriate theory, terminology and cultural background.

Prerequisite: No prior experience is necessary, but permission of the course director is required. Open to non-majors.

FA/MUSI 2041 6.0 Philippine Kolintang Ensemble I. Practical training in performance styles, together with some of the appropriate theory, terminology and cultural background.

Prerequisite: No prior experience is necessary, but permission of the course director is required. Open to non-majors.

FA/MUSI 2042 3.0 Gamelan Orchestra. Group instruction in the technique and performance of Indonesian Gamelan repertoire. Rhythmic and melodic techniques are developed while performing on various gongs, metalophones, flutes, and drums of the Gamelan Orchestra. Repertoire is memorized and ensemble performance practice is emphasized through public performance. Not open to students who have taken FA/MUSI 2042G 3.0.

Prerequisite: Permission of the course director. No prior experience is necessary. Open to majors and non-majors.

FA/MUSI 2043 3.0 Ghanaian Drum Ensemble. Group instruction in the rhythmic and melodic technique and performance of the Ghanaian Drum Ensemble. Practical instruction on the two fontomfrom ensembles with an emphasis on repertoire, performance skill, and ensemble techniques.

Prerequisite: Permission of the course director. No prior experience is necessary. Open to majors and non-majors.

FA/MUSI 2044 3.0 North American String Band. Practical instruction in several vernacular fiddle-based musical traditions of North America. Some knowledge of fiddle, guitar, piano, harmonica, or tin whistle is an asset.

Prerequisite: Permission of the course director. No prior experience is necessary. Open to majors and non-majors.

FA/MUSI 2045 3.0 Klezmer Folk Ensemble. Practical performance instruction in the Klezmer musical tradition. Some knowledge of fiddle, guitar, piano, or clarinet required. The course develops facility and repertoire in the improvisational styles associated with the Klezmer (Jewish Wedding Band) tradition of central Europe and the Middle East.

Prerequisite: Permission of the course director. No prior experience is necessary. Open to majors and non-majors.

FA/MUSI 2046 3.0 African-American Musics: Ragtime, Blues, Boogie-Woogie, and Barrelhouse Piano. Practical performance instruction in the African-American traditions of ragtime, blues, barrelhouse, boogie-woogie, and

stride piano styles. Students develop manual independence, rhythmic security, improvisation skills, and stylistic awareness using repertoire chosen from the tradition. Both aural sources and written scores are consulted and used to recreate the music.

Prerequisite: Permission of the course director. Open to majors and non-majors with appropriate skill level in piano playing.

FA/MUSI 2047 3.0 Chinese Classical Ensemble. Practical and repertoire studies in traditional Chinese orchestral techniques (chin, erhu etc.) Students learn and perform pieces from the repertoire while concentrating on appropriate instrumental techniques.

Prerequisite: Permission of the course director. No prior experience is necessary. Open to majors and non-majors.

FA/MUSI 2048 3.0 Japanese Music. Practical and repertoire studies in traditional instrumental techniques (shakuhachi, koto etc.) Students concentrate on issues of performance such as tone colour, rhythmic accuracy and nuance, and ensemble performance.

Prerequisite: Permission of the course director. No prior experience is necessary. Open to majors and non-majors.

FA/MUSI 2049 3.0 Cuban Music. A performance course dealing primarily with Cuban popular music styles. An in-depth examination of various Afrocuban traditional musics, which have had important influence on the popular styles, will also be presented. Ensembles concentrate on group dynamics and rhythmic interaction with an emphasis on rhythmic feel, style, and groove.

Prerequisite: Permission of the course director. No prior experience is necessary. Open to majors and non-majors.

FA/MUSI 2051 6.0 Jazz Workshop II. Continuation of FA/MUSI 1051 6.0. Hours vary.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2052 3.0 Jazz Orchestra II. Continuation of FA/MUSI 1052 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2053 3.0 Jazz Choir II. Continuation of FA/MUSI 1053 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 2059 3.0 Jazz Theory and Musicianship II. A jazz theory course for students in the jazz performance stream. All students enrolled in FA/MUSI 2051 6.0 must be concurrently enrolled in FA/MUSI 2059 3.0. However, qualified students may elect to take FA/MUSI 2059 3.0 without concurrent enrolment in FA/MUSI 2051 6.0.

Prerequisite: FA/MUSI 1059 3.0 or equivalent.

Prerequisite or corequisite: FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0.

FA/MUSI 2080 6.0 Classical Piano. Instruction and recital preparation in classical piano through individual lessons and master classes.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 2081 3.0.

FA/MUSI 2081 3.0 Piano Literature and Pedagogy. Literature and pedagogy of classical piano. Open to non-majors who have studied piano. Activities vary according to the level of skill and experience of the individual student.

Prerequisite: Permission of the course director.

FA/MUSI 2110 3.0 Composition Studio II. A continuation of work begun in FA/MUSI 1110 3.0, emphasizing the control of variation, repetition, and development to create coherent musical thought in short compositions for small groups of acoustic instruments and voices.

Prerequisite: FA/MUSI 1110 3.0 (formerly FA/MUSI 2110 3.0) or permission of the course director.

FA/MUSI 2140 6.0 Electronic Media Workshop I. Electronic music systems in composition and performance. Studio work includes classical tape composition techniques, synthesizer techniques, use of "concrete" sound sources, microphone and tape recording techniques, and creative mixing. Three hours per week plus three hours of lab time.

Prerequisites or corequisites: For Music majors and minors, FA/MUSI 1000 6.0 and FA/MUSI 1200 9.0. Limited enrolment. Open to non-majors/minors by permission of the course director.

Note: Materials fee of $l00.

FA/MUSI 2200 6.0 Musics and Cultures II. A continuation of FA/MUSI 1200 9.0. First term: topics in North American Music, with emphasis on the dissemination of musical styles and their social contexts. Second term: contemporary music styles and contemporary musical issues. Required of all music majors.

Prerequisite: FA/MUSI 1200 9.0.

FA/MUSI 2201 3.0 Counterpoint. Students master the traditional pedagogy of species counterpoint while studying examples of the Renaissance vocal polyphonic style from which it is derived. Correlated work in vocal, aural and keyboard skills is a major component of the course. Four hours plus tutorial.

Prerequisites: FA/MUSI 1000 6.0 with a minimum final grade of C+, or equivalent score on a proficiency exam, and FA/MUSI 1200 9.0.

FA/MUSI 2202 3.0 Harmony. Students study the traditional art of selecting and connecting chords in four voices. Idioms which draw on the formulae of this texture in freer or abstract presentations are also considered, as these are the materials of classical music which are most nearly adopted in jazz, popular, and some folk music styles. Four hours plus tutorial.

Prerequisites: FA/MUSI 1000 6.0 with a minimum final grade of C+, or equivalent score on a proficiency exam, and FA/MUSI 1200 9.0.

FA/MUSI 3000 6.0 Score Study, Advanced Musicianship, and Conducting. Advanced musicianship, with emphasis upon skills and methods applicable to learning and teaching music from orchestral vocal and ensemble scores. Individual and class exercises in conducting, analysis, aural recognition, keyboard harmony, sight-reading, and transposing.

Prerequisites or corequisites: Foundation courses. Keyboard proficiency is helpful.

FA/MUSI 3010 6.0 Rhythm. A comprehensive musicianship course, developing rhythmic skills and perception through a detailed study of Indian rhythmic theory and practice from the disciplines of music and dance. Rhythmic systems of other musical cultures are also discussed in a comparative context.

Prerequisites or corequisites: Foundation courses or permission of the course director.

FA/MUSI 3020 3.0 Classical Performance. This course provides instruction in instrumental or vocal performance. Students enrol in the course number corresponding to their particular instrument.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 3024 3.0 or FA/MUSI 3025 3.0 or FA/MUSI 3026 3.0.

FA/MUSI 3022 3.0 York University Women's Chorus. Continuation of FA/MUSI 2022 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 3024 3.0 York University Concert Choir. Continuation of FA/MUSI 2024 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 3025 3.0 York University Wind Symphony. Continuation of FA/MUSI 2025 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 3026 3.0 Orchestra. Continuation of FA/MUSI 2026 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 3028 3.0 York Chamber Music Ensembles. Continuation of FA/MUSI 2028 3.0.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 3020 3.0.

FA/MUSI 3029 6.0 Recital and Master Class in Performance I. Advanced students in the classical performance stream may audition for an enriched performance experience in their third year. This course is designed for students who have the ability to pursue careers or graduate work in performance. Students are

required to perform a mid-year playing exam and a final, one-hour, adjudicated recital including twentieth century repertoire.

Prerequisite: At least 6 credits in classical performance at the 2000 level with a minimum grade of B+, or permission of the audition jury.

Corequisite: FA/MUSI 3020 3.0.

FA/MUSI 3031 6.0 Piano Improvisation and Contemporary Styles. Continuation of FA/MUSI 2031 6.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 3032 6.0 Contemporary Musicianship and Improvisation. Continuation of FA/MUSI 2032 6.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 3040 6.0 South Indian Classical Music II. A continuation of FA/MUSI 2040 6.0.

Prerequisites: FA/MUSI 2040 6.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3041 6.0 Philippine Kolintang Ensemble II. A continuation of FA/MUSI 2041 6.0.

Prerequisites: FA/MUSI 2041 6.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3042 3.0 Gamelan Orchestra. A continuation of FA/MUSI 2042 3.0.

Prerequisites: FA/MUSI 2042G 3.0 or FA/MUSI 2042 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3043 3.0 Ghanaian Drum Ensemble. A continuation of FA/MUSI 2043 3.0.

Prerequisites: FA/MUSI 2043 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3044 3.0 North American String Band. A continuation of FA/MUSI 2044 3.0.

Prerequisites: FA/MUSI 2044 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3045 6.0 Klezmer Folk Ensemble. A continuation of FA/MUSI 2045 3.0.

Prerequisites: FA/MUSI 2045 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3046 6.0 African-American Musics: Ragtime, Blues, Boogie-Woogie, and Barrelhouse Piano. A continuation of FA/MUSI 2046 3.0.

Prerequisites: FA/MUSI 2046 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3047 3.0 Chinese Classical Ensemble. A continuation of FA/MUSI 2047 3.0.

Prerequisites: FA/MUSI 2047 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3048 3.0 Japanese Music. A continuation of FA/MUSI 2048 3.0.

Prerequisites: FA/MUSI 2048 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3049 3.0 Cuban Music. A continuation of FA/MUSI 2049 3.0.

Prerequisites: FA/MUSI 2049 3.0 and permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3051 6.0 Jazz Workshop III. Advanced improvising and ensemble playing in contemporary jazz, emphasizing theoretical and practical competence in some of its main idioms. Students receive applied training in performance workshops each week.

Prerequisites: FA/MUSI 2051 6.0 and permission of the course director, by audition.

Corequisite: FA/MUSI 3059 6.0.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3052 3.0 Jazz Orchestra III. Continuation of FA/MUSI 2052 3.0.

Prerequisite: Permission of course director, by audition.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3053 3.0 Jazz Choir III. Continuation of FA/MUSI 2053 3.0.

Prerequisites and corequisites: For Music majors, Foundation Courses.

FA/MUSI 3059 6.0 Jazz Theory and Musicianship III. An intensive jazz theory course for students in the jazz performance stream who through assessment at the beginning of third year, are eligible to proceed to advanced studies.

Prerequisite: FA/MUSI 2059 3.0 or equivalent, or permission of the course director.

Prerequisites or corequisites: For Music majors, Foundation Courses.

FA/MUSI 3070 3.0/6.0 Electro-acoustic Orchestra. This course allows students to participate in a large electro-acoustic orchestra that will create (re-create) and perform both historical and contemporary repertoire using both the latest digital sound production hardware as well as traditional instruments. A participating student will be required to

function as both performer and in at least one other capacity such as composer, arranger, improviser, or conductor.

FA/MUSI 3071 3.0 Synthesizer Performance. This course prepares the student for a career as a professional synthesizer artist. It deals with the development of specific performance techniques, style considerations, and sonic perception related to contemporary synthesizer practice.

Prerequisite: Foundation courses.

FA/MUSI 3080 6.0 Classical Piano. Instruction and recital preparation in classical piano through individual lessons and master classes.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 3081 3.0.

FA/MUSI 3081 3.0 Piano Literature and Pedagogy. Literature and pedagogy of classical piano. Open to non-majors who have studied piano. Activities vary according to the level of skill and experience of the individual student.

Prerequisite: Permission of the course director.

FA/MUSI 3110 6.0 Composition Studio III. Students are encouraged to compose in contemporary idioms and to undertake exercises which expand their awareness of styles, methods, materials, notation systems. Hours vary.

Prerequisites or corequisites: Foundation courses or permission of the course director.

FA/MUSI 3120 3.0 Song Writing and Repertoire. Students develop and explore aspects of the compositional process by dealing with melodic, rhythmic, harmonic, formal, and textural considerations as they pertain to song writing. Students are required to produce a substantial number of original songs and analyze relevant material from the literature. The use of the multi-track recording process is studied as a compositional aid and as a means of producing pre-production demos.

Prerequisites: Foundation courses.

Note: Materials fee, $25.

FA/MUSI 3131 3.0 Jazz Composition and Arranging (Small Ensembles). A study of jazz compositional techniques of the past and present through analysis, transcription and performance. Aims of the course are development of a basic craft, and experimentation leading towards a more personal expression. Projects for small ensembles are required and read by members of the class.

Prerequisites: FA/MUSI 2201 3.0, FA/MUSI 2202 3.0 and FA/MUSI 2051 6.0, or permission of the course director.

FA/MUSI 3132 3.0 Jazz Composition and Arranging (Large Ensembles). A study of jazz compositional techniques of the past and present through analysis, transcription and performance. Aims of the course are development of a basic craft, and experimentation leading towards a more personal expression. Projects for large ensembles are required and read by members of the class.

Prerequisites: FA/MUSI 2201 3.0, FA/MUSI 2202 3.0 and FA/MUSI 2051 6.0, or permission of the course director.

FA/MUSI 3140 6.0 Electronic Media Workshop II. Continuation of FA/MUSI 2140 6.0.

Prerequisite: FA/MUSI 2140 6.0 or equivalent, or permission of the course director. Enrolment limited.

Note: Materials fee, $l00.

FA/MUSI 3201 3.0 Fugal Style. An introduction to fugal composition including advanced work in tonal harmony and counterpoint. Students analyze compositions in fugal style, principally those of J.S. Bach with some regard to earlier and later developments, and learn to organize and execute compositions using the techniques of this genre.

Prerequisite: FA/MUSI 2201 3.0.

Prerequisite or corequisite: FA/MUSI 2200 6.0.

FA/MUSI 3202 3.0 Sonata Style. An introduction to composition in sonata form and related genres in advanced tonal harmonic style. Students analyze compositions in sonata style, principally those of Haydn, Mozart and Beethoven, with some regard to earlier and later developments, and learn to organize and execute compositions using the techniques of this genre.

Prerequisite: FA/MUSI 2202 3.0.

Prerequisite or corequisite: FA/MUSI 2200 6.0.

FA/MUSI 3210 6.0 Introduction to Sonic Architecture and Design. This course introduces students to the complex world of sonic architecture and design. Through the manipulation, control, and creation of digital instruments, the class will explore the musical and technical aspects of sonic theory and practice in the digital domain.

Prerequisite: For Music majors, Foundation courses.

FA/MUSI 3220 3.0 Introduction to Alternate Tunings. This course deals with the historical, theoretical, aesthetic and practical aspects of various alternate and microtonal tuning systems. Mathematical relationships, practical applications, sonic characteristics and compositional aesthetics will be discussed. Students will be encouraged to create original systems and to perform and compose music using various temperaments.

Prerequisite: Foundation courses.

FA/MUSI 3240 6.0 Instrumentation and Orchestration. A study of instruments, singly and in combination, with respect to their use in composition. The course emphasizes traditional instruments of the band and orchestra, though other types of instrumentation may be considered. The student's main work involves regular exercises in arranging or composing in a variety of styles.

Prerequisites: FA/MUSI 2201 3.0 and FA/MUSI 2202 3.0.

FA/MUSI 3300 6.0 Music of World Cultures. An introduction, through listening and analysis, filmed or live demonstrations, and occasional field trips, to the musical traditions of specific nations and communities. The social practices, concepts and sound structures of the music, as well as the impact of contemporary recording technologies will be explored.

Prerequisite: For Music majors, foundation courses.

Degree credit exclusion: FA/MUSI 2310 6.0.

FA/MUSI 3310 6.0 Music in the Modern Era. A study of major musical developments from 1890 to 1950 in Europe and North America, with emphasis on the relationship between innovation and tradition and on problems of style and communication in an era of rapid social and cultural change.

Prerequisites: For Music majors, foundation courses. Open to non-majors/minors by permission of the course director.

FA/MUSI 3320 6.0 Music of India. Theoretical systems and contemporary performance styles in relation to one another and in the context of a number of closely related aspects of Indian culture.

Prerequisites or corequisites: Foundation courses. Open to non-majors/minors by permission of the course director.

FA/MUSI 3340 6.0 History of European Music. A survey of the history of European music from 1590 to 1890, with particular attention to Italy, France, Austria, and Germany. Important works of major composers are examined in detail with reference to the pertinent social and historical contexts.

Prerequisite: For Music majors, foundation courses.

Degree credit exclusions: FA/MUSI 2220 6.0, AK/MUSI 2220 6.0.

FA/MUSI 3350 6.0 Music of the Americas. A study of the various musical traditions that have been absorbed and transformed by the emerging civilizations of the New World. Topics include: the history of music in British North America; the blending of African, European, and native idioms in Latin America and the Caribbean; the rise and development of jazz, blues, and urban popular music (including rock); the music and musical culture of minority groups; New World musics in their cultural context. Equivalent to AK/MUSI 3440 6.0.

Prerequisite: For Music majors, foundation courses.

Degree credit exclusion: FA/MUSI 2350 6.0.

FA/MUSI 3360 6.0 Jazz History and Repertory Studies. Jazz history and repertory emphasizing the small group tradition in the US from the mid-1930s to the late 1960s. Various paradigms for jazz history, style analysis, and criticism are examined, with attention to jazz as a repertory music as well as a musical process.

Prerequisites: For Music majors, foundation courses. Open to non-majors/minors by permission of the course director.

FA/MUSI 3370 3.0 Opera. A history of opera from its origins to the 20th century, exploring the interrelationship of music and drama. Production and staging techniques are discussed, and students are required to attend and comment critically upon all aspects of at least one live operatic performance.

FA/MUSI 3380 3.0 Western Art Song. A study of the interconnections between poetry and music in western art song, particularly in the 19th and 20th century German Lied, French chanson, and English/North American song.

FA/MUSI 3390 3.0/6.0 Special Topics I. In any given year, special studies courses may be offered.

Prerequisites: Foundation courses.

FA/MUSI 3450 3.0 Creative Applications of MIDI Technology. A major focus of the course is the mastery of MIDI technology as a means towards individual artistic expression. Class work includes regular assignments using a variety of instruments and techniques and demands both live and recorded performances. The use of MIDI-equipped mixers, effects units, and rhythm composers are explored.

Prerequisites: Foundation courses; or FA/MUSI 2110 3.0 and FA/MUSI 2111 3.0.

Note: Materials fee, $25.

FA/MUSI 3460 3.0 Music Engraving and Notation Using Computers. This course deals with aesthetic, theoretical and practical considerations involved in the production and printing of music scores, and develops skill in score layout, part extraction, preparation for publications, step time/MIDI input techniques, scanning, and other relevant techniques.

Prerequisite: Foundation courses.

FA/MUSI 3470 3.0 Pedagogical Applications of Computer Software in the Contemporary Music Curriculum. This course explores the recent and growing use of music software in teaching subjects such as ear training and rudiments, musicianship, theory, history and analysis. Computer-aided instruction and interactive tools are considered.

Prerequisite: Foundation courses.

FA/MUSI 3900 3.0/6.0 Special Options I. In any given year, special courses may be offered in theory, composition, or performance.

Prerequisites: Foundation Courses.

FA/MUSI 4020 3.0 Classical Performance. This course provides instruction in instrumental or vocal performance. Students enrol in the course corresponding to their particular instrument.

Corequisite: FA/MUSI 4024 3.0 or FA/MUSI 4025 3.0 or FA/MUSI 4026 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 4022 3.0 York University Women's Chorus. Continuation of FA/MUSI 3022 3.0.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 4024 3.0 York University Concert Choir. Continuation of FA/MUSI 3024 3.0.

Prerequisites: Permission of the course director, by audition.

FA/MUSI 4025 3.0 York University Wind Symphony. Continuation of FA/MUSI 3025 3.0.

Prerequisites: Permission of the course director, by audition.

FA/MUSI 4026 3.0 Orchestra. Continuation of FA/MUSI 3026 3.0.

Prerequisites: Permission of the course director, by audition.

FA/MUSI 4028 3.0 York Chamber Music Ensembles. Continuation of FA/MUSI 3028 3.0.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 4020 3.0.

FA/MUSI 4029 6.0 Recital and Master Class in Performance II. Continuation of FA/MUSI 3029 6.0.

Prerequisites: FA/MUSI 3029 6.0 with a minimum grade of B+, or permission of the audition jury.

Corequisite: FA/MUSI 4020 3.0.

FA/MUSI 4031 6.0 Piano Improvisation and Contemporary Styles. Continuation of FA/MUSI 3031 6.0.

Prerequisites: Permission of the course director, by audition.

FA/MUSI 4032 6.0 Contemporary Musicianship and Improvisation. Continuation of FA/MUSI 3032 6.0. Hours vary.

Prerequisite: Permission of the course director, by audition.

FA/MUSI 4040 6.0 South Indian Classical Music. Continuation of FA/MUSI 3040 6.0.

Prerequisites: FA/MUSI 3040 6.0 and permission of the course director.

FA/MUSI 4041 6.0 Philippine Kolintang Ensemble. Continuation of FA/MUSI 3041 6.0.

Prerequisites: FA/MUSI 3041 6.0 and permission of the course director.

FA/MUSI 4042 3.0 Gamelan Orchestra. A continuation of FA/MUSI 3042 3.0.

Prerequisites: FA/MUSI 3042 3.0 and permission of the course director.

FA/MUSI 4043 3.0 Ghanaian Drum Ensemble. A continuation of FA/MUSI 3043 3.0.

Prerequisites: FA/MUSI 3043 3.0 and permission of the course director.

FA/MUSI 4044 3.0 North American String Band. A continuation of FA/MUSI 3044 3.0.

Prerequisites: FA/MUSI 3044 3.0 and permission of the course director.

FA/MUSI 4045 3.0 Klezmer Folk Ensemble. A continuation of FA/MUSI 3045 3.0.

Prerequisites: FA/MUSI 3045 3.0 and permission of the course director.

FA/MUSI 4046 3.0 African-American Musics: Ragtime, Blues, Boogie-Woogie and Barrelhouse Piano. A continuation of FA/MUSI 3046 3.0.

Prerequisites: FA/MUSI 3046 3.0 and permission of the course director.

FA/MUSI 4047 3.0 Chinese Classical Ensemble. A continuation of FA/MUSI 3047 3.0.

Prerequisites: FA/MUSI 3047 3.0 and permission of the course director.

FA/MUSI 4048 3.0 Japanese Music. A continuation of FA/MUSI 3048 3.0.

Prerequisites: FA/MUSI 3048 3.0 and permission of the course director.

FA/MUSI 4049 3.0 Cuban Music. A continuation of FA/MUSI 3049 3.0.

Prerequisites: FA/MUSI 3049 3.0 and permission of the course director.

FA/MUSI 4051 6.0 Jazz Workshop IV. A continuation and intensification of FA/MUSI 3051 6.0. Students receive applied training in performance workshops each week.

Prerequisites: FA/MUSI 3051 6.0 and FA/MUSI 3059 6.0.

Corequisite: FA/MUSI 4059 6.0.

FA/MUSI 4052 3.0 Jazz Orchestra IV. Continuation of FA/MUSI 3052 3.0.

Prerequisites: Permission of the course director, by audition.

FA/MUSI 4053 3.0 Jazz Choir IV. Continuation of FA/MUSI 3053 3.0.

Prerequisites: FA/MUSI 3053 3.0 and permission of the course director, by audition, and for Music majors, Foundation Courses.

FA/MUSI 4059 6.0 Jazz Theory and Musicianship IV. A continuation and intensification of FA/MUSI 3059 6.0. All students in FA/MUSI 4051 6.0 must be concurrently enrolled in FA/MUSI 4059 6.0. Qualified students, however, may elect to take FA/MUSI 4059 6.0 without concurrent enrolment in FA/MUSI 4051 6.0.

Prerequisite: FA/MUSI 3059 6.0.

FA/MUSI 4070 3.0/6.0 Electro-acoustic Orchestra. This course allows students to participate in a large electro-acoustic orchestra that will create (re-create) and perform both historical and contemporary repertoire using both the latest digital sound production hardware as well as traditional instruments. A participating student will be required to function as both performer and in at least one other capacity such as composer, arranger, improviser, or conductor.

FA/MUSI 4080 6.0 Classical Piano. Instruction and recital preparation in classical piano through individual lessons and master classes.

Prerequisite: Permission of the course director, by audition.

Corequisite: FA/MUSI 4081 3.0.

FA/MUSI 4081 3.0 Piano Literature and Pedagogy. Literature and pedagogy of classical piano. Open to non-majors who have studied piano. Activities vary according to the level of skill and experience of the individual student.

Prerequisite: Permission of the course director.

FA/MUSI 4110 6.0 Composition Studio IV. A continuation of FA/MUSI 3110 6.0. Advanced work in composition, analysis, and current music-theoretic ideas of relevance to the composer.

Prerequisites: FA/MUSI 3110 6.0 and permission of the course director. Prior or concurrent courses in the theory and literature of twentieth century music, such as FA/MUSI 3310 6.0 or FA/MUSI 4300 3.0, are strongly recommended.

FA/MUSI 4140 6.0 Electronic Media Workshop III. A continuation of FA/MUSI 3140 6.0. Advanced electro-acoustical composition studies involving composing with analogue, digital and computer based music systems. Students are expected to complete and present several electro-acoustics compositions in the following formats tape, live and tape, acoustic instruments and tape.

Prerequisite: FA/MUSI 3140 6.0, and permission of the course director.

FA/MUSI 4150 6.0 Digital Recording, Editing and Composition. This course deals with digital composition techniques. Included are topics such as: hard disk recording, destructive and non-destructive editing, non-linear editing, digital signal processing, digital audio sampling, multipass processing, processor smoothing, effects portamento, sample looping, crossfading, and other additional rubrics.

Prerequisite: Foundation courses and permission of the course director.

FA/MUSI 4200 3.0 Topics in Advanced Theory and Analysis. A seminar in contemporary musical analysis emphasizing the comprehensive investigation of complete musical works. Drawing on such perspectives as set theory or Schenkerian reduction, the course introduces the student to research problems in theory and analysis from various perspectives.

Prerequisite: A minimum grade of B in a third year theory course.

FA/MUSI 4300 3.0 Studies in Contemporary Music. Analytical and historical studies of the theory and development of contemporary music, with emphasis on the latter half of the twentieth century.

Prerequisite: FA/MUSI 3310 6.0, or permission of the course director.

FA/MUSI 4320 3.0 Honours Seminar. Researchers are motivated by problems which reflect basic issues in intellectual history, humanities, science, and social science. In this course, pilot projects will introduce the broad

range of research tools which several centuries of theory and academic scholarship have made available to musical study.

Prerequisite: A minimum grade of B in an upper-level studies course.

FA/MUSI 4370 3.0 Music of Canada. Canadians tend to be sharply aware of the derivative aspects of their culture; yet the physiognomy of Canadian music taken as a whole is unique. This course studies selected aspects of Canadian musical achievements which offer perspectives on our national situation.

Prerequisite: FA/MUSI 3310 6.0, FA/MUSI 3350 6.0, or permission of the course director.

FA/MUSI 4380 3.0 Historical Studies in Music. The introductory unit of the course situates the chosen topic with regard to historiographical variables and methods. Then a focused study of a period, style, or individual is devoted to the detailed assessment of continuity, influence, and change in music history.

Prerequisite: An upper-level studies course.

FA/MUSI 4381 3.0 Cultural Studies in Music. Musical styles are shaped by their interactions with language, religion, economy, other arts, and with the whole fabric of social life. This course studies selected musical traditions with the aim of exploring their dependence on, and contribution to, the cultural matrix. When appropriate, the course may explore traditional activities in local communities.

Prerequisite: An upper-level studies course.

FA/MUSI 4390 3.0/6.0 Special Topics II. In any given year, advanced courses may be offered in history or area studies.

Prerequisite: An upper-level studies course.

FA/MUSI 4399 3.0 Special Topics in the Graduate Program. Fourth-year undergraduates who have the necessary background may apply to take certain half courses offered in the graduate program.

Prerequisites: Permission of both the Graduate Program Director and the course director; a minimum grade of B+ in an upper-level studies course.

FA/MUSI 4590 3.0/6.0 Honours Project in Music. A special project option open to fourth year students who have shown an exceptional ability to study independently and who have designed a course that cannot be accommodated elsewhere in the department's offerings. At the end of the year, the student's work is evaluated on the basis of one or more of the following: a recital, composition, research paper, or lecture-recital.

Note: See departmental supplementary calendar for specific requirements.

Prerequisite: Permission of the Curriculum Committee.

FA/MUSI 4600 6.0 Seminar on the Sonic Enhancement of Healing and Learning. A seminar exploring the use of sound, in conjunction with colour and other subtle energies, as tools for the enhancement of healing, learning, and creative activity in the context of recent literature from the disciplines of metaphysics,

physics, biology, psychology, phonology, thanatology, colour theory, and music composition.

Prerequisite: An upper level studies course, or permission of the course director.

FA/MUSI 4900 3.0/6.0 Special Options II. In any given year, advanced courses may be offered in theory, composition, or performance.

Prerequisite: A third-year theory, musicianship, composition, or performance course.

Natural Science – Pure and Applied Science

Division Office:
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Professor and Director of the Division:
    C.E. Holloway
Professors:
    J.J. Caldwell, J.N. Hattiangadi,
    J.M. Goodings, R.A. Jarrell, L.E. Licht,
    D.M. Logan, M.L. McCall, J. Sapp,
    C.G.H. Steel
Associate Professors:
    S. Jeffers, R.A. Koehler, J.G. Little,
    F.J. Morgan
Associate Professor Emeritus:
    G. Hunter
Senior Lecturers:
    P.A. Delaney, S.B. Joshi
Associate Lecturers:
    E.C. Gardonio, N. Smith

Courses in Natural Science

The Natural Science courses are designed, as part of the general education program, to acquaint those students not intending to be professionally concerned with science with the outlook, methods and some of the achievements of science. The individual courses offered approach this objective by selecting a particular area, problem or aspect of science in which the operations of the scientific enterprise can be studied in some detail.

The courses may be broadly classified into four areas, within which some overlap occurs, resulting in degree credit exclusions as noted. However, in certain circumstances, such exclusions are petitionable. The four categories are as follows:

a) History and Philosophy of Science and Technology (with science laboratories and/or tutorials): SC/NATS 1710 6.0, SC/NATS 1730 6.0, SC/NATS 1760 6.0;

b) Biological Science: SC/NATS 1610 6.0, SC/NATS 1620 6.0, SC/NATS 1650 6.0, SC/NATS 1660 6.0, SC/NATS 1680 6.0, SC/NATS 1690 6.0, SC/NATS 1695 6.0, SC/NATS 1850 6.0;

c) Environmental Science: SC/NATS 1640 6.0, SC/NATS 1770 6.0, SC/NATS 1840 6.0;

d) Physical Science: SC/NATS 1720 6.0 (also has a psychological component), SC/NATS 1740 6.0, SC/NATS 1750 6.0, SC/NATS 1780 6.0 (has an environmental aspect), SC/NATS 1790 6.0, SC/NATS 1810 6.0, SC/NATS 1820 6.0, SC/NATS 1830 6.0.

The Natural Science courses are intended primarily for non-Science majors. Courses in Biology, Chemistry, Earth and Atmospheric Science, Physics and Astronomy, and other science disciplines are described elsewhere in this section of the Calendar. Those courses are available, subject to prerequisites, as electives to students in the Faculties of Arts and Fine Arts. Six credits from 1000-level courses offered by the departments of Biology, Chemistry, Earth and Atmospheric Science, Physics and Astronomy, will satisfy the Faculty of Arts Natural Science general education requirement.

Grading Procedure. Grades will be assigned in the manner described by the Faculty of Pure and Applied Science in Science section III "Regulations Governing Examinations and Academic Standards."

Not all Natural Science courses will be offered in any given year. Some may be offered during the evening, once a week, in cooperation with Atkinson College. The contact hour information in the course outlines below specifies the number of hours per week when the course is taught in the daytime in a Fall/Winter Session. If the course is offered in the evening and/or in a Summer Session, the format and scheduling may be different, though equivalent in credit value. For all such scheduling details, students should consult the Lecture Schedules or the Natural Science mini-calendar which is published in March of each year.

The Natural Science courses all follow the Faculty of Arts sessional dates.

For a list of Atkinson College courses which are degree credit exclusions for Natural Science courses in this Calendar, Arts students should consult the Lecture Schedules. Science students should consult the "Atkinson Equivalence/Exclusion Table for Science Students" available in the Office of Science Academic Services beginning in March each year.

SC/NATS 1610 6.0 The Living Body. Some aspects of human biology, including structure and function, reproduction, physiology, genetics and a study of some human diseases. Laboratories are self-paced, scheduled audio-tutorials involving demonstrations, experiments and observations. Two lecture hours, two laboratory hours. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1620 6.0, SC/NATS 1660 6.0, SC/NATS 1690 6.0. Not open to students enrolled in Biology programs.

SC/NATS 1620 6.0 Human Biology. Human biology is studied from the perspectives of four specialties: histology, anatomy, biochemistry and genetics. The historical development and medical significance of our current knowledge are discussed, including special topics such as AIDS and genetic engineering. Three lecture hours for two terms, two laboratory hours for one term. Six credits.

Degree credit exclusions: SC/NATS 1610 6.0. Not open to students enrolled in Biology programs.

SC/NATS 1640 6.0 Biology and the Environment. This course provides an understanding of the fundamental biological and ecological principles influencing the environment. The impact of the human species on the biosphere and inter-relationships with all living organisms are discussed in the context of environmental concerns. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1690 6.0, SC/NATS 1770 6.0, SC/NATS 1770 6.0A, SC/NATS 1770 6.0B, SC/NATS 1770 6.0C, SC/NATS 1840 6.0, ES/ENVS 1500 6.0. Not open to students enrolled in Biology programs.

SC/NATS 1650 6.0 Human Anatomy for the Fine Arts. An introductory course on the structure and function of the human body specifically oriented towards the needs of students in Fine Arts. Body systems are studied from anatomical, physiological and biomechanical perspectives. Included as well are on-going references to nutrition, athletic injuries, and health and wellness. Two lecture hours, two laboratory hours. Two terms. Six credits.

Degree credit exclusions: AS/SC/KINE 2031 3.0, AS/SC/KINE 3070 3.0, AS/PHED 2030 3.0, SC/PHED 2030 4.0, AS/SC/PHED 2070 3.0, SC/PHED 2070 4.0, AS/PHED 3070 3.0, SC/PHED 3070 4.0.

SC/NATS 1660 6.0 The Biology of Sex. This course investigates the role of sexual reproduction in the living world. The cellular, physiological and genetic bases of sex are discussed. Other topics include sexual behaviour and the influence of sexual reproduction on evolution. Three lecture hours for two terms, two laboratory hours for one term. Six credits.

Degree credit exclusions: SC/NATS 1610 6.0, SC/NATS 1690 6.0. Not open to students enrolled in Biology programs.

SC/NATS 1680 6.0 The Genetic Revolution. This course examines the impact of recent genetic discoveries on medicine, agriculture and industry. New technologies employ enzymes to cut and splice DNA from different organisms. This has the potential to benefit human society but gene manipulations raise important ethical questions. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1800J 6.0A, SC/NATS 1800J 6.0B, SC/NATS 1850 6.0, SC/BC 1850 6.0. Not open to students enrolled in Biology programs.

SC/NATS 1690 6.0 Evolution. This course concerns the origin and diversification of life forms on Earth. Students are introduced to the historical development of evolutionary theory, classification of living things and to scientific explanations of how biological diversity has arisen. Three lecture hours for two terms, two laboratory hours for one term. Six credits.

Degree credit exclusions: SC/NATS 1610 6.0, SC/NATS 1640 6.0, SC/NATS 1660 6.0, SC/NATS 1695 6.0, SC/NATS 1770 6.0C. Not open to students enrolled in Biology programs.

SC/NATS 1695 6.0 Evolution and the Diversity of Life. An introductory overview of some of the major issues, concepts and theories concerning evolution and the diversity of life from the rise of Darwinism in the 19th century, to molecular biology and global ecology in the second half of the 20th century. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1690 6.0, AK/NATS 1770 6.0. Not open to students enrolled in Biology programs.

SC/NATS 1710 6.0 The Nature and Growth of Scientific Thought. Science is examined as an intellectual activity. Emphasis is placed on the evolution of some key concepts to show the nature and methodology of natural science, the development of scientific ideas and their grounding in experience. Three lecture hours plus scheduled laboratory sessions. Two terms. Six credits.

Degree credit exclusion: SC/NATS 1730 6.0.

SC/NATS 1720 6.0 Light and Sound. An introduction to the physics, physiology and psychology of light and sound, together with some of the historical background and philosophical implications of these studies. Three lecture hours plus scheduled laboratory sessions. Two terms. Six credits.

SC/NATS 1730 6.0 Science as Discovery. A study of the nature of scientific discovery based on several case histories, including the Ptolemaic and Copernican planetary theories, the Newtonian mechanist system, Darwin's theory of evolution, Einstein's relativity, and Watson and Crick's discovery of the structure of DNA. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusion: SC/NATS 1710 6.0.

SC/NATS 1740 6.0 Astronomy. A discussion of our present understanding of the universe and its constituents. Topics include the structure and evolution of the planets, stars, galaxies and the universe as a whole. Three lecture hours per week, two-hour laboratory sessions every second week. Two terms. Six credits.

Degree credit exclusions: Not open to any student who has passed or is taking SC/PHYS 1070 4.0 or SC/PHYS 1070 3.0.

SC/NATS 1750 6.0 The Earth and Its Atmosphere. Topics addressed concerning the Earth include geochronology, seismology, geomagnetism and plate tectonics. Topics addressed concerning the atmosphere include the general circulation, climate change, ozone depletion, weather and violent storms. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1780 6.0, SC/NATS 1800H 6.0. Not open to any student who has passed or is taking a course in Earth and Atmospheric Science.

SC/NATS 1760 6.0 Science and Technological Change. The relationship and interaction between science and technology are explored through a number of topics, both biological and physical. Specific topics discussed may vary from year to year, but most have relevance to our everyday lives and life-styles. Three lecture hours, one tutorial hour. Two terms. Six credits.

SC/NATS 1770 6.0 Technology and the Environment. Basic scientific principles and reasoning need to be applied to environmental pollution. Underlying causes of the present difficulties and current technological solutions are examined. Some ecological and societal aspects of pollution are discussed. Three lecture hours per week, one tutorial hour every second week. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1640 6.0, SC/NATS 1770 6.0A, SC/NATS 1770 6.0B, SC/NATS 1770 6.0C, SC/NATS 1840 6.0.

SC/NATS 1780 6.0 Weather and Climate. The weather and health of our atmosphere affect us all. This course provides an overview of the Earth's atmosphere; its chemistry, physics and dynamics; an introduction to meteorology and weather forecasting; and a discussion of climate. Canada's weather and climate are emphasized. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1750 6.0, SC/NATS 1800H 6.0.

SC/NATS 1790 6.0 The Science of Flight. This course presents basic physical principles by studying various aspects of aircraft and flying. Topics include properties of air as a fluid, aero-engines, basic theory of flight, principles of aircraft instruments and navigation, and processes which influence the weather. Three lecture hours per week, two tutorial hours in some weeks. Two terms. Six credits.

SC/NATS 1800 6.0 Special Topics in Natural Science. Each year the division may offer full courses of a unique or experimental character in Natural Science. Descriptions of such courses are available in the divisional office in March of the preceding year. Two terms. Six credits.

SC/NATS 1810 6.0 Energy. Conversion technology of current and possible future energy sources is described. The extent of the resource base of each and the environmental consequences of utilization are discussed, with emphasis on nuclear power and energy policies of Ontario and Canada. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1800C 6.0, SC/BC 1810 6.0.

SC/NATS 1820 6.0 Chemistry in Modern Living. A study of the role of chemistry in contemporary society. Relevant topics are selected each year to show how chemistry impinges upon daily life. Important historical perspectives and basic concepts, such as energy and atomic/molecular structure, are introduced as background. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: Not open to any student who has passed or is taking SC/CHEM 1000 6.0 or SC/CHEM 1010 6.0.

SC/NATS 1830 6.0 Matter and Structure. From atomic structure comes molecular structure, and, in turn, come the physical properties of matter composed of atoms and molecules. The relationship between physical properties and usefulness of materials is developed. The role of science in developing new materials is discussed. Three lecture hours, one tutorial/assignment hour. Two terms. Six credits.

SC/NATS 1840 6.0 Science and the Environment. This course provides a simplified description of the complex interactions and balances controlling the biosphere. The ways in which pollutants are produced and dispersed in the environment are discussed, together with their effects and how they are monitored and controlled. Three lecture hours, one tutorial hour. Two terms. Six credits.

Degree credit exclusions: SC/NATS 1640 6.0, SC/NATS 1770 6.0, SC/NATS 1770 6.0A, SC/NATS 1770 6.0B, SC/NATS 1770 6.0C.

SC/NATS 1850 6.0 Biomedical Ethics and the New Genetics. Recent developments in genetics and biotechnology are rapidly generating both medical breakthroughs and societal dilemmas. This course provides an understanding of basic principles of molecular biology and human genetics, and examines societal and bioethical implications of the new genetics. (Same as SC/BC 1850 6.0.) Three lecture/seminar hours. Two terms. Six credits.

Degree credit exclusions: SC/BC 1850 6.0, SC/NATS 1680 6.0, SC/NATS 1800J 6.0A, SC/NATS 1800J 6.0B. Not open to students enrolled in Biology programs.

SC/NATS 2700 9.0 Science: Fundamental Ideas and Social Dimensions. A study of key ideas in the physical, life, earth, space and environmental sciences necessary to teach the Ontario elementary science curriculum. The social dimensions of science and technology, especially relating to Canada, are integrated with the scientific material. Four lecture hours per week, twelve two-hour laboratory sessions. Two terms. Nine credits.

Prerequisite: Normally open only to those co-registered in the Faculty of Education Primary/Junior or Junior/Intermediate programs or planning to apply for those programs.

Note: This course fulfills the Faculty of Arts General Education requirement.

Philosophy – Arts

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Distinguished Research Professors:
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Professors:
 A.W. Cragg, M.A. Gilbert, L.J.M. Green, M. Schabas

Professors Emeriti:
 J. Agassi, M.B. Bakan, G.F. Cowley, W.E. Creery, C.D. MacNiven, J.D. McFarland, N. Mackenzie, R.E. Simpson
Associate Professors:
 S. Dimock, L. Jacobs, D.M. Johnson, D.A. Jopling, A. MacKenzie, E. Morera, G. Naddaf, J. Pelham E. Thompson
Assistant Professors:
 H, Jackman

"Philosophy is to be studied, not for the sake of any definite answers to its questions, since no definite answers can, as a rule, be known to be true, but rather for the sake of the questions themselves; because these questions enlarge our conception of what is possible, enrich our intellectual imagination and diminish the dogmatic assurance which closes the mind against speculation; but above all because, through the greatness of the universe which philosophy contemplates, the mind also is rendered great, and becomes capable of that union with the universe which constitutes its highest good." (Bertrand Russell)

Courses in Philosophy

Note: Not all courses will be offered in any given year. The Department's mini-calendar, generally available in early March, should be consulted for specific offerings and detailed course descriptions.

Courses in Philosophy have three class hours a week unless otherwise specified. All 2000-level courses are introductory and require no previous knowledge of philosophy. For specific requirements of degree programs offered by this department, please consult the "Programs of Study" section, Faculty of Arts.

Note: Honours BA majors are strongly urged to take PHIL 2010 3.0, PHIL 2015 3.0, PHIL 2020 3.0, PHIL 2025 3.0, and PHIL 2100 3.0. All majors should consult the Undergraduate Program Director concerning course selection and design of individual programs.

Note: For a list of Atkinson courses which are degree credit exclusions, students should consult the degree credit exclusion/equivalent tables in the Lecture Schedule or the departmental/divisional supplemental calendars.

1000-Level Courses

AS/PHIL 1000 6.0 Introduction to Philosophy. A full year introduction to the basic issues and classic writers in the Western philosophical tradition. Areas such as ethics, metaphysics, theory of knowledge, and logic are surveyed by examining the writings of philosophers such as Plato, Aristotle, Descartes, Berkeley, Hume as well as more modern writers.

Degree credit exclusion: AK/PHIL 1400 6.0.

Cross-listed to: AK/PHIL 1000 6.0.

AS/PHIL 1100 3.0 The Meaning of Life. This course explores a number of fundamental practical philosophical questions: What is the meaning of (my) life? What is happiness, and how can I achieve it? What is wisdom? What is death, and what does it mean to me?

Cross-listed to: AK/PHIL 1100 3.0.

2000-Level Courses

AS/PHIL 2010 3.0 Origins of Western Philosophy. The ancient Greek philosophers are the origin of modern Western thought. How did they construe reality, knowledge, and humankind's relation to the world? Philosophers such as Heraclitus, Parmenides, Zeno and Democritus will be explored.

Cross-listed to: AK/PHIL 2010 3.0.

AS/PHIL 2015 3.0 Plato & Aristotle. Plato and Aristotle are the pillars of Western Philosophy. Practically all modern thought has its roots in their work. This course examines their writings and philosophy.

AS/PHIL 2020 3.0 Reason, God and the Mind. The works of Descartes, Spinoza, and Leibniz are crucial building blocks of our contemporary understanding of the world. This course examines their work.

AS/PHIL 2025 3.0 Experience, World and the Self. Locke, Berkeley and Hume manifested an approach to philosophy that emphasized sense experience and the development of all knowledge from it. This course explores this tradition and its impact on our current world view.

Cross-listed to: AK/PHIL 2025 3.0.

AS/PHIL 2035 3.0 Asian Philosophical Traditions. This course is an introduction to the major philosophical traditions of India and China.

AS/PHIL 2050 6.0 Philosophy of Law. A. Crime and Punishment: What is the criminal law for? What should be prohibited and why? What excuses allowed? B. The concept of law: What is a law? What is a legal system? Positivism, realism, and Natural Law theories.

Degree credit exclusion: AK/PHIL 3530 6.0.

Cross-listed to: AK/PHIL 2050 6.0.

AS/PHIL 2060 3.0 Social and Political Philosophy. This course examines several theories of social justice including utilitarianism, social contract theory, and natural rights. How do we distinguish between right and wrong? Good and evil?

Cross-listed to: AK/PHIL 2060 3.0.

AS/PHIL 2070 3.0 Introductory Ethics. This course provides a basic introduction to the three main branches of moral theory. Normative, descriptive and theoretical ethics will be examined in order to develop a comprehensive ethical system.

Cross-listed to: AK/PHIL 2070 3.0.

AS/PHIL 2075 3.0 Introduction to Applied Ethics. This course introduces students to the application of ethical theory to controversial public issues such as abortion, affirmative action, and euthanasia, among others.

AS/PHIL 2080 3.0 Perception, Knowledge and Causality. This course provides an introduction to philosophical discussion about what exists, or what is most real, the subject of metaphysics, and what we can truly know about such things. What are the most basic things, and how do they interact with each other?

Cross-listed to: AK/PHIL 2080 3.0.

AS/PHIL 2090 3.0 Philosophy of Religion. Can we prove God's existence or must we experience God directly? Is faith opposed to reason? Are miracles and revelations really possible? Do a mystic's claims count as knowledge?

Cross-listed to: AK/PHIL 2090 3.0.

AS/PHIL 2100 3.0 Introduction to Logic. Logic, in the philosophical tradition, is the study of what makes arguments valid. That is, it aims to distinguish correct reasoning from faulty reasoning. Modern symbolic logic begins this project by giving two complementary analyses of validity. This course presents the basic elements of modern symbolic logic for the beginning student.

AS/PHIL 2110 3.0 Truth, Theory and Superstition. There are diverse views on how to improve one's understanding or to do research, even in the case of science. This course investigates the possibility of a method of science, and also recent contributions to its theory.

Cross-listed to: AK/PHIL 2110 3.0.

AS/PHIL 2120 3.0 Existentialism. This course is an introduction to some of the central themes of existentialism, for example, the individual, being, the absurd, freedom, moral choice. These themes are explored in the work of philosophers such as Kierkegaard, Nietzsche, Camus, Sartre, deBeauvoir.

AS/PHIL 2130 3.0 Philosophy of Art and Literature. Is truth relevant to art? What connections are there between art and morality? Are aesthetic judgments purely subjective or is there an objective basis for them? What is the artist's role in society?

Cross-listed to: AK/PHIL 2130 3.0.

AS/PHIL 2150 3.0 Introduction to the Philosophy of Education. Since we disagree about values, can we educate children morally without indoctrinating them? Are sociology and developmental psychology relevant to this problem? How is it connected with issues in scientific, sexual, religious and aesthetic education?

Cross-listed to: AK/PHIL 2150 3.0.

AS/PHIL 2160 3.0 Mind, Brain and Self. An introduction to metaphysical issues about the mind. What is the nature of the mind and what is its relation to the body? What is the self and what is it that makes one the same person over time? What is the nature of consciousness and what is its relation to the brain?

Cross-listed to: AK/PHIL 2160 3.0.

AS/PHIL 2170 3.0 Freedom, Determinism and Responsibility. An investigation of different concepts of freedom, arguments for free will and determinism, people's responsibility for their actions and how it is adjudicated, the justification of punishment, and some related moral problems.

AS/PHIL 2200 3.0 Critical Reasoning. A systematic study of practical argument, the analysis of techniques, formal and informal fallacies, the relationship between arguing well and winning an argument. When is argument propaganda? Methods of identifying and undermining specious arguments will be explored and tried.

AS/PHIL 2240 3.0 Philosophy and Psychology. What concepts of mind underlie current research on mind in psychology and cognitive science? What methods are used to study it? How much can science tell us about our own subjectivity?

AS/PHIL 2250 3.0 Philosophy of Gender and Sexuality. An examination of some conceptual and normative questions about gender and the nature, forms, and regulation of human sexuality.

Cross-listed to: AK/PHIL 2250 3.0.

AS/PHIL 2500 3.0 Introduction to Feminist Philosophy. This course is an introduction to core readings and concepts in feminist philosophy including, but not limited to, essentialism vs. non-essentialism systemic and overt sexism, and key philosophical writings in feminist philosophy.

Cross-listed to: AK/PHIL 2500 3.0.

AS/PHIL 2990 6.0/3.0 Special Topics. In any given year an additional number of courses may be offered. Information concerning these will be available at the Departmental office.

3000-Level Courses

AS/PHIL 3020 3.0 Ethics. An advanced course treating the major ethical theories in western thought.

Prerequisite: At least one of the following: AS/PHIL 2050 6.0, AS/PHIL 2060 3.0, AS/PHIL 2070 3.0 or AS/PHIL 2075 3.0.

AS/PHIL 3030 3.0 Metaphysics. Metaphysics concerns such issues as the nature of reality, the existence of contingent and necessary truths, universals, perception and the nature of the external world.

Prerequisite: AS/PHIL 2080 3.0 or at least 6 credits in Philosophy.

Cross-listed to: AK/PHIL 3030 3.0.

AS/PHIL 3035 3.0 Knowledge and Reality. Theories of knowledge, epistemology, are examined in relation to theories of reality. How does our perception of reality relate to our understanding of it? How can we come to know something is true or false?

Prerequisite: AS/PHIL 2080 3.0 or at least 6 credits in Philosophy.

AS/PHIL 3040 3.0 Aesthetics. An examination from a contemporary philosophical perspective of problems concerning aesthetic experience, the nature of art, the structure and properties of works of art, creativity and appreciation, reasons and standards in art criticism.

Prerequisite: AS/PHIL 2130 3.0 or at least 6 credits in Philosophy.

AS/PHIL 3050 3.0 Business Ethics. This course examines the role of ethics in private, public and voluntary sector economic activity, for example, the concept of a free market and the role of government regulation, governance issues, corporate social responsibility, ethics codes, globalization, and cross-cultural codes and standards.

Prerequisite: At least one of the following: AS/PHIL 2050 6.0, AS/PHIL 2060 3.0, AS/PHIL 2070 3.0 or AS/PHIL 2075 3.0.

Degree credit exclusions: AS/PHIL 3025 3.0 (prior to Fall/Winter 2000), AS/PHIL 4160 3.0 (prior to Fall/Winter 1988), AK/PHIL 3560 3.0.

AS/PHIL 3080 3.0 Philosophy of Kant. "For the chief question is always simply this: what and how much can the understanding and reason know apart from all experience?" Kant's answer revolutionized philosophy. It is given in the Critique of Pure Reason, which will be studied in detail.

Prerequisites: AS/PHIL 2020 3.0 and AS/PHIL 2025 3.0.

AS/PHIL 3095 3.0 Philosophy of Religion. How do theistic philosophies deal with the fact of evil? Is religious language and forms of knowing distinct from other forms? What are the moral and ethical issues inherent in religious propagation?

Prerequisite: AS/PHIL 2090 3.0 or at least 6 credits in Philosophy.

Cross-listed to: AK/PHIL 3095 3.0.

AS/PHIL 3100 3.0 Classical Logic. Classical logic is that well-established part of philosophical logic which is sometimes taken as the foundation for rationality, as well as mathematics. This course begins to explore foundational concepts in metalogic, such as the notion of a logical system and the rigorous definition of a proof. It explores the ideas of the soundness and completeness of a logical system and introduces the incompleteness of arithmetic.

Prerequisite: AS/PHIL 2100 3.0, or permission of the instructor.

AS/PHIL 3101 3.0 Philosophy of Logic. This course studies issues relating the study of symbolic logic to ordinary language, including the nature of truth, the nature of sentences vs. propositions, semantics for natural language (the Liar paradox, descriptions, reference, demonstratives) syntactical conceptions of inference vs. semantic conceptions.

Prerequisite: AS/PHIL 2100 3.0, or permission of the instructor.

AS/PHIL 3105 3.0 Deviant Logics. An exploration of several systems of non-standard logic including modal logic, many-valued logic,

and relevance logic. The deductive structure, consistency and completeness of the systems will be explored.

Prerequisite: AS/PHIL 2100 3.0, or permission of the instructor.

AS/PHIL 3110 3.0 Political Philosophy. The major contemporary theories of moral justification applied to these two fundamental questions of politics and economies: Is a state (instead of anarchy) morally justified? Is private (instead of communal) property morally justified?

Prerequisite: At least one of the following: AS/PHIL 2050 6.0, AS/PHIL 2060 3.0, AS/PHIL 2070 3.0 or AS/PHIL 2075 3.0.

Cross-listed to: AK/PHIL 3110 3.0.

AS/PHIL 3120 3.0 Early Existentialism. A detailed study of the early existentialist thinkers such as Pascal and Kierkegaard. Emphasis is on their views concerning knowledge and faith, God and humankind, freedom and self-deception.

Prerequisite: AS/PHIL 2120 3.0.

AS/PHIL 3125 3.0 Contemporary Existentialism. The views of such recent philosophers as Sartre, Camus, Nietchze and de Beauvoir have had a great impact on contemporary society. This course will explore their views on self, freedom, action, and personal relations.

Prerequisite: AS/PHIL 2120 3.0.

Cross-listed to: AK/PHIL 3125 3.0.

AS/PHIL 3130 3.0 Philosophical Issues around Race and Ethnicity. This course examines issues of race and ethnicity such as multiculturalism, social construction, toleration, and IQ from the perspective of social and political philosophy and the philosophy of the social sciences.

Prerequisite: At least one of the following: AS/PHIL 2050 6.0, AS/PHIL 2060 3.0, AS/PHIL 2070 3.0 or AS/PHIL 2075 3.0.

Degree credit exclusion: AS/PHIL 3025 3.0 (prior to Fall/Winter 2000).

AS/PHIL 3140 3.0 Russell and Logical Positivism. The contribution of Bertrand Russell is extensive. This course examines his philosophy along with that of the early Wittgenstein and the Vienna Circle Positivists such as Carnap, Schlick and Ayer.

Prerequisite: At least 6 credits in philosophy.

AS/PHIL 3145 3.0 Wittgenstein's Philosophical Investigations. A critical examination of the philosophic writings of the later Wittgenstein through an examination of his most crucial work, The Philosophical Investigations.

Prerequisite: At least 6 credits in philosophy.

AS/PHIL 3170 3.0 Philosophy of Science. The philosophy of science explores the fundamental assumptions and methodologies of science, as well as examining its history. Topics to be discussed may include the nature of scientific theories, the problem of induction and theories of probability, the demarcation and growth of scientific knowledge.

Prerequisite: At least 6 credits in philosophy.

AS/PHIL 3180 3.0 Conversations with African Philosophy. This course examines the development of African philosophy in the 20th century. It focuses on the debates among African philosophers regarding the nature of philosophical problems, and studies the emergence of various schools of thought in ethics, epistemology, and ontology.

AS/PHIL 3200 3.0 Philosophy of Language. This course provides an introduction to basic notions of the philosophy of language. Questions to be discussed may include: How is communication in language possible? What is a language? What makes words and phrases meaningful? What is truth?

Prerequisite: At least 6 credits successfully completed in Philosophy.

Recommended: AS/PHIL 2100 3.0.

Cross-listed to: AK/PHIL 3200 3.0.

AS/PHIL 3220 3.0 Argumentation Theory. Dispute and argument have been studied by philosophers since ancient times. This course examines the nature of dispute in the context of both the history of philosophy and modern research.

Recommended: AS/PHIL 2100 3.0.

AS/PHIL 3260 3.0 Philosophical Foundations of Cognitive Science. An introduction to philosophical issues in the foundations of cognitive science, an interdisciplinary field made up of psychology, neuroscience, computer science and artificial intelligence, linguistics, and philosophy. The course covers the main philosophical issues and debates associated with this field.

Prerequisite: At least 6 credits in Philosophy including one of: AS/PHIL 2160 3.0 or AS/PHIL 2240 3.0.

Degree credit exclusion: AS/PHIL 3260 3.0.

Cross-listed to: AK/PHIL 3635 3.0.

AS/PHIL 3265 3.0 Philosophy of Mind. How can we understand the relation between mind and body? How do mental states get their meaning? What is consciousness? Other topics may be discussed, such as: human agency, self-knowledge, unity of self, rationality of emotion, language and mind.

Prerequisite: At least 6 credits in Philosophy including one of: AS/PHIL 2160 3.0 or AS/PHIL 2240 3.0.

Degree credit exclusion: AS/PHIL 3260 3.0 (prior to Fall/Winter 2000).

AS/PHIL 3270 3.0 Philosophy of Social Science. This course provides an introduction to central ideas in the philosophy of social science. Topics for discussion may include: the debate concerning naturalism in social science, human rationality, scientism and functionalism.

Prerequisite: At least 6 credits in Philosophy.

AS/PHIL 3280 3.0 Mind and Nature: The Philosophy of Biology. This course concerns philosophical issues arising form the life sciences, in particular evolutionary theory and neuroscience. Topics examined may

include: What is it that makes something living? What does the Darwinian theory of evolution mean for the understanding of human nature? Are religion and the theory of evolution compatible or irreconcilable?

Prerequisite: At least 6 credits in Philosophy.

Recommended: At least one of AS/PHIL 2160 3.0 or AS/PHIL 2240 3.0.

AS/PHIL 3500 6.0 Philosophy and Feminism. This course studies the history of feminist philosophical thought about the place women are to occupy in a man's world, and examine some contemporary feminist writings on reason, morality, scientific methodology, and/or political theory.

Prerequisite: At least 6 credits in Philosophy.

AS/PHIL 3595 3.0 International Ethics. This course examines the roll of norms in the analysis of international relations, in particular as they apply to foreign actor involvement in conflicts within states, thus, issues such as massive human rights violations, ethnic cleansing, genocide and the norms governing intervention by international, state and non-state actors. Extensive case study material is used rooted in the civil wars of the nineties.

Prerequisites: At 3 credits chosen from AS/PHIL 2050 6.0, AS/PHIL 2060 3.0, AS/PHIL 2070 3.0 or AS/PHIL 2075 3.0.

Cross-listed to: AK/PHIL 3595 3.0.

AS/PHIL 3600 3.0 Ancient Philosophy. This course involves a careful reading from selected texts in ancient philosophy. Writings are drawn from the Pre-Socratics, Plato, Aristotle, and others.

Prerequisite: At least one of: AS/PHIL 2010 3.0 or AS/PHIL 2015 3.0.

AS/PHIL 3620 3.0 Empiricism and Rationalism. The empiricists and Rationalists include such eminent philosophers as Hume, Descartes, Berkely, and Locke, among others. This course examines selected readings from one or more representative of each tradition.

AS/PHIL 3640 3.0 German Philosophy. German philosophy has had a profound impact on Western philosophy. In this course philosophers such as Hegel, and Hursserl. to mention but two, are examined in some detail.

Prerequisite: At least 6 credits successfully completed in Philosophy.

Cross-listed to: AK/PHIL 3640 3.0.

AS/PHIL 3990 3.0/3990 6.0 Special Topics. In any given year an additional number of courses may be offered. Information concerning these are available at the Departmental office.

4000-Level Courses

Note: All 4000-level Philosophy courses have a general prerequisite of at least 9 credits in philosophy. Please refer to the course descriptions for specific course prerequisites.

AS/PHIL 4000 3.0/4000 6.0 Directed Readings. A full-year (or half-year course in either term) course of independent reading under the direction of a member of the faculty. This course is only considered when a student has completed all listed courses in the area of study. Agreement of the supervising faculty member must be obtained prior to registration.

Prerequisite: 84 credits, at least 30 of which are in philosophy.

Degree credit exclusion AS/PHIL 4990 6.0.

Note: Please consult the "Enrolment and Registration" section, Faculty of Arts, for regulations on independent reading courses.

Note: All fourth year level courses are topics courses. Please consult the departmental annual mini-calendar for specifics.

AS/PHIL 4010 3.0/4010 6.0 Topics in Historical Philosophy. An intensive examination of problems and historical issues in philosophy. Topics vary from year to year.

Prerequisite: At least 9 credits in Philosophy.

AS/PHIL 4020 3.0/4020 6.0 Topics in Medieval Philosophy. A seminar course in medieval epistemology and metaphysics. Texts may include selections from St. Augustine, St. Anselm, and St. Thomas.

Prerequisite: At least 9 credits in Philosophy.

AS/PHIL 4030 3.0/4030 6.0 Topics in Ancient Philosophy. A seminar course in ancient epistemology and metaphysics. Texts may include *Selected Dialogues from Plato, Aristotle's Organon and Metaphysics.*

Prerequisite: At least 9 credits in Philosophy.

AS/PHIL 4040 3.0/4040 6.0 Topics in Contemporary Philosophy. An intensive examination of problems and contemporary issues in philosophy. Topics vary from year to year.

Prerequisite: At least 9 credits in Philosophy.

AS/PHIL 4050 3.0/4050 6.0 Topics in the Philosophy of History. The course discusses some of the central philosophical problems arising out of historical knowledge Truth, Objectivity, Facts, Explanation. The main emphasis will be on the controversy over "covering laws" and on that between Realists and Idealists.

Prerequisite: At least 9 credits in Philosophy.

Recommended: AS/PHIL 3270 3.0.

AS/PHIL 4070 3.0/4070 6.0 Topics in Moral Philosophy. An intensive examination of particular problems in moral philosophy, or intensive studies of the writings of individual moral philosophers. Topics vary from year to year.

Prerequisite: At least 9 credits in Philosophy including at least 3 credits from the following: AS/PHIL 3020 3.0, AS/PHIL 3025 3.0, AS/ PHIL 3050 3.0, AS/PHIL 3110 3.0 or AS/PHIL 3130 3.0.

AS/PHIL 4080 3.0/4080 6.0 Topics in the Philosophy of Mind. A selection of the following topics are discussed: mind and body, thinking, intention, emotions, desires, motives, reasons, dispositions, memory, the unconscious, and the concept of a person.

Prerequisite: At least 9 credits in Philosophy including AS/PHIL 3260 3.0.

AS/PHIL 4090 3.0/4090 6.0 Topics in Metaphysics. An intensive investigation into issues concerning the nature of reality and existence. Focus is on selected issues or the work of particular metaphysicians. Topics vary from year to year.

Prerequisite: At least 9 credits in Philosophy including 3 credits from: AS/PHIL 3030 3.0 or AS/PHIL 3035 3.0.

AS/PHIL 4110 3.0/4110 6.0 Topics in the Philosophy of Science. The course deals with situations in science and in the history of science that give rise to the basic problems of the philosophy of science. The role of observation in science. The criteria of truth in science.

Prerequisite: At least 9 credits in Philosophy.

Recommended: AS/PHIL 3170 3.0 or AS/PHIL 3270 3.0 or AS/PHIL 3280 3.0.

AS/PHIL 4120 3.0/4120 6.0 Topics in Existentialism. An intensive study of selected works of such thinkers as Pascal, Kierkegaard, and Sartre. Topics include idealism and realism, freedom, the self and others.

Prerequisite: At least 9 credits in Philosophy including one of: AS/PHIL 3120 3.0 or AS/PHIL 3125 3.0.

AS/PHIL 4130 3.0/4130 6.0 Topics in the Philosophy of Nature. Topics in the history of concepts of nature in Western philosophy going back from Kant's Critique of Judgment to aspects of Greek thought, and forward to Hegel's philosophy of nature and to contemporary conceptions, particularly systems theory.

Prerequisite: At least 9 credits in Philosophy.

Recommended: AS/PHIL 3170 3.0 or AS/PHIL 3270 3.0 or AS/PHIL 3280 3.0.

AS/PHIL 4140 3.0/4140 6.0 Topics in Aesthetics: Imitation and Representation in Art. A critical examination of recent problems in aesthetics concerning the representative function of works of art. Specific topics include the semantic theory of representation; transcription, translation, and the making of equivalent structures in art; picturing, symbolizing, and artistic vision.

Prerequisite: At least 9 credits in Philosophy.

Recommended: AS/PHIL 3040 3.0.

AS/PHIL 4150 3.0/4150 6.0 Topics in Applied Ethics. An in depth examination of issues in such areas and topics as: contemporary moral issues (e.g. abortion, euthanasia, pornography, human rights and poverty); business ethics (e.g. corporate social responsibility and cross cultural ethics codes); environmental ethics (e.g. sustainable development); morality and law; and punishment.

Prerequisite: At least 9 credits in Philosophy including at least 3 credits from the following: AS/ PHIL 3020 3.0, AS/PHIL 3025 3.0, AS/PHIL 3050 3.0, AS/PHIL 3110 3.0 or AS/PHIL 3130 3.0.

AS/PHIL 4180 3.0/4180 6.0 Topics: Political Philosophy. An intensive study of some selected normative and conceptual problems in contemporary political philosophy.

Prerequisite: At least 9 credits in Philosophy including at least 3 credits from the following: AS/ PHIL 3020 3.0, AS/PHIL 3025 3.0, AS/PHIL 3050 3.0, AS/PHIL 3110 3.0 or AS/PHIL 3130 3.0.

AS/PHIL 4190 3.0/4190 6.0 Topics in the Philosophy of Law. An advanced seminar on some contemporary theories of the nature of law and legal reasoning.

Prerequisite: AS/PHIL 2050 6.0 and at least 3 credits from the following: AS/PHIL 3020 3.0, AS/ PHIL 3025 3.0, AS/PHIL 3050 3.0, AS/PHIL 3110 3.0 or AS/PHIL 3130 3.0.

AS/PHIL 4200 3.0/4200 6.0 Topics in Semantics. The study of semantics is at the root of philosophical logic, as well as the philosophy of language and linguistics. This course studies a topic in this central area of philosophical inquiry.

Prerequisite: At least 9 credits in Philosophy.

AS/PHIL 4220 3.0/4220 6.0 Topics: Argumentation Theory. An intensive examination of one or more theories of argument. These may include field theory, critical thinking, and pragma-dialectic approaches.

Prerequisite: At least 9 credits in Philosophy including AS/PHIL 3220 3.0.

AS/PHIL 4230 3.0/4230 6.0 Topics: Epistemology. Selected topics in the theory of knowledge are explored in depth.

Prerequisite: At least 9 credits in Philosophy including 3 credits from: AS/PHIL 3030 3.0 or AS/ PHIL 3035 3.0.

AS/PHIL 4240 3.0/4240 6.0 Topics: Continental Philosophy. An intensive investigation of the work of such writers as Husserl, Heidegger, and Sartre as well as their offshoots and modern formulations.

Prerequisite: At least 9 credits in Philosophy.

AS/PHIL 4250 3.0/4250 6.0 Topics in the Philosophy of Film. This course is concerned with the aesthetics and ontology of film as a form of art and human expression. Particular concentration varies from year to year.

Prerequisite: At least 9 credits in Philosophy.

AS/PHIL 4350 3.0/4350 6.0 Topics in the Philosophy of Language. This course explores a topic in the philosophy of language. The topic will vary from year to year.

Prerequisite: At least 9 credits in Philosophy including one of: AS/PHIL 3200 3.0 or AS/PHIL 2040 3.0 (prior to Fall/Winter 1999).

AS/PHIL 4450 3.0/4450 6.0 Topics in Philosophical Logic. This course provides an intensive examination of a selected area of philosophical logic. Topics will vary from year to year.

Prerequisite: At least 9 credits in Philosophy including 3 credits chosen from: AS/PHIL 3100 3.0 or AS/PHIL 3105 3.0.

AS/PHIL 4500 3.0/4500 6.0 Topics in Feminist Philosophy: Critique and Construct. An intensive study of recent feminist writings in one or more of the following areas: aesthetics, epistemology, ethics, political philosophy, philosophy of science, philosophy of the social sciences, theories of subjectivity, philosophy of language, theories of rationality.

Prerequisite: At least 9 credits in Philosophy.

Recommended: AS/PHIL 3500 6.0.

General Certificate in Practical Ethics

Practical Ethics is an exciting new area of multidisciplinary study and research. The area of practical ethics provides the opportunity to apply ethical concepts and principles to contemporary social issues. The courses listed for the Practical Ethics General Certificate enable students to address questions of applied ethics and public policy in the fields of anthropology, economics, humanities, philosophy, political science, social science, and sociology.

Faculty of Arts students may earn a General Certificate in Practical Ethics in addition to fulfilling the requirements for an undergraduate degree. To qualify for the General Certificate in Practical Ethics, students must complete AS/PHIL 2070 3.0 and AS/PHIL 2075 3.0 and 18 additional credits from a list of designated courses (see below), of which at least 6 credits will be at the 3000 or 4000 level. No more than 6 credits will be at the 1000 level. Students must take at least 12 credits outside the Philosophy Department. The cumulative grade point average in all 24 credits taken must be at least 4.0. Students are required to select the 18 additional credits - additional to the required 6 credits (two half courses) specified - so as to ensure a focus to their programs. Students must register for the Certificate, and the written approval of a member of the Advisory Group for the Certificate must be obtained. Such approval might, at the advisor's discretion, be conditional on the student submitting an acceptable written justification for the intended course selection.

Students must indicate their intention to pursue the Certificate by completing an enrolment form - available from the Philosophy Department. Students must make an appointment for individualized advising with a member of the Advisory Group for the Certificate. The list of Advisory Group members is available from the Philosophy Department. Once students have completed all the Certificate Requirements, they must inform the Philosophy Department of their eligibility for the Certificate. Further information is available from the Philosophy Department.

Required Courses:

AS/PHIL 2070 3.0 Introductory Ethics.

AS/AK/PHIL 2075 3.0 Introduction to Applied Ethics.

Designated Courses in Practical Ethics:

Note - Check with Departments/Divisions concerning availability.

Anthropology

AS/ANTH 3020 6.0 Race, "Racism" and Popular Culture.
AS/ANTH 3080 6.0 Modes of Enablement: A Cultural Perspective on Physical Disability.
AS/ANTH 3090 6.0 Gender, Science and Society.
AS/ANTH 3280 6.0 Psychiatric Anthropology and Social Stress.
AS/ANTH 3330 6.0 Health and Illness in Cross-Cultural Perspective.
AS/ANTH 3410 6.0 Ethnicity and Nationalism.
AS/ANTH 4020 3.0 Human Rights in Canada: Key Issues.

Economics

AS/ECON 4259 3.0 Health Economics.
AS/ECON 4309 3.0 Law and Economics.
AS/ECON 4379 3.0 Regulatory Economics.
AS/ECON 4399 3.0 Topics in Law and Economics.

Humanities

AS/HUMA 1810 6.0 Good and Evil.
AS/HUMA 1820 6.0 Ideology and Morality.
AS/HUMA 1950 9.0 Concepts of "Male" and "Female" in the West. (formerly AS/HUMA 1950 6.0)
AS/HUMA 2800 9.0 Introduction to the Study of Religion. (formerly AS/HUMA 2800 6.0)
AS/HUMA 2840 6.0 Perspectives on Contemporary Moral Issues.

Philosophy

AS/PHIL 2050 6.0 Philosophy of Law.
AS/AK/PHIL 2060 3.0 Social and Political Philosophy.
AS/PHIL 3020 3.0 Ethics.
AS/PHIL 3050 3.0 Business Ethics.
AS/AK/PHIL 3110 3.0 Political Philosophy.
AS/PHIL 3130 3.0 Philosophical Issues around Race and Ethnicity.
AS/PHIL 3595 3.0 International Ethics.
AS/PHIL 4150 3.0/6.0 Topics in Applied Ethics.

Political Science

AS/POLS 2040 6.0 Introduction to Political Theory.
AS/POLS 3455 3.0/SOSC 3175 3.0 Topics in Women and Politics.
AS/POLS 3600 3.0 Public Law I: The Constitution and the Courts in Canada.
AS/POLS 3605 3.0 Public Law II: The Charter of Rights and Freedoms and the Limits of Public Administration.
AS/POLS 4125 3.0 Women and Current Public Policy Issues.
AS/POLS 4605 3.0 Ethical Politics.
AS/POLS 4620 3.0 Health Policy in Canada.

Social Science

AS/SOSC 1360 6.0 Social Conflict and Environmental Law.
AS/SOSC 2350 6.0 Law and Society.
AS/SOSC 3050 6.0 Methodological and Ethical Issues.
AS/SOSC 3360 6.0 Canadian Charter of Rights and Freedoms.
AS/SOSC 3370 6.0 Social Justice and Law.
AS/SOSC 4050 6.0 Animals and People.

Sociology

AS/SOCI 3430 6.0 Race and Ethnic Relations in Western Society.
AS/SOCI 3450 6.0 Sociology of "Race" and Racism.
AS/SOCI 4300 3.0 Sociology of Health Care Delivery.
AS/SOCI 4430 3.0 Canada and Refugees.
AS/SOCI 4440 6.0 Race, Minorities and the Legal Order.

Physics and Astronomy – Pure and Applied Science

Department Office:
  128 Petrie, (416) 736-5249
Professor and Chair of the Department:
  M. Horbatsch
Distinguished Research Professor Emeritus:
  R.W. Nicholls
Professors:
  N. Bartel, J.J. Caldwell, W.H. Cannon, J.W. Darewych, M.M. De Robertis, H.S. Freedhoff, K.A. Innanen, R.G. Koniuk, J.G. Laframboise, M.L. McCall, J.R. Miller, R.H. Prince, A.D. Stauffer, W.A. van Wijngaarden
Professors Emeriti:
  A.I. Carswell, C.H. Dugan, W.R. Frisken, G.R. Hébert, R.P. McEachran
Associate Professors:
  S. Bhadra, E.A. Hessels, S. Jeffers, R.A. Koehler, A. Kumarakrishnan, S. Menary, F.J. Morgan
Associate Professor Emeritus:
  J.A. Burt
Senior Lecturers:
  P.A. Delaney, S. Jerzak, S.B. Joshi

Physics and Astronomy are quantitative sciences which employ the scientific method of observation, experiment and systemization of the results of experiment. Their objectives are to seek to understand the ways in which the most fundamental or elementary systems in nature really operate.

Courses in the Department of Physics and Astronomy cover basic elements of the major topics delineated during the last 200 years in these rapidly developing fields of knowledge. There are certain required courses (see the program of study requirements in Science section V) which expose each student to the broad spectrum of physical phenomena and in an elementary way to the techniques of the theoretical physicist or astronomer in numerical analysis and modelling and of the experimental physicist or observational astronomer in measurement, observation and the apparatus of experiment. In developing programs of 3000- and 4000-level courses, students may concentrate their interests around experimental physics, theoretical physics, or astronomy and astrophysics. There are opportunities to develop Honours Double Major and Honours Major/Minor programs with

other disciplines in the Faculty of Pure and Applied Science or in other Faculties.

The department offers Specialized Honours applied science streams in **Applied Physics** and in **Space and Communication Sciences**, developed to meet the needs of rapidly expanding technologies in these fields. The requirements for these streams are found in Science section V.

A brochure giving detailed course descriptions and typical program prescriptions for all programs involving Physics and Astronomy is available on request from the department office.

Courses in Physics and Astronomy

Admission to any course beyond the 1000 level requires consultation with a member of the departmental admissions committee. Normally, entry to courses at the 3000 and 4000 levels requires successful completion of all lower-level courses that are required for degree programs in Physics and Astronomy. The prerequisites and corequisites stated for certain courses indicate the standard of background preparation deemed necessary for those not taking Bachelor or Honours Physics and Astronomy programs. The course director should be consulted by potential entrants who have not completed the normal entry requirements of the department.

Unless otherwise specified, courses whose numbers end in "6.0" (i.e. 6-credit courses) have three lecture hours per week for two terms when taught in a Fall/Winter Session; those whose numbers end in "3.0" (i.e. 3-credit courses) have three lecture hours per week for one term. Courses offered in the evening and/or in a Summer Session may have different formats and scheduling, though they will be equivalent in credit value.

SC/PHYS 1010 6.0 Physics. Topics include linear, rotational and oscillatory motion; Newtonian mechanics; electrostatics; magnetostatics; electric current and induction; heat; geometrical and physical optics and sound. Differential and integral calculus and vector algebra are used. This course covers fewer topics than SC/PHYS 1410 6.0, but covers them in greater depth. It should be taken by all those likely to enrol in 2000-level PHYS courses. Three lecture hours per week in the first term, two lecture hours per week in the second term; three laboratory hours in alternate weeks in both terms; one tutorial hour each week in both terms.

Prerequisite: OAC Physics or SC/PHYS 1510 4.0.

Corequisite(s): AS/SC/MATH 1013 3.0 and AS/SC/MATH 1014 3.0 and AS/SC/MATH 1025 3.0, or AS/SC/MATH 1505 6.0, or equivalents.

Degree credit exclusions: SC/PHYS 1410 6.0, AK/PHSI 2000 6.0.

SC/PHYS 1070 3.0 Astronomy. An introduction to astronomy for science majors. The course gives an overview of basic astronomical knowledge from the solar system

to the edge of the Milky Way, and basic astronomical concepts from white dwarfs to black holes.

Prerequisite: OAC Physics or SC/PHYS 1510 4.0.

Prerequisite or corequisite: AS/SC/MATH 1013 3.0 or AS/SC/MATH 1505 6.0 or equivalent.

Degree credit exclusions: SC/PHYS 1070 4.0, SC/PHYS 2070 3.0 (before 1992-1993).

SC/PHYS 1410 6.0 Physical Science. Topics include kinematics, dynamics, momentum and energy for linear and rotational motion; elementary kinetic theory and thermodynamics; static and current electricity; waves and physical and geometrical optics, elements of modern physics. Recommended for students unlikely to enrol in 2000-level PHYS courses. Three lecture hours per week in the first term, two lecture hours per week in the second term; three laboratory hours in alternate weeks in both terms; one tutorial hour each week in both terms.

Prerequisite: OAC Physics or SC/PHYS 1510 4.0. This is a calculus-based course making use of elementary differential and integral calculus. While not mandatory, a first-year mathematics course involving calculus, such as AS/SC/MATH 1013 3.0/1014 3.0 or AS/SC/ MATH 1505 6.0, is normally taken concurrently. Co-registration in AS/SC/MATH 1515 3.0 or AS/SC/MATH 1505 6.0 is strongly recommended for students lacking OAC Calculus.

Degree credit exclusions: SC/PHYS 1010 6.0, AK/PHSI 2000 6.0.

SC/PHYS 1510 4.0 Introduction to Physics. An introductory course for students lacking adequate preparation for SC/PHYS 1010 6.0 or SC/PHYS 1410 6.0. Topics involve Newton's laws applied to linear and angular motion, force, inertia, torque, impulse, momentum, centre of mass, work, energy, oscillatory motion, geometric optics (including lenses and mirrors). No calculus is used, but vectors are used extensively. Three lecture hours per week, a laboratory session alternating weekly with a tutorial session. One term.

Prerequisite: Ontario Grade 12 Advanced Mathematics.

Degree credit exclusions: AK/PHSI 1500 3.0. May not be taken by any student who has taken or is currently taking another university course in physics.

SC/PHYS 2010 3.0 Classical Mechanics. Translational motion of point masses and rigid bodies under the influence of both constant and varying forces (e.g. fluid drag, surface gravity on Earth). Rotational motion of point masses and rigid bodies, including cyclical motion and precession.

Prerequisites: SC/PHYS 1010 6.0, or a minimum grade of C in SC/PHYS 1410 6.0; AS/SC/MATH 1014 3.0 or equivalent; AS/SC/ MATH 1025 3.0 or equivalent.

Corequisite: AS/SC/MATH 2015 3.0.

SC/PHYS 2020 3.0 Electricity and Magnetism. The elements of electric and magnetic fields are developed together with DC and AC circuit theory and an introduction to electromagnetic waves.

Prerequisites: SC/PHYS 1010 6.0, or a minimum grade of C in SC/PHYS 1410 6.0; AS/SC/MATH 1025 3.0 or equivalent; AS/SC/MATH 2015 3.0.

SC/PHYS 2030 3.0 Symbolic Computation in Physics. The Maple symbolic computing environment is used to solve problems from classical mechanics, fluids, heat and electromagnetics at a level comparable to and above that of SC/PHYS 1010 6.0 or SC/PHYS 1410 6.0.

Prerequisites: SC/PHYS 1010 6.0 or SC/PHYS 1410 6.0; AK/AS/SC/COSC 1540 3.0; AS/SC/ MATH 1014 3.0 or equivalent.

Corequisite: AS/SC/MATH 2015 3.0 or equivalent.

SC/PHYS 2040 3.0 Special Relativity and Modern Physics. This course introduces the two pillars of modern physics - the special theory of relativity and quantum mechanics. The relativistic concepts of space, time and energy are derived from first principles. The quantum nature of radiation and matter is introduced.

Prerequisites: SC/PHYS 1010 6.0, or a minimum grade of C in SC/PHYS 1410 6.0; AS/SC/MATH 1025 3.0 or equivalent; AS/SC/MATH 2015 3.0.

Prerequisites or corequisites: It is strongly recommended that SC/PHYS 2010 3.0 and SC/ PHYS 2020 3.0 be taken in the same year as this course.

SC/PHYS 2060 3.0 Optics and Spectra. Wave phenomena. Interference and diffraction. Atomic spectra and lasers. Microwaves, X-rays and gamma-rays. Instrumentation.

Prerequisites: SC/PHYS 1010 6.0, or a minimum grade of C in SC/PHYS 1410 6.0; AS/SC/MATH 1014 3.0 or equivalent; AS/SC/MATH 1025 3.0 or equivalent.

SC/PHYS 2070 3.0 Galaxies and the Universe. An intermediate survey of the structure, evolution and origin of galaxies, aggregates of galaxies, and the universe as a whole. Frontier topics such as Dark Matter, the Great Attractor, the Great Wall and the Inflationary Universe are included.

Prerequisite: SC/PHYS 1070 3.0, or SC/NATS 1740 6.0 and permission of the instructor.

SC/PHYS 2211 1.0 Experimental Physics. Second-year laboratory experiments, for students of physical science, in mechanics, electric and magnetic interactions including both AC and DC circuits, geometrical and physical optics. Normally three laboratory hours per week. Offered in both terms. One credit.

Prerequisite: SC/PHYS 1010 6.0, or a minimum grade of C in SC/PHYS 1410 6.0.

Corequisite(s): At least one of SC/PHYS 2010 3.0, SC/PHYS 2020 3.0, SC/PHYS 2060 3.0.

Degree credit exclusions: SC/PHYS 2210 2.0, SC/PHYS 2210 1.0, SC/PHYS 2210A 1.0.

SC/PHYS 2212 1.0 Experimental Physics. A second course in second-year laboratory experiments, for students of physical science, in mechanics, electric and magnetic interactions including both AC and DC circuits, geometrical and physical optics. Includes different experiments than those completed in SC/PHYS 2211 1.0, as determined by the course director. Normally three laboratory hours per week. Offered in both terms. One credit.

Prerequisite: SC/PHYS 2211 1.0.

Corequisite(s): At least one of SC/PHYS 2010 3.0, SC/PHYS 2020 3.0, SC/PHYS 2060 3.0.

Degree credit exclusions: SC/PHYS 2210 2.0, SC/PHYS 2210M 1.0.

SC/PHYS 3001 1.0 Organization and Management Seminar in Space and Communication Sciences. A seminar course taught by guest speakers from industry, government and the University. Content changes from year to year, but includes such topics as professional ethics, communications regulations, space law, space science policy, project management, privacy and security issues in computing. (Same as SC/COSC 3001 1.0 and SC/EATS 3001 1.0.) One lecture hour in alternate weeks. Two terms.

Prerequisite: Eligibility to proceed in the Specialized Honours stream in Space and Communication Sciences beyond the 2000-level requirements, or permission of the course director.

Degree credit exclusions: SC/COSC 3001 1.0, AS/SC/COSC 3002 1.0, SC/EATS 3001 1.0.

SC/PHYS 3010 3.0 Classical Mechanics. Intermediate classical mechanics, including dynamics of particles and systems of particles. Lagrange's equations and Hamilton's equations.

Prerequisites: SC/PHYS 2010 3.0; AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0.

SC/PHYS 3020 3.0 Electromagnetics I. Vector calculus; electrostatic and magnetostatic fields, derived from charge and current distributions studied in vacuum and in material media.

Prerequisites: SC/PHYS 2020 3.0; AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0.

Prerequisite or corequisite: AS/SC/MATH 3271 3.0.

SC/PHYS 3030 3.0 Statistical and Thermal Physics. Statistical mechanics of systems of large numbers of elements. Probability, ensembles, fluctuations. Applications: spin magnetism, electrons in metals, radiation, specific heats of solids. Transport theory.

Prerequisites: SC/PHYS 2010 3.0; SC/PHYS 2020 3.0.

Degree credit exclusions: SC/CHEM 4012 3.0, SC/CHEM 4090 3.0.

SC/PHYS 3040 6.0 Modern Physics. Survey of the basis of contemporary physics: introduction to quantum theory of light, atoms, molecules, solids, nuclei, elementary wave mechanics and elementary particles.

Prerequisites: SC/PHYS 2010 3.0; SC/PHYS 2020 3.0; SC/PHYS 2040 3.0; SC/PHYS 2211 1.0; AS/SC/AK/MATH 2270 3.0.

SC/PHYS 3050 3.0 Electronics I. Introduction to physical electronics including DC and AC circuit theory and network analysis; circuit models/analysis for selected transformers; electron and semiconductor devices; introduction to DC power supplies (including CV/CC); analysis/design of basic amplifiers and oscillators; computer simulation/analysis of circuits. Two lecture hours, three laboratory hours form an integral part of this course. One term.

Prerequisites: SC/PHYS 2020 3.0; SC/PHYS 2211 1.0.

SC/PHYS 3070 3.0 Planets and Planetary Systems. Survey of planetary astrophysics. Specific emphases vary, but an overview of planetary observations and current knowledge concerning the atmospheres and interiors of planets and the formation and evolution of planets and planetary systems is presented. Normally offered in alternate years.

Prerequisite: At least one of SC/PHYS 1070 3.0, SC/EATS 1010 6.0, SC/EATS 2030 3.0; or permission of the instructor.

Prerequisite(s) or corequisite: AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0; or permission of the instructor.

SC/PHYS 3080 3.0 Atmospheric Radiation and Thermodynamics. Applications of basic thermodynamic principles to dry and moist atmospheric situations. Aerological diagrams illustrating vertical structure. Solar (short wave) and terrestrial (long wave) radiation with respect to absorption and scattering processes involving atmospheric atoms, molecules, aerosol particles and clouds. (Same as SC/EATS 3030 3.0.)

Prerequisites: SC/PHYS 1010 6.0, or a minimum grade of C in SC/PHYS 1410 6.0; AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0.

Degree credit exclusion: SC/EATS 3030 3.0.

SC/PHYS 3090 6.0 (3090 3.0) Special Topics. Supervised study, lectures, seminars and laboratory work on specific topics of contemporary interest.

SC/PHYS 3150 3.0 Electronics II. Advanced circuit theory and analysis/design for semiconductor circuits, operational amplifier circuits, analogue and digital computation circuits, pulse circuits and circuits employing electronic devices of current interest; general feedback and noise theory; electronic circuit analysis/design using computer simulation. Two lecture hours, three laboratory hours form an integral part of this course. One term.

Prerequisite: SC/PHYS 3050 3.0.

SC/PHYS 3210 6.0 Experimental Physics. Experiments are performed in fluid mechanics, electromagnetism, optics, atomic and nuclear physics. Error analysis of the data and detailed write-ups of at least nine experiments are required. Students are required to present a seminar on a research topic to the class. One lecture/seminar hour per week, open laboratory hours. Two terms.

Prerequisites: SC/PHYS 2211 1.0; SC/PHYS 2212 1.0.

Corequisite: SC/PHYS 3040 6.0.

Degree credit exclusions: SC/PHYS 3210 4.0, SC/PHYS 3220 3.0.

SC/PHYS 3220 3.0 Experimental Physics. A three-credit version of SC/PHYS 3210 6.0 comprising a selection of the experiments in the latter course. These are chosen in consultation with the course director to reflect the student's particular program and background. One lecture/seminar hour per week, open laboratory hours. One term.

Prerequisite: SC/PHYS 2211 1.0; SC/PHYS 2212 1.0 is recommended.

Corequisite: SC/PHYS 3040 6.0.

Degree credit exclusions: SC/PHYS 3210 6.0, SC/PHYS 3210 4.0.

SC/PHYS 3250 3.0 Introduction to Space Communications. The course covers all aspects of communications between spacecraft and ground stations. Topics include orbits, perturbations and launching methods, the essential characteristics and components of satellites, interplanetary spacecraft and ground stations, transmission, reception and link equations and access to a satellite.

Prerequisite: SC/PHYS 2020 3.0.

Prerequisite or corequisite: SC/PHYS 3050 3.0.

SC/PHYS 3280 3.0 Physics of the Space Environment. An introduction to the physical processes of the upper atmosphere, the ionosphere, the magnetosphere and the heliosphere, and the interactions that occur with space vehicles that traverse these regions of space. (Same as SC/EATS 3280 3.0.)

Prerequisites: SC/PHYS 2020 3.0; SC/PHYS 2040 3.0.

Degree credit exclusion: SC/EATS 3280 3.0.

SC/PHYS 4001 6.0 Space and Communication Sciences Workshop. This course is intended to allow the student to carry out the development of a specific space project, under the supervision of a faculty member, a government scientist or an industrial associate. The equivalent of nine laboratory hours per week for two terms. (Same as SC/COSC 4001 6.0 and SC/EATS 4001 6.0.)

Prerequisite: Satisfactory completion of the 3000-level courses in the Space and Communication Sciences core.

Degree credit exclusions: SC/COSC 4001 6.0, SC/EATS 4001 6.0.

SC/PHYS 4010 3.0 Quantum Mechanics (formerly half of SC/PHYS 4010 6.0 - before 2000-2001). Physical concepts and mathematical foundations of quantum mechanics. Emphasis on approximation methods, treatment of angular momentum, spin and their couplings. Introduction to relativistic quantum mechanics and scattering theory.

Prerequisite: SC/PHYS 3040 6.0.

Prerequisite(s) or corequisite(s): SC/PHYS 3020 3.0; AS/SC/MATH 3271 3.0.

Degree credit exclusion: SC/PHYS 4010 6.0.

SC/PHYS 4011 3.0 Atomic and Molecular Physics (formerly half of SC/PHYS 4010 6.0 - before 2000-2001). Application of quantum mechanics to atomic and molecular structure. One-electron systems, many electron atoms, Hartree-Fock approximation, fine structure, hyperfine structure, atom-laser interactions.

Prerequisite: SC/PHYS 4010 3.0.

Degree credit exclusion: SC/PHYS 4010 6.0.

SC/PHYS 4020 3.0 Electromagnetics II. Time-dependent electric and magnetic fields, Maxwell's differential equations in linear, isotropic, homogeneous conductors and dielectrics; the radiation and transmission of electromagnetic energy; relativistic transformation; scalar diffraction theory.

Prerequisites: SC/PHYS 3020 3.0; AS/SC/ MATH 3271 3.0.

SC/PHYS 4040 3.0 Nuclear and Fundamental Particle Physics. The properties of fundamental particles (quarks and leptons), and the forces between them, are studied. Topics include the interactions of particles with matter, symmetry principles and experimental techniques. Properties of nuclear matter (e.g. radioactive decays, fission, fusion) are also investigated.

Prerequisites: SC/PHYS 3010 3.0; SC/PHYS 3020 3.0; SC/PHYS 4010 6.0 or SC/PHYS 4010 3.0.

SC/PHYS 4050 3.0 Solid State Physics. The structural, mechanical, thermal, electrical and magnetic properties of crystalline solids are studied.

Prerequisites: SC/PHYS 3030 3.0; SC/PHYS 4010 6.0 or SC/PHYS 4010 3.0.

SC/PHYS 4060 3.0 Time Series and Spectral Analysis. Treatment of discrete sampled data by linear optimum Wiener filtering, minimum error energy deconvolution, auto-correlation and spectral density estimation, discrete Fourier transforms and frequency domain filtering and the Fast Fourier Transform algorithm. (Same as SC/EATS 4020 3.0 and AS/SC/MATH 4830 3.0.)

Prerequisites: AK/AS/SC/COSC 1540 3.0 or equivalent FORTRAN programming experience; AS/SC/MATH 2015 3.0; AS/SC/ AK/MATH 2270 3.0.

Degree credit exclusions: AK/AS/SC/COSC 4242 3.0, SC/EATS 4020 3.0, AS/SC/MATH 4130B 3.0, AS/SC/MATH 4830 3.0, AS/SC/ MATH 4930C 3.0.

SC/PHYS 4070 3.0 Stars and Nebulae. The astrophysics of radiating matter in the universe. The course covers radiation processes, radiative transfer, interstellar matter, stellar atmospheres and stellar interiors.

Prerequisites: SC/PHYS 1070 3.0; SC/PHYS 3030 3.0; SC/PHYS 3040 6.0; AS/SC/MATH 3271 3.0.

SC/PHYS 4100 6.0 (4100 3.0) Special Topics. Supervised study, lectures, seminars and laboratory work on specific topics of contemporary interest.

SC/PHYS 4110 3.0 Dynamics of Space Vehicles. The dynamics of spacecraft in the near Earth and deep space environments, including the classical theory of orbits, the effects of perturbations on satellite orbits, aerodynamic and electromagnetic drag effects, rocket propulsion, orbital manoeuvres and methods of satellite stabilization.

Prerequisites: SC/PHYS 2010 3.0 or SC/EATS 2470 4.0 or SC/EATS 2470 3.0; AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0; AS/SC/ MATH 3271 3.0 is strongly recommended.

SC/PHYS 4120 3.0 Gas and Fluid Dynamics. Fundamental laws; conservation of mass, momentum and energy; vortex motion; incompressible, compressible and viscous flows; turbulent flow; surface waves. (Same as AS/SC/MATH 4470 3.0.)

Prerequisites: SC/PHYS 2010 3.0 or SC/EATS 2470 4.0 or SC/EATS 2470 3.0; AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0.

Degree credit exclusions: SC/PHYS 3180 3.0, AS/SC/MATH 4470 3.0.

SC/PHYS 4210 3.0 Experimental Physics. Advanced experiments in physics related to topics in solid state physics, optical and microwave spectroscopy, and nuclear physics. Six open laboratory hours. One term.

Prerequisites: SC/PHYS 3210 6.0; registration in an Honours Program in Physics and Astronomy.

Note: Students whose programs require 6 credits of 4000-level experimental physics take both SC/PHYS 4210 3.0 and SC/PHYS 4211 3.0, including different experiments as determined by the course coordinator.

SC/PHYS 4211 3.0 Experimental Physics. Advanced experiments in physics related to topics in solid state physics, optical and microwave spectroscopy, and nuclear physics. Six open laboratory hours. One term.

Prerequisites: SC/PHYS 3210 6.0; registration in an Honours Program in Physics and Astronomy.

Note: Students whose programs require 6 credits of 4000-level experimental physics take both SC/PHYS 4210 3.0 and SC/PHYS 4211 3.0, including different experiments as determined by the course coordinator.

SC/PHYS 4250 3.0 Signal and Communications Theory. Signal representation using orthogonal functions; Fourier series and transforms as applied to signals; ideal and physically realizable filters; the sampling theorem; definitions and characterizations of energy, power and their spectral densities; the modulation theorem; various kinds of modulation and bandwidth requirements.

Prerequisites: SC/PHYS 3250 3.0; AS/SC/ MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0.

Degree credit exclusion: AS/SC/MATH 4130B 3.0.

SC/PHYS 4270 4.0 Astronomical Techniques (formerly SC/PHYS 4270 3.0 - before 1999-2000). An introduction to modern astronomical instrumentation, observational methods, data analysis and numerical methods. In addition to weekly lectures, the course provides students with hands-on experience with both observational and theoretical techniques of modern astronomy. Normally offered in alternate years. One and one half lecture hours per week, several laboratory exercises. Two terms.

Prerequisites: SC/PHYS 1070 3.0; AS/SC/MATH 2015 3.0; AS/SC/AK/MATH 2270 3.0.

Degree credit exclusion: SC/PHYS 4270 3.0.

SC/PHYS 4310 3.0 Physics or Astronomy Project. A supervised research endeavour, either theoretical or experimental, in physics or astronomy. The project follows consultation with a faculty member who agrees to supervise.

Prerequisite: Open to students in the final year of the Physics, Applied Physics, or Astronomy stream of an Honours Physics and Astronomy program.

SC/PHYS 4410 3.0 Space Geodynamics. The dynamical behaviour of the Earth from space measurements. Included are the external gravity field of the Earth, orbital dynamics of artificial satellites, satellite geoid, internal figure of the Earth, rotation of the Earth and its measurement by space techniques. (Same as SC/EATS 4250 3.0.) Normally offered in alternate years.

Prerequisite(s) or corequisite(s): SC/EATS 3020 3.0; AS/SC/MATH 3241 3.0 or AK/AS/SC/COSC 3121 3.0; AS/SC/MATH 3271 3.0.

Degree credit exclusion: SC/EATS 4250 3.0.

SC/PHYS 4450 3.0 Spacecraft Systems. The course begins with a presentation of the basic principles underlying the design of spacecraft systems to meet the requirements of an orbital environment. It then develops the concepts and current approaches to spacecraft electrical, mechanical and thermal design.

Prerequisites: SC/PHYS 3050 3.0; SC/PHYS 3250 3.0; SC/PHYS 3280 3.0 or SC/EATS 3280 3.0.

SC/PHYS 4550 3.0 Introduction to Control Systems. An introduction to the analysis and design of automatic control systems for linear time-invariant systems.

Prerequisites: AS/SC/MATH 2015 3.0; AS/SC/ AK/MATH 2270 3.0; AS/SC/AK/MATH 3410 3.0 strongly recommended.

Political Science – Arts

Department Office:
  S672 Ross, (416) 736-5265
Chair of Department:
  TBA
Professors Emeriti:
  N. Black, R. Cornell, R. Cox, M.D. Goldrick, R.W. Grant, G. Szablowski, D. Verney, N. Wood
Professors:
  A. Bayefsky, D. Dewitt, E. Dosman, F.J. Fletcher, M.B. Frolic, S. Gill, J. Hellman, S. Hellman, H. Kaplan, D. Leyton-Brown,

K. McRoberts, L. North, J. Saul, H. Simmons, O. Subtelny, R. Whitaker

Distinguished Research Professor:
L.V. Panitch

Associate Professors:
A. Acharya, G. Albo, R. Albritton, I. Bakker, S. Bell, G. Comninel, A. Denholm Crosby, R.J. Drummond, S. Forsyth, C.I. Greene, A. Horowitz, R. MacDermid, D. McNally, E. Morera, S. Newman, J. Newton, J. Nitzan, S. Plekhanov, R.A. Rudolph, D. Shugarman, M. Thomas, S.L. Whitworth

Assistant Professors:
M. Bernard, Dobrowolsky, A. Mukherjee-Reed, D. Mutimer, L. Sossin, G.W. Swanson

Contractually-Limited Appointment:
D. Marien

The Political Science Department offers courses in five fields: Canadian Politics, Comparative World Politics, International Relations, Political Theory, and Empirical Theory and Methodology. Students may select from a full range of courses in each field, starting with broad survey courses at the 2000-level and advancing to more specialized courses at the 3000-level and Honours BA seminars at the 4000-level. Typical offerings in Canadian politics deal with federal-provincial relations, public law, municipal government, and political parties. Comparative world politics courses are of two sorts: some examine the political systems of such countries as the United States, the former Soviet Union, and China, while others explore entire regions like Latin America, Western Europe, and Southern Africa. Offerings in international relations focus particularly upon Canadian foreign and defence policy, strategic studies, international political economy, international organizations, and the foreign policies of the superpowers. In political theory, courses provide a detailed survey of the history of Western political thought and take up the concerns of such modern political philosophers as Hannah Arendt, Albert Camus, C.B. Macpherson, and John Rawls. Finally, courses in empirical theory and methodology introduce students to statistics and computer applications in the social sciences and examine more sophisticated questions of political analysis and the philosophy of inquiry. The department offers a 4000-level Honours BA Colloquium open by invitation to advanced students. Students interested in independent study may enrol in individual reading and research courses at the upper level. The department participates, as well, in a substantial number of interdisciplinary programs within the Faculty of Arts, including, for example, Canadian Studies, Urban Studies, and Law and Society.

Note: The department also offers Specialized Honours BA degree programs in Public Policy and Administration and Global Political Studies. For details, please consult the "Programs of Study" section, Faculty of Arts.

Courses in Political Science

Note: For specific requirements of programs offered by this department, please consult the "Programs of Study" section, Faculty of Arts.

Courses at the 2000 and 3000-level normally have two lecture hours and one tutorial hour a week. Courses at the 4000-level normally have two consecutive seminar hours a week. Majors registered for the BA degree may, with the permission of the department, count toward the major requirement a maximum of 15 credits in Political Science taken outside the department. Honours BA majors may count toward the major requirement a maximum of 21 such credits taken outside of the department.

Note: A more detailed description of course offerings is contained in the department's supplementary calendar, which is available from the Political Science department, S672 Ross; students should consult the supplementary calendar prior to registration.

Note: Not all courses will necessarily be offered in any given year; consult the department's supplementary calendar for details of courses to be offered.

Note: For a list of Atkinson courses which are degree credit exclusions, students should consult the degree credit exclusion/equivalent tables in the Lecture Schedule.

I. 1000-Level Courses

Note: Open to all students. Should be taken in their first or second years (i.e. before successfully completing 54 credits).

AS/POLS 1000 6.0 Introduction to Politics: Exploring the Democratic Experience. This course introduces students to the central concepts of political science. The emphasis is on how individuals participate in politics and on how politics may be changed. Among the topics to be considered are the following: nationalism and nation building, liberalism, communism, fascism, power, war, imperialism and dependency, international organization, interdependence, and integration. Material from municipal, provincial, national, and international levels of politics will be included as well as material on current policy issues, such as recent changes in the Ontario Human Rights Code.

Cross-listed to: AK/POLS 2410 6.0.

AS/POLS 1090 6.0 Introduction to Business Government and Society. This course presents an overview of the Canadian and international business environment with particular emphasis on government regulation of business, and the social pressures governments respond to when regulating business.

II. 2000-Level Courses

Prerequisites: Open to all students. No prerequisites.

AS/POLS 2040 6.0 Introduction to Political Theory. An introduction to the history of political theory with a focus upon selected theorists in the western tradition.

Note: This course is a prerequisite for most 3000 and 4000-level courses in political theory.

AS/POLS 2100 6.0 Introduction to Canadian Government and Politics. The process of Canadian government is studied through an examination of the institutional framework and socio-economic context of Canadian politics. Topics include federalism, public policy and administration, parties and elections, interest groups, and the structures and operation of parliamentary government.

Note: This course is a prerequisite for most 3000 and 4000-level courses in Canadian politics.

Degree credit exclusion: AS/POLS 2610 6.0.

Cross-listed to: AK/POLS 3420 6.0.

AS/POLS 2210 6.0 Introduction to International Relations. A descriptive and analytical examination of international politics from the development of the nation-state system to the present time.

Note: This course is a prerequisite for most 3000 and 4000-level courses in international relations.

AS/POLS 2300 6.0 Introduction to Empirical Theory. Introduction to the issues, procedures, and theories associated with the empirical approach to the study of politics. The course includes an examination of the origins and critical debates of political science and a survey of the major empirical theories of politics.

Note: This course is a prerequisite for most 3000 and 4000-level courses in empirical theory and methodology.

AS/POLS 2510 6.0 Introduction to Comparative Politics. An introduction to the comparative study of political systems, institutions, and processes. The second half of the course examines in detail the government and politics of specific countries and regions.

Note: This course is a prerequisite for most 3000 and 4000-level courses in comparative world politics.

AS/POLS 2610 6.0 Public Policy and Administration. Focusing on Canadian government at the federal, provincial and local levels, this course assesses the relations between administrative structures and public policy development.

Note: This course is a prerequisite for most 3000 and 4000-level courses in Canadian politics.

Degree credit exclusion: AS/POLS 2100 6.0.

III. 3000-Level Courses

Prerequisites: Most 3000-level courses have a specified 2000-level course as a prerequisite (see the course descriptions for 2000-level courses above, and always consult the departmental supplementary calendar). Third and fourth-year students (i.e. those who have successfully completed at least 54 or more credits) in other departments may, if they are otherwise adequately prepared, take a 3000-level Political Science course without having satisfied the departmental requirements. Written permission of the course director must be obtained and submitted to S672 Ross prior to enrolment.

AS/POLS 3000 3.0/3000 6.0 Special Topics. Various sections of this course focus on specific themes of general interest to undergraduate students. Students should

consult the department's supplementary calendar for sections which may be announced at a later date.

AS/POLS 3001 3.0/6.0 Selected Topics in Comparative Politics. Various sections of this course focus on specific themes in Comparative Politics. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 3002 3.0/6.0 Selected Topics in Canadian Politics. Various sections of this course focus on specific themes in Canadian Politics. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 3003 3.0/6.0 Selected Topics in International Relations. Various sections of this course focus on specific themes in International Relations. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 3004 3.0/6.0 Selected Topics in Political Theory. Various sections of this course focus on specific themes in Political Theory. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 3005 3.0/6.0 Selected Topics in Empirical Theory and Methodology. Various sections of this course focus on specific themes in Empirical Theory and Methodology. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 3010 3.0 Ancient and Medieval Political Thought. An interdisciplinary approach to selected thinkers within their historical context. Readings are drawn from among the works of the Sophists and Epicurians, Plato, Aristotle, Cicero, St. Augustine, and St. Thomas Aquinas.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3010 6.0.

AS/POLS 3020 3.0 Political Thought of the Renaissance and Reformation. An interdisciplinary approach to selected thinkers of the Renaissance and Reformation within their historical contexts. Primary sources are drawn from the works of Machiavelli, Bodin, Hooker, Luther, and Calvin among others.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3010 6.0.

AS/POLS 3025 3.0 Seventeenth Century Political Thought. An interdisciplinary approach to early modern political thought emphasizing the contributions of selected European theorists. Readings are drawn from the works of the English Levellers, Hobbes, Locke, and Spinoza among others.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3020 6.0.

AS/POLS 3030 3.0 Eighteenth Century Political Thought. An interdisciplinary approach to the political thought of the eighteenth century through a survey of such authors as Vico, Montesquieu, Rousseau, Hume, Smith, Burke, and Kant.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3020 6.0.

AS/POLS 3040 6.0 Currents in Modern Political Theory. This course analyzes the political theories or the political implications of the theories of major philosophers and social theorists from Kant to Foucault. Studies include Kant, Hegel, Marx, Nietzsche, Weber, Freud, and Foucault.

Degree credit exclusions: AS/POLS 3035 3.0, AS/POLS 3040 3.0, AS/POLS 3045 3.0.

AS/POLS 3065 3.0: Political Culture of Race and Racism. This course analyses the political, economic, and cultural development of "race" and "racism" in political discourse. Attention is given to categories such as "Eurocentric" and "the West". We deal with the historical development of "identity politics" versus "political correctness" debates.

Degree credit exclusion: AS/POLS 3000B 3.0 (Fall/Winter 1997).

AS/POLS 3070 3.0 Psychology and Politics. This course involves the use of personality concepts in contemporary political thought. After outlining some psychological theories, starting with Freud, the focus is on selected problems: ideology, freedom and the law, community and utopia, leadership and biography, democratic participation, totalitarianism, and conservatism.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3070 6.0.

AS/POLS 3075 3.0 Law, Justice and Jurisprudence. This course deals with the theories and principles of law and justice which underlie legal systems, with an emphasis on how these theories and principles impact on the political process. Readings draw from a variety of classical and contemporary sources.

Prerequisite: Any second-year political science course or permission of the instructor.

Degree credit exclusion: AS/POLS 3130 6.0.

AS/POLS 3080 3.0 American Political Thought. A study of the beliefs, values, and expectations characteristic of American political culture. Readings from the leading political, psychological, and social thinkers in American history.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3080 6.0.

AS/POLS 3100 3.0 The Politics of Communication and Culture in Canada. This course is organized around the assumption that patterns of communication and culture are central elements in any political system. It examines the principles and theories underlying communications and cultural practices, policy and regulation in Canada, with particular attention to the role of the state and the private sector in shaping the nature of political and cultural discourse in Canada.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or AS/SOSC 2310 6.0 or permission of the instructor.

AS/POLS 3110 3.0 The Process of Urban Politics I: Institutions and Power. An examination of the political systems of major metropolitan areas in Canada, including the following topics: the structure and operation of municipal government; the role of cities in national and provincial governments; city elections and parties; and political aspects of urban planning.

Prerequisite: Any second-year political science course or permission of the instructor.

Degree credit exclusion: AS/POLS 3110 6.0.

AS/POLS 3115 3.0 The Process of Urban Politics II: Social Justice and Urban Ecology. An examination of the important issues confronting urban governments in Canada and the forces impacting responses to these issues. Issues include redevelopment, social housing and the environment; forces impacting responses include the economy, social culture, ideology and social movements.

Prerequisite: Any second-year political science course or permission of the instructor.

Recommended: AS/POLS 3110 3.0.

Degree credit exclusion: AS/POLS 3110 6.0.

AS/POLS 3120 3.0 The Politics of French Canada. The purpose of this course is to provide a systematic introduction to the political life of Quebec, as well as relations between Quebec and the rest of Canada. It seeks to apply and evaluate major theoretical propositions about nationalism and independence movements, ethnic and class relations, intergovernmental conflict, economic and social change, and social movements and political parties.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3120 6.0.

AS/POLS 3125 3.0 The Canadian Political Economy. An exploration of the rich tradition of Canadian Political Economy through a survey of the traditional as well as emerging approaches and issues. The classical political economy writers, including the pioneering staples school, are examined, as well as more recent writers. Critiques and explanations of political economists - old and new - highlight the elements of past and current Canadian political and economic development.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3000A 3.0.

AS/POLS 3140 3.0 Political Economy of Labour in Canada. An analysis of the role organized labour has played in the political economy of Canada. The course traces the interaction of labour, business and government and focuses on the contemporary struggle of labour as it confronts the corporate state.

Prerequisite: Any second-year political science course or permission of the instructor.

Degree credit exclusions: AS/POLS 3140 6.0, AS/SOSC 3280 6.0.

AS/POLS 3145 3.0 Government and Business in Canada. This course describes the role of market forces and corporate institutions in shaping Canada's political economy, and the attempt to control or regulate the corporate sector.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3000B 3.0.

Cross-listed to: AK/POLS 3209L 3.0.

AS/POLS 3150 3.0 Political Parties in Canada. An intensive examination of the origins and development of political parties in Canada, including the three major parties and smaller parties which have arisen from time to time at the federal and provincial levels.

Prerequisite: Any second-year political science course or permission of the instructor.

Degree credit exclusion: AS/POLS 3150 6.0.

Cross-listed to: AK/POLS 3209K 3.0.

AS/POLS 3155 3.0 Election Campaigns in Canada. An intensive examination of political science studies of elections, voter decision-making, campaigns and campaign strategies in Canada.

Prerequisite: Any second-year political science course or permission of the instructor.

Recommended: AS/POLS 3150 3.0.

Degree credit exclusion: AS/POLS 3150 6.0.

Cross-listed to: AK/POLS 3209H 3.0.

AS/POLS 3160 6.0 Issues in Canadian Constitutional Law. An introduction to the politics of Canadian constitutional law. The course examines such issues as judicial review, the division of powers, civil liberties, emergency powers, and constitutional reform to demonstrate the link between law and fundamental issues of politics.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 3165 6.0 Problems in Canadian Business Law. This course describes the legal rules that govern the conduct of business in Canada and samples the extensive normative commentary on these issues. Students also develop their capacity to present written arguments reflecting their own views on the law.

Prerequisite: None.

Degree credit exclusions: AS/ECON 4500 3.0, AS/ECON 4510 3.0.

Cross-listed to: AS/SOSC 3165 6.0.

AS/POLS 3170 3.0 Provincial Politics in Canada. This course familiarizes students with various issues surrounding the organization of politics in the provinces. The course covers both contemporary and historical political developments in provincial governing structures and processes.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0, or permission of the instructor.

Degree credit exclusion: AS/POLS 3170 6.0.

AS/POLS 3175 3.0 Ontario Provincial Politics. An analysis of Ontario provincial politics. The course focuses on substantive problems of Ontario provincial politics and on formal and informal institutions of Ontario's government in the context of the Canadian federal system.

Prerequisite: Any second-year political science course or permission of the instructor.

Recommended: AS/POLS 2100 6.0 or AS/POLS 2610 6.0.

Degree credit exclusion: AS/POLS 3170 6.0.

AS/POLS 3180 3.0 Interest Groups in Canada. This course deals with the politics of participation and representation. It examines the efforts of citizens and social movements and of corporations and economic interest groups to influence public policy. It deals with theoretical concepts of power, equality, fairness and balance, and with case studies of lobbying, community organization and the politics of dissent.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3180 6.0.

AS/POLS 3190 6.0 Public Administration. This course examines the theory and practice of public administration and the machinery of government, with particular reference to Canada. It discusses who makes policy, how policy is developed and implemented, and how the "system" is controlled and evaluated.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 3200 3.0 Global Conflict and Security I. This course acquaints students with issues surrounding conflict and security in global politics as it has evolved over the past three centuries. It examines the history and development of war from the medieval period to the era of "total war", and the main currents of thought on issues of war and peace.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Degree credit exclusions: AS/POLS 3200 6.0, AS/POLS 3210 6.0.

AS/POLS 3210 3.0: Global Conflict and Security II. This course explores the issues surrounding different dimensions of conflict and security in the contemporary period. In its broadest sense, security can be understood not only in military, but also in political, economic, cultural and social terms. Several specific themes will be examined in this course, including: national liberation struggles and the rise of protracted social conflicts, the ethics of war, gender and conflict, and the analytic attempts to define alternative conceptions of security.

Prerequisites: AS/POLS 2210 6.0 and AS/POLS 3200 3.0 or permission of the instructor.

Degree credit exclusions: AS/POLS 3200 6.0, AS/POLS 3210 6.0.

AS/POLS 3220 3.0: Comparative Foreign Policy Analysis. Examination of the value of cross-national comparisons by considering the conduct and sources of the contemporary foreign policies of at least two countries drawn from a list including the United States, China, Japan, and Russia. Particular attention is devoted to the domestic forces with shape policy formulation and implementation.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3230 6.0.

AS/POLS 3230 3.0 Global Issues in Foreign Policy. Increasingly, problems such as environmental degradation, sustainable development, the uses and effects of technology in financial, production and communication systems, human rights abuses, refugee and population movements, and militarization, require solutions that can only be realized within a system of multilateral cooperation. The purpose of this course is to introduce students to the foreign policy decision-making process in terms of these global issues.

Prerequisites: AS/POLS 2210 6.0 and AS/POLS 3220 3.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3230 6.0.

AS/POLS 3235 3.0 Russia and the World: Issues in Contemporary Russian Foreign Policy. This course, taught at the Institute of the USA and Canada, Russian Academy of Sciences, in Moscow, analyses ideas, interests, structures and processes which shape relations between Russia and other countries.

Prerequisites: AS/POLS 2210 6.0 or AS/POLS 2510 6.0, or permission of the instructor.

AS/POLS 3240 3.0 Multilateralism I: Introduction to International Organization. Multilateralism concerns the management of conflict and the building of cooperation among the variety of political entities and agents that enter the field of world politics and governance. The primary purpose of this course is to provide the student with a better understanding of the evolving role of international organization within the broader context of changing world politics and international law. Emphasis will be placed on the historical development of international organization.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3280 6.0.

AS/POLS 3250 3.0 Multilateralism II: Structures and Processes. Multilateralism concerns the management of conflict and the building of cooperation among the variety of political entities and agents that enter the field of world politics and governance. The primary

purpose of this course is to build upon the introduction provided in Political Science 3240 3.0 and examine actual structures, processes, activities and instruments of international organizations within and outside the UN Family.

Prerequisites: AS/POLS 2210 6.0 and AS/POLS 3240 3.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3280 6.0.

AS/POLS 3260 6.0 War and Peace in the Middle East. A study of the relations between Israel and its contiguous neighbours, including the historical origins of the current stalemate and an assessment of the various approaches to peace-making in the area.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Cross-listed to: AK/POLS 3209J 6.0.

AS/POLS 3270 3.0 Global Political Economy I: Theory and Approaches. This course introduces the main theoretical perspectives (realism, liberalism, Marxism) and concepts (structure, power, hegemony, state, market etc.) of GPE and applies them in the identification of the main substructures of the global political economy (e.g. security, money and finance, production and trade) in the context of historical developments, especially since the nineteenth century.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3270 6.0.

AS/POLS 3275 3.0 Global Political Economy II: Issues and Problems Since 1945. This course builds on the theoretical apparatus in AS/POLS 3270 3.0 to focus on problems and issues relating to the post-1945 GPE, for example, the globalization of production and associated migration of labour; global money and finance, underdevelopment and the debt crisis, the economic crisis of the 1970s and 1980s, and prospects for the 1990s and beyond; contemporary transformations such as the changes in Eastern Europe and the implications of the collapse of the USSR; longer-term problems such as ecology and economics, perennial issues such as global conflict and cooperation, e.g. involving the Group of Seven.

Prerequisites: AS/POLS 2210 6.0 and AS/POLS 3270 3.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3270 6.0.

AS/POLS 3280 3.0 Canada and World Affairs. This half course studies the impact of external developments on Canada and Canadians, and the role and behaviour of Canadian traditional state, foreign, and defense policy instruments, other governmental actors, and non-governmental organizations and forces in bilateral and multilateral contexts.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3240 6.0.

AS/POLS 3300 6.0 Statistics for Social Sciences. This course provides a basic understanding of the statistical reasoning and fundamental statistical techniques frequently used to analyse social data. It introduces students to the uses of computers and statistics in the social sciences. It helps develop necessary critical skills to evaluate empirical research.

Prerequisite: AS/POLS 2300 6.0 or permission of the instructor.

Recommended: AS/SOCI 2030 6.0.

Cross-listed to: AS/SOCI 3030 6.0.

Degree credit exclusions: AS/PSYC 2020 6.0, AS/KINE 2050 3.0, AS/GEOG 2420 6.0 or equivalent.

AS/POLS 3405 3.0 Comparative Perspectives in Public Policy and Political Economy. An examination of how capitalist states differ in their economic institutions and policy outputs. The economic, political and social factors that explain these differences are analyzed, and the main theoretical paradigms (the liberal-market, neo-institutional, and Marxist traditions) are explored. Policy areas to be examined include welfare states, labour market policy, the economic role of women, industrial policy, financial institutions, and trade policy.

Prerequisite: AS/POLS 2510 6.0 or AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 3425 3.0 Comparative Constitutional Law. A comparison of the constitutional systems and jurisprudence of several countries with constitutional problems similar to those of Canada. Particular countries selected for comparison varies from year to year, but are selected from the following: the United States, the United Kingdom, France, Australia, India, Malaysia, Nigeria, South Africa, Germany and Switzerland.

Degree credit exclusions: AS/POLS 3525 3.0, AS/POLS 3130 6.0, AS/POLS 3540 3.0.

AS/POLS 3450 3.0 Women and Politics. This course examines women's political position in advanced capitalist countries. The focus is historical, theoretical and issue-oriented. Issues examined include the politics of racism, sexuality, reproduction, pornography within formal political structures and community organizing.

Degree credit exclusions: GL/POLS 4960E 6.0, GL/WMST 4960E 6.0.

Cross-listed to: AS/AK/GL/WMST 3516 3.0, AS/SOSC 3170 3.0.

AS/POLS 3455 3.0 Topics in Women and Politics. This course explores in greater depth one or two of the issues examined in AS/POLS 3450 3.0. Possible issues include women and employment, politics of reproduction, politics of racism, gender and international relations, feminist theory, and so on.

Prerequisite: AS/POLS 3450 3.0 or AS/SOSC 3170 3.0 or AS/AK/GL/WMST 3517 3.0 or permission of the instructor.

Degree credit exclusions: AS/POLS 3450 6.0, AS/SOSC 3170 6.0.

Cross-listed to: AS/SOSC 3175 3.0, AS/AK/GL/WMST 3516 3.0.

AS/POLS 3500 3.0 The Rise and Fall of Communism in Russia and Eastern Europe. The course acquaints students with the development of the Soviet Political System after 1917, and its recent disintegration. Issues to be discussed include: the nature of the Russian Revolution; building socialism; the role of Lenin, Stalin and other leaders; the Communist party; Gorbachev and perestroika; the crises of socialism; and the current post-Soviet successor state.

Degree credit exclusion: AS/POLS 3500 6.0.

AS/POLS 3502 3.0 Transforming Russia: The Burden of History and the Imperative of Change. This course, taught at the Institute of the USA and Canada, Russian Academy of Sciences, in Moscow, deals with the key issues of Russia's post-communist reforms in a historical context, as the latest in a long series of efforts to modernize Russian society and political system.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 3503 3.0 Russia And Canada: Comparing the Two Societies. This course, taught at the Institute of the USA and Canada, Russian Academy of Sciences, in Moscow, reviews issues in contemporary Russia politics through comparisons with Canada.

Prerequisites: AS/POLS 2100 6.0 or AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 3510 3.0 Government and Politics in China. This course examines the origins and development of the modern Chinese political system. Emphasis is on the role of Mao Zedong, the post-1949 period and the reform of Chinese socialism.

Degree credit exclusion: AS/POLS 3510 6.0.

Prerequisite: Any second-year political science course, or permission of the instructor.

AS/POLS 3515 3.0 China and the World. China's relationship with the outside world has been a dominant issue in its political development. This course focuses on this relationship in the post-1949 period, with emphasis on the recent "open door" policy and its impact on the Chinese political system.

Degree credit exclusion: AS/POLS 3510 6.0.

AS/POLS 3530 3.0 West European Politics. This course begins with an examination of the development of states and political institutions in West European democracies. It then examines recent trends in politics in Western Europe, including the rise and crisis of the welfare state.

Degree credit exclusions: AS/POLS 3410 6.0, AS/POLS 3415 3.0.

AS/POLS 3540 3.0 American Government and Politics. An analysis of the American system via examination of recent political events. Attention is given to the composition of the socio-political elite, the nature of mass influence in public

policies and the operation of such major institutions as the congress, courts, presidency and political parties.

Degree credit exclusions: AS/POLS 3440 6.0, AS/POLS 3440 3.0.

AS/POLS 3545 3.0 Freedom, Wealth and Equality: Society and Political Economy in the United States. The purpose of this course is to provide students with a basic knowledge of US government and politics with the opportunity to apply that knowledge to the analysis of current issues in US politics, and to examine the relation between government and American society.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Recommended: AS/POLS 3540 3.0.

Degree credit exclusions: AS/POLS 3440 6.0, AS/POLS 3445 3.0.

AS/POLS 3550 3.0 The Politics of Central America. This course focuses on 20th century Central America to explore the social foundations of political stability and instability. In addition to examining the domestic politics of the region's nations, it looks at the international pressures that impinge on their evolution.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3550 6.0.

AS/POLS 3555 3.0 The Politics of South America. This course examines post-World War II experiences of dictatorship and democratization in Mexico and South America, in the light of the region's nineteenth century legacy. It deals with the conflicts that have led to the establishment of repressive regimes and the processes that have paved the way toward political openings.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3550 6.0.

AS/POLS 3560 6.0 Politics of the Third World. An examination of the political issues, institutions and strategies for (and obstacles to) development, in the so-called developing areas. Although the course considers general themes, such as colonialism, social change, economic development etc., its primary focus is on current politics in independent sub-Saharan Africa and South Asia.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 3570 3.0 Africa: The Politics of Continental Crisis. An examination of Africa's present crisis, identifying both the opportunities for, and the severe constraints upon, the political and economic transformation of selected African states, with emphasis varying from year to year, on Ghana, Nigeria, Ivory Coast, Senegal, Tanzania, Kenya and Uganda.

Prerequisite: Any second-year political science course or permission of the instructor.

Degree credit exclusion: AS/POLS 3570 6.0.

AS/POLS 3590 3.0 Japan and World Order. An introduction to the post-war politics of Japan. Topics covered include the traditional origins of the Japanese political system, the influence of the America occupation, political institutions (including the Emperor, elected officials, and the bureaucracy), linkages between state and society, linkages between state and economy, the Japanese production system (including labour relations), and Japan's emerging regional and global role.

Prerequisite: AS/POLS 2210 6.0 or AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 3600 3.0 Public Law I: The Constitution and the Courts in Canada. The objective of this course is to examine constitutional laws and practices, judicial review of the division of powers, and the role of the courts and the legal profession in Canada. A strong emphasis is placed on the relationship between law, politics and public policy.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3600 6.0.

AS/POLS 3605 3.0 Public Law II: The Charter of Rights and Freedoms and the Limits of Public Administration. The objective of this course is to examine key provisions of the Canadian Charter of Rights and Freedoms as they have been interpreted by the courts. This includes freedoms of expression and association; right to life, liberty and security of the persons; equality rights and non-discrimination; and the rights of aboriginal peoples. In addition, a section of the course will be devoted to judicial review of public administration.

Prerequisites: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 and AS/POLS 3600 3.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3600 6.0.

AS/POLS 3700 3.0 Political Economy Of Industrial Democracies. This course provides an analysis of the political economy of the advanced capitalist democracies in the postwar period. The primary area of focus is Western Europe, but the subject matter may also include Japan and the USA.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 3710 3.0 The Political Economy Of The Newly-Industrialized Countries. The course examines theoretical debates concerning the political economy of industrialization in post-colonial countries through examination of specific case studies.

Prerequisite: AS/POLS 2210 6.0 or AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 3720 3.0 Post-Communist Transformations: Can East Become West? An examination of key problems of political and economic change in post-communist societies, especially Russia, including economic and political liberalization, the challenge of nationalism, and democratization.

Degree credit exclusion: AS/POLS 3000D 3.0 (Fall/Winter 1995).

AS/POLS 3790 6.0 Political Economy of Latin America and The Caribbean. This course critically examines the classical writings on imperialism, underdevelopment, and dependency, as well as new theoretical attempts to conceptualize the new international division of labour and the problems of poverty, environmental degradation, and unequal exchange.

Degree credit exclusion: AS/POLS 3290 6.0.

Cross-listed to: AS/SOSC 3410 6.0.

AS/POLS 3800 3.0 Speed Politics. Speed is understood as the ideology and practice of postcontemporary society. This course constructs a political theory of speed by examining speed in select theoretical texts.

AS/POLS 3990 3.0/3990 6.0 Supervised Reading and Research. Students in their third year may take independent, individually-supervised reading/research courses, either on a full-year or half-year basis, when the student and the course meet the requirements set out by the Faculty of Arts and those established by the Department.

IV. 4000-Level Courses

Prerequisites: 4000-level courses are advanced seminars for students in an Honours BA Program (at least a 5.0 cumulative grade point average) who have successfully completed at least 84 credits. Students who meet these requirements must also have the stated prerequisite, (please check the current supplemental calendar) or written permission of the course director before enrolling.

AS/POLS 4000 3.0/4000 6.0 Special Topics. Various sections of this course will focus on specific themes of general interest to undergraduate students. Students should consult the Department's supplementary calendar for sections which may be announced at a later date.

AS/POLS 4001 3.0/6.0 Selected Topics in Comparative Politics. Various sections of this course focus on specific themes in Comparative Politics. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 4002 3.0/6.0 Selected Topics in Canadian Politics. Various sections of this course focus on specific themes in Canadian Politics. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 4003 3.0/6.0 Selected Topics in International Relations. Various sections of this course focus on specific themes in International Relations. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 4004 3.0/6.0 Selected Topics in Political Theory. Various sections of this course focus on specific themes in Political Theory. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 4005 3.0/6.0 Selected Topics in Empirical Theory and Methodology. Various sections of this course focus on specific themes in Empirical Theory and Methodology. Students should consult the Department of Political Science supplementary calendar for specific section offerings.

AS/POLS 4010 3.0 Selected Problems in the History of Political Thought. A seminar examining a major theme or problem derived from the writings of one or more central figures in Western political theory.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4010 6.0.

Integrated with: GS/POLS 5000U 3.0.

AS/POLS 4015 3.0 Theories of Justice. An exploration of theories of justice which are at the heart of contemporary debates in political theory. The course makes the student aware both of the complexity of notions of justice, and of the fundamental conditions for just societies to exist.

Prerequisite: Any second-year political science course or permission of the instructor.

AS/POLS 4020 3.0 Hegel's Philosophy of Right. An intensive textual study of Hegel's major political work.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Integrated with: GS/POLS 5000U 3.0 and GS/SPT 6180 3.0.

AS/POLS 4025 3.0 Freedom and Equality. Freedom and equality are two of the fundamental conditions for democracy, and as such they provide the ethical basis for much of contemporary political theory. The course explores conflicting conceptions of freedom and equality, their interrelationship, and the implications of contemporary developments in this important field of political morality.

Prerequisite: Any second-year political science course or permission of the instructor.

AS/POLS 4030 3.0 Classical Political Theory. An analysis of a number of texts in classical political theory, focusing on primary texts rather than secondary works, relevant to Greek, Hellenistic, and Roman politics.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Integrated with: GS/POLS 5010 3.0.

AS/POLS 4035 6.0 The Emergence of Modernity. This course examines the emergence of modernity as a response to Enlightenment crisis. Focusing on conflicting conceptions of reason, values and emotional experience in the modern institutional context, we critically explore the modern bases of contemporary social and political life.

Cross-listed to: AS/SOSC 4500 6.0.

AS/POLS 4040 3.0 Vico to Gramsci: Historicism and Social Science. The primary focus of the course is to enquire into the theory of knowledge underlying the method of historicism and to consider its applicability in contemporary social science. It focuses on the thought of Vico and Gramsci and on other theorists associated with the historicist or hermeneutic tradition.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Integrated with: GS/POLS 5040 6.0 and GS/SPT 6390 6.0.

AS/POLS 4045 3.0 Ecology, Politics and Philosophy. This course includes discussion on "deep" ecology, Marxian environmentalism, feminist ecology, social ecology, post-modern approaches, Heideggerian ecology and the approach to the analysis of the domination of nature in the Frankfurt School.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Integrated with: GS/POLS 5045 3.0.

AS/POLS 4050 6.0 Contemporary Approaches to the Rational Society. An examination of how contemporary thinkers have sought to grapple with the extent to which people can fashion a rational social system, and what attributes are required by humans and society to bring such a system into being.

Prerequisite: AS/POLS 2040 6.0 or permission of the course instructor.

AS/POLS 4055 3.0 The Idea of Democracy. This seminar examines texts in contemporary democratic theory, focusing on debates pertaining to (a) capitalism and democracy versus socialism and democracy; (b) modern democratic political representation; (c) new models and strategies for the democratization of state and economy.

Degree credit exclusion: AS/POLS 4000N 3.0.

Integrated with: GS/POLS 5055 3.0.

AS/POLS 4090 3.0 Classical Marxist Theory. This course focuses primarily on the writings of Marx and Engels with some consideration of Marxism as it first developed as an ideology of mass parties in the context of the Second International.

Prerequisite: AS/POLS 2040 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3090 6.0.

Integrated with: GS/POLS 5090 3.0.

AS/POLS 4091 3.0 Contemporary Marxist Theory. This course explores some of the important theories put forward by Marxists in the twentieth century including those of Lukacs, Marcuse, and Althusser. It also examines challenges to Marxist theory posed by feminism and post-structuralism.

Degree credit exclusion: AS/POLS 3090 6.0.

Integrated with: GS/POLS 5091 3.0.

AS/POLS 4100 3.0 The Political Development of Canada. A study of Canada in historical perspective employing theoretical perspectives from political development and related fields. Topics include political culture, economy, regionalism, ethnic politics, communications and evolution of political institutions.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4100 6.0.

Integrated with: GS/POLS 5100 3.0.

AS/POLS 4110 6.0 Canadian Urban Policy. This course examines the influence of government policy on the development of cities and the characteristics of urban life. It provides a historical, institutional and theoretical framework for understanding and analyzing Canadian urban policy-making and policy implementation.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or AS/SOSC 2700 6.0 or AS/SOSC 2720 6.0 or permission of the instructor.

Cross-listed to: AS/SOSC 4720 6.0.

AS/POLS 4114 3.0 Topics in Canadian State Finance. The relative invisibility of decision making around government spending and taxation as well as the general sentiment that "there is no alternative" to current approaches to fiscal crisis given the imperatives of the global political economy, will structure our consideration of Canadian public finance.

Degree credit exclusions: AS/POLS 4115 6.0, AS/POLS 4115 3.0.

Prerequisite: AS/POLS 2100 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 4115 6.0 The Political Economy of State Finance. The course studies the major fiscal functions of the state, including allocation, distribution and stabilization, accumulation and legitimization. The second semester features a budget simulation where the task is to develop a federal budget from various political party perspectives.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusions: AS/POLS 4114 3.0, AS/POLS 4115 3.0, AS/POLS 4116 3.0.

AS/POLS 4120 3.0 Ontario and Quebec: The Political Economy of Interregional Conflict. Interdisciplinary course exploring two interrelated themes: Ontario-Quebec economic and political relations, and comparative patterns of internal development. Topics include: sources of Quebec's economic disadvantage; development of provincial states and intergovernmental conflict; implications of Quebec's *indépendantisme* and Ontario's new economic vulnerability.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4120 6.0.

Integrated with: GS/POLS 5120 3.0.

AS/POLS 4125 3.0 Women and Current Policy Issues. The course begins by evaluating selected feminist theories in the light of their

ability to explain policy developments. Policy issues of the past decade are then examined, including prostitution, pornography, homosexual rights, sexual assault, abortion and reproductive technology.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 4135 3.0 The Politics of Aging. An examination of the effect of population aging on politics and public policy in Canada.

Degree credit exclusion: AS/POLS 4000P 3.0 in Fall/Winter 1992.

Prerequisite: AS/POLS 2100 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 4145 3.0 Restructuring the Canadian State. The course explores Canada and the shift to a neo-liberal state and citizenship rights, and the current economic and social policy challenges.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 4155 3.0 Politics of the Canadian Women's Movement. This course examines the politics of the Canadian women's movement, emphasizing its historical and contemporary development. We examine the suffrage movement, the inter-war years, and the development of second wave feminism in light of Canada's unique political structures and current challenges to feminism.

Prerequisite: Successful completion of at least 6 credits in a 1000- or 2000-level Women's Studies course.

Cross-listed to: AS/AK/GL/WMST 4503 3.0, GL/POLS 4603 3.0.

Integrated with: GS/POLS 5150 3.0 and GS/WMST 6901L 3.0.

AS/POLS 4160 3.0 The Political Economy of Regionalism. This course adopts a political economy perspective to examine the nature and evolution of regionalism in Canada. The core of the course is devoted to the relationship between economic development strategies and regional disparities and political protest.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4160 6.0.

Integrated with: GS/POLS 5160 3.0.

AS/POLS 4165 3.0 Canadian Social Policy in Comparative Perspective. The course analyzes the design and implementation of social policy in Canada, seen in the context of social policy development in other Western societies, including the United States and Western Europe.

Degree credit exclusion: AS/POLS 4000T 3.0 (Fall/Winter 1996 & Fall/Winter 1997).

Integrated with: GS/POLS 5000Y 3.0.

AS/POLS 4170 3.0 The Politics of Security and Intelligence. An examination of the nature of security and intelligence and its effect on policy-making. Among topics studied will be disinformation, counter-intelligence strategies, internal security mechanisms, accountability, and the relation between security and intelligence, democracy and peace.

Prerequisite: AS/POLS 2210 6.0 or AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

AS/POLS 4175 6.0 Canadian Federalism in Comparative Perspective. An examination of federalism in Canada: historical evolution, impact on public policy; constitutional and political frameworks; future directions. Comparison with other federations, especially those featuring multinational and linguistic divisions. General assessment of federalism as a political regime.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusions: AS/POLS 4130 3.0, AS/POLS 4580 3.0.

AS/POLS 4180 6.0 Politics and the Mass Media in Canada. The political functions of the mass media in the Canadian system, and the application of normative and empirical theories about mass media to the Canadian context.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or AS/SOSC 2310 6.0 or permission of the instructor.

AS/POLS 4185 6.0 Culture and Communication. This course explores contemporary issues of cultural theory and their application to cultural and communication policies in Canada.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or AS/SOSC 2310 6.0 or permission of the instructor.

AS/POLS 4190 6.0 The Politics of Protest in Canada. A study of the principal movements of political protest in twentieth-century Canada. Attention is focused on analyses of right-wing and left-wing responses to developments in Canadian society.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4350 6.0.

Integrated with: GS/POLS 5170 6.0.

AS/POLS 4200 6.0 International Relations Theory. A survey of recent theories and approaches to international relations. Possible topics include systems analysis, integration, decision-making, communication theory, games theory, social psychological analyses, quantitative methods, strategy and deterrence, and bargaining and negotiation.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

AS/POLS 4205 3.0 The New German Politics and European Integration. This course analyses Germany's domestic and foreign politics and the changes within German society after unification and in the context of the end of the cold war. In particular, the course examines the international ramifications of German separation and unification, and the effects of unification on European integration. As well, the impact of unification on Germany's economy and the life of German women is evaluated. Changes in German society and politics, such as the transition of its party

system, the rise of right-wing extremism and nationalism, and a new foreign policy are analyzed in comparison to similar trends in the rest of Europe.

Prerequisite: AS/POLS 2210 6.0 or AS/POLS 2510 6.0 or permission of the instructor.

Integrated with: GS/POLS 5205 3.0.

AS/POLS 4210 3.0 Peace Research. The purpose of the course is to examine the rationale, assumptions and key issues of peace research, focusing on the possible contributions which peace research can bring to the processes of social change. The course begins with an examination of power, both within the contemporary strategic environment and within the discipline of peace research. A series of issues is then examined, including militarism, feminist perspectives on peace, ecopolitics, and so on.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

AS/POLS 4215 3.0 Multilateralism. This half course studies the institutions and practices of global and regional cooperation, with a particular emphasis on the forces shaping multilateralism (e.g. states, cultures, social movements) and the way multilateralism can influence global structural change.

Prerequisites: AS/POLS 2210 6.0; and AS/POLS 3240 3.0 and AS/POLS 3250 3.0, (or AS/POLS 3270 3.0 and AS/POLS 3275 3.0) or permission of the instructor.

AS/POLS 4220 3.0 Canadian National Security Policy: Issues and Problems. An analysis of contemporary issues and problems in Canadian national security policy.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Integrated with: GS/POLS 5220 3.0.

AS/POLS 4225 3.0 Canada and the Americas. The course assesses Latin America prospects in the 1990's and within that context, policy options in Canadian-Latin American relations. The course covers the present Latin American economic environment; the socio-political and "good government" backdrop to economic revival; the process and politics of trade liberalization in Western Hemisphere; and Canada's emergence as a full actor in the Americas. The course introduces students to the principal themes and debates surrounding the apparent revival of several major Latin American countries.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 4230 3.0 Canadian Defence Policy: Issues, Problems and Future Developments. An analysis of contemporary topics, issues and problems in Canadian defence policy.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

AS/POLS 4235 3.0 Latin American Development. An examination of the processes and issues connected with

development in Latin America including the impact of political economy, impact on culture, and impact on women.

Prerequisite: Any second-year political science course or permission of the instructor.

Integrated with: GS/POLS 5555 3.0.

AS/POLS 4240 3.0 Canadian/American Relations. This seminar examines the nature of the various structures, processes and issue-areas involved in the political, economic and cultural relationship between Canada and the US.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Integrated with: GS/POLS 5240 3.0.

AS/POLS 4245 3.0 Gender and International Relations. This course explores theoretical and empirical issues raised by the consideration of gender in international relations (IR). We examine theoretical concerns raised by feminists and feminist IR scholars, and issues including: gender and the environment, militarism, international political economy and human rights.

Prerequisites: AS/POLS 2210 6.0 and AS/POLS 3450 3.0 or AS/AK/GL/WMST 3516 3.0 or permission of the instructor.

Cross-listed to: AS/AK/GL/WMST 4802 3.0.

Integrated with: GS/POLS 5245 3.0.

AS/POLS 4250 3.0 Canadian Foreign Policy. A research seminar focusing on such topics as Canada's role in NATO and NORAD, the Law of the Sea Conference, relations with the United States, North-South issues, international economic trends, and domestic sources of foreign policy.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Integrated with: GS/POLS 5250 3.0.

AS/POLS 4255 6.0 Issues in International Human Rights. This seminar examines the operation and efficacy of the United Nations human rights treaty system. It focuses on both the substantive law and the operational strategies associated with their implementation.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4000X 6.0.

Integrated with: GS/POLS 5000I 6.0.

AS/POLS 4260 3.0 Contemporary Security Studies. An examination of current issues and problems in the fields of contemporary strategic studies and international conflict, with a particular emphasis on regional security, conflict management, and conflict resolution.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

AS/POLS 4270 3.0 United States Foreign Policy. An examination of the historical development of the objectives of US foreign policy and of current policy issues. The course takes different analytic approaches to

understanding the formulation and implementation of policy with emphasis on bureaucratic politics.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Integrated with: GS/POLS 5270 3.0.

AS/POLS 4280 3.0 Soviet and Post-Soviet Foreign Policies. A study of the formulation and implementation of Soviet foreign policy from an analytic rather than an historical-descriptive standpoint.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

Integrated with: GS/POLS 5280 3.0.

AS/POLS 4290 3.0 Topics in International Political Economy. An examination of the actors, processes and issues involved in the politics of international economic relations.

Prerequisite: AS/POLS 2210 6.0 or permission of the instructor.

AS/POLS 4295 3.0 Political Economy of Global Finance. This course examines the functioning and broader ramifications of international finance. Emphasis is put on how financial markets operate, their historical evolution, and their larger role in the working of the global political economy.

Prerequisite: AS/POLS 3275 3.0 or permission of the instructor.

AS/POLS 4300 6.0 Public Policy Research. An examination of the theoretical literature in public policy and policy sciences leading toward development of individual policy research for the presentation and critical discussion at the seminar.

Prerequisites: AS/POLS 2300 6.0 and AS/POLS 3300 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4600 6.0 (prior to Fall/Winter 1988).

AS/POLS 4311 3.0 Global Justice and the Environment. This course provides a general introduction to socio-environmental ethics and, in particular, social justice as applied to global development and international relations.

Prerequisites: EN/ENVS 3000 3.0 or permission of the instructor.

Cross-listed to: ES/ENVS 4311 3.0.

AS/POLS 4340 6.0 Practicum in Survey Research. This course provides the theoretical background and practical skills needed to conduct surveys. Using computerized telephone survey facilities of the Institute for Social Research, students take part in questionnaire design, interviewing, data processing, statistical analysis and report writing.

Cross-listed to: AS/SOCI 4080 6.0.

AS/POLS 4435 3.0 The Extreme and Neo-Fascist Right in Contemporary Europe. An examination of the increasing prominence of extreme right-wing and neo-fascist groups in Western Europe. Particular emphasis is placed on France.

Prerequisite: Any second-year political science course or permission of the instructor.

Integrated with: GS/POLS 5435 3.0.

AS/POLS 4440 3.0 Human Rights in Europe and Canada. The objective of this course is to examine the European Human Rights Convention system in Strasbourg and its political significance in Europe. The focus is on the work of the European Commission and European Courts of Human Rights in the context of national politics and policy priorities of the member-states.

Prerequisite: AS/POLS 2510 6.0 or AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4440 6.0.

Integrated with: GS/POLS 5440 3.0.

AS/POLS 4445 3.0 European Union. The objective of this course is to examine the key institutions and processes of the EC (Council, COREPER, Commission, Parliament, and European Court) in the context of recent developments. The focus is on the major issues facing the Community: the Maastricht treaty and its implementation; future enlargement by admission of the EFTA and the East-Central European countries; and democratic deficit and future institutional reform.

Prerequisite: AS/POLS 2510 6.0 or AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4440 6.0.

AS/POLS 4450 3.0 Madness, Asylums and Politics I. This course looks at the following questions: Is mental illness a myth? What is madness? Has the treatment of the insane really improved since the eighteenth century? What explains the evolution of government policy toward the insane?

Prerequisite: Any second-year political science course or permission of the instructor.

Degree credit exclusion: AS/POLS 4450 6.0.

Integrated with: GS/POLS 5450 3.0.

AS/POLS 4455 3.0 Madness, Asylums and Politics II. After World War II, mental health policy began to change. The day of the large asylum was over and a massive number of people were deinstitutionalized. Many wound up in unsupervised boarding homes or on the streets of major urban centres. This course takes a hard look at the evolution of government policy in an age of deinstitutionalization and cutbacks.

Prerequisites: AS/POLS 4450 3.0 and any second-year political science course or permission of the instructor.

Degree credit exclusion: AS/POLS 4450 6.0.

Integrated with: GS/POLS 5455 3.0.

AS/POLS 4470 3.0 Working Class Politics in Capitalist Democracies. This course seeks to understand the current parameters of working class politics through a theoretical and historical examination of the relationship between parties, trade unions and the democratic capitalist state.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 4710 3.0.

Integrated with: GS/POLS 5460 3.0.

AS/POLS 4520 3.0 Nationalism, Communism and Imperialism. The course deals with the relationship between imperial systems and national communities. It includes a comparative analysis of empire-building and nation-building, concentrating on center-periphery conflicts and imperial disintegration. Case studies are drawn primarily from Russia/USSR and Eastern Europe, the Balkans and the Middle East. Other regional examples are also considered.

Prerequisite: AS/POLS 2210 6.0 or AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 4530 3.0 Crisis and Collapse of the Soviet Bloc. This course traces the evolution of the socialist idea and its application up to and including the Gorbachev reforms in the 1980s. Emphasis is on the development of the socialist economic system, dissent and human rights, the cold war and the evolution of foreign policy, and the party-state relations.

Prerequisite: Any 2000-level political science course or permission of the instructor.

Degree credit exclusion: AS/POLS 4530 6.0.

AS/POLS 4540 6.0 Caribbean Politics. A study of selected aspects in Caribbean politics from the protest movements of the 1930s to the present. Special emphasis is paid to attempts at Caribbean regional integration within the context of wider political development.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Integrated with: GS/POLS 5540 6.0.

AS/POLS 4545 3.0 Approaches to American Politics. This seminar introduces participants to overarching interpretations of American politics. We critically examine different theories on the nature and driving forces of politics in the United States since the creation of the republic.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Integrated with: GS/POLS 5545 3.0.

AS/POLS 4575 3.0 The Politics of Southern Africa. This course examines South Africa's racial capitalist system and resistance to it -- focusing on the present transition to a more equitable political and economic system; it also explores the current situation in other southern Africa countries (Angola, Mozambique, Namibia, Zimbabwe).

Prerequisites: AS/POLS 2510 6.0 or permission of the instructor.

Integrated with: GS/POLS 5575 3.0.

AS/POLS 4590 3.0 Political Development in India. A survey of political development in contemporary India, including, for example, the transformation from colony to independence; and the challenge to the liberal-democratic system by caste, communalism, regionalism and communism.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Integrated with: GS/POLS 5590 3.0.

AS/POLS 4595 3.0 Southeast Asia in the New Global Order. Using Southeast Asia as its focus, this course addresses questions relating to economic development, political change and regional security in the emerging global order. It stimulates interest in politics and international relations of developing countries in Southeast Asia.

Prerequisite: AS/POLS 2510 6.0 or permission of the instructor.

Degree credit exclusion: AS/POLS 3595 3.0.

AS/POLS 4600 3.0 Judicial Administration in Canada. *An overview of judicial administration in Canada. The course focuses on judicial independence, the constitutional parameters of judicial administration, course administrative structures, and recent issues relevant to judicial review and judicial policy-making.*

Prerequisite: AS/POLS 3600 3.0 or AS/POLS 3605 3.0 or AS/POLS 3160 6.0 or permission of the instructor.

Integrated with: GS/POLS 5110 3.0.

AS/POLS 4601 3.0 Systems of Justice. *An overview of procedures in the Canadian justice system, with comparisons to other common law justice systems and some civil law systems. The course begins with a study of civil and criminal procedure, and then proceeds to a review of recent issues relevant to justice system procedures.*

Prerequisite: AS/POLS 3600 3.0 or AS/POLS 3605 3.0 or AS/POLS 3160 6.0 or permission of the instructor.

AS/POLS 4605 3.0 Ethical Politics. An analysis of the current systems of ethical rules in Canadian politics concerning conflicts of interest, election financing, lobbying, and truthfulness in the presentation of information. The history and adequacy of these rules are to be considered as well as their philosophical foundations.

Prerequisite: Any second-year political science course or permission of the instructor.

Recommended: AS/POLS 2100 6.0 or AS/POLS 2610 6.0.

Integrated with: GS/POLS 5605 3.0.

AS/POLS 4620 3.0 Health Policy in Canada. The critical issues in health care delivery are quality, cost, and availability. Interactions between and among health care consumers, providers, payers, and regulators are examined in terms of their impact on those three central issues. The course is interdisciplinary in content, and highly interactive in style, with all members of the seminar being relied on to contribute extensively.

Prerequisite: Any second-year political science course or permission of the instructor.

Recommended: AS/POLS 2100 6.0 or AS/POLS 2610 6.0.

AS/POLS 4625 3.0 Issues in Canadian Health Policy. This course applies the analytical framework developed in AS/POLS 4620 3.0, Health Policy in Canada, to the study of specific aspects of the Canadian health care system. The specific topics addressed are determined both by their timeliness and by the expressed interests of the students.

Prerequisite: AS/POLS 4620 3.0 or permission of the instructor.

AS/POLS 4630 3.0 Policy Making and Royal Commissions. As different Royal Commissions are established and conclude their research, their specific findings are discussed with particular reference to the formulation of public policy. Therefore, different Royal Commissions may be discussed in each year.

Prerequisite: Any second-year political science course or permission of the instructor.

AS/POLS 4640 3.0 Politics of Work and Industry. An analysis of the ability of capitalist economic and political institutions to restructure and project themselves anew, including more flexible forms of production and new political alliances. The historical forces which have shaped the politics of work and industry are examined, as well as the contemporary restructuring of work, the new industrial policy debate, and the altering spatial patterns of production and trade.

Prerequisite: AS/POLS 2100 6.0 or AS/POLS 2610 6.0 or AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 4650 3.0 Provincial and Municipal Government in Ontario. This seminar course examines the theory and practice of the Ontario provincial system of government, including an overview of the federal-provincial and provincial-municipal arrangements, and an examination of the organization of the executive branch and selected ministries and agencies within the Ontario government. The course includes presentations by various senior provincial and municipal public servants.

Prerequisite: Any second-year political science course or permission of the instructor.

Recommended: AS/POLS 2100 6.0 or AS/POLS 2610 6.0.

Cross-listed to: AK/POLS 4109D 3.0.

Integrated with: GS/POLS 5650 3.0.

AS/POLS 4700 3.0 Topics in International Political Economy of Eastern Asia. This seminar examines the changing dynamics of political, economic and security relations in and among the countries of Eastern Asia.

Degree credit exclusion: AS/POLS 4500 3.0.

Prerequisite: AS/POLS 2210 6.0 or AS/POLS 2510 6.0 or permission of the instructor.

AS/POLS 4735 3.0 After the Fall: International Relations of Collapsed Socialism. An analysis of the Gorbachev reforms and the collapse of the Soviet system in Eastern Europe and the Soviet Union. The analysis will extend to include the Chinese model of socialist reform under Deng Xiaoping, and some examples will be drawn from other communist states.

Degree credit exclusions: AS/POLS 4535 3.0, AS/POLS 4530 6.0.

Integrated with: GS/POLS 5535 3.0.

AS/POLS 4770 3.0 Political Economy of Development. This course offers a comparative analysis of patterns of peripheral capitalist development in Latin America and the Caribbean. It explores the formation of social classes, the development of the modern state, and the current economic crises in Mexico and Brazil.

Prerequisite: AS/POLS 2510.06 or permission of the instructor.

Degree credit exclusion: AS/POLS 4570 3.0.

AS/POLS 4810 3.0 Social Justice and Political Activists. This seminar surveys alternative philosophical terrains for discussing social justice and past approaches to constructing a better world. Its main focus is social justice in modern capitalism - not just as a matter of alternative policies, but of alternative politics.

AS/POLS 4980 6.0 Undergraduate Colloquium. The Undergraduate Colloquium offers students with initiative a unique opportunity to pursue research interests in a collegial framework. For further information see the Political Science supplementary calendar.

Prerequisite: By departmental invitation to outstanding Honours BA Political Science students.

AS/POLS 4985 6.0 Global Political Studies Honours Colloquium. The Colloquium is the Global Political Studies Specialized Honours BA Seminar. The seminar meets on a weekly basis to discuss assigned readings about current issues and debates in international relations and comparative world politics.

Prerequisite: Open to students who have successfully completed at least 84 credits.

AS/POLS 4990 3.0/4990 6.0 Supervised Reading and Research. During their final academic session in Specialized or Honours programs in Political Science students may select one supervised reading course. (Students wishing a half course will register for AS/POLS 4990 3.0.) Students in Honours Double Major or Honours Major/Minor programs have a similar option, provided at least one additional Political Science course is taken at the 4000-level.

Prerequisite: The permission of the Director of Undergraduate Studies.

Note: Please consult the Enrolment and Registration section, Faculty of Arts for regulations on independent reading courses.

AS/POLS 4995 3.0/4995 6.0 Practicum in Public Administration. Public Policy and Administration students in their fourth year may take an independent, individually-supervised reading and research course which combines volunteer work experience in an agency with an academic analysis of that experience. The course may be taken either on a full-year or half-year basis, when the student and the course meet the requirements set out by the Faculty of Arts and those established by the Department. Students are normally registered in AS/POLS 4300 6.0 and AS/POLS 4995(3.0 or 6.0) concurrently.

Prerequisite: AS/POLS 3610 6.0 or AS/POLS 3190 6.0 or AS/SOCI 3620 6.0 or AS/POLS 4300 6.0 or permission of the instructor.

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