

GRADUATE COURSE BANK**RE: Policy on Course and Program Changes**

Courses which have not been offered in four or more consecutive years will be suspended and removed from the undergraduate and graduate calendars, with the exception of special topics courses and other such designated courses.

Courses which have been suspended will be stored in a 'course bank' for a maximum of five years, after which time they will be deleted if they continue to not be offered. No further delays will be permitted for courses which have not been offered for the five years in the 'course bank'.

Areas wishing to offer a suspended course will notify the Registrar's Office and University Secretariat. The course will then be reinstated in the undergraduate or graduate calendar and the registration system.

NB: The policy does not apply to special topics and other such designated courses. (e.g, directed study/reading, independent study courses, internships, and capstone courses.)

Courses Suspended Fall 2026 (To be deleted Fall 2031)**PSYCHOLOGY****PHYS-8510. Theory of Particle Scattering**

Classical theory of scattering. Formal quantum theory. The definitions of cross sections, transition probabilities and related concepts. The Born approximation, phase shifts.

PHYS-8630. General Theory of Relativity

The principle of equivalence, general co-variance. Riemann spacetime Einstein field equations.

PHYS-8650. Theory and Applications of Thin Films

Definition of thin films and their classification; methods of preparation; elements of high-vacuum technology; thin-film formation, structure and methods of investigation; mechanical, optical, electrical properties of thin films and their application in modern technology.

PHYS-8660. Atmospheric and Environmental Physics

Physics of the atmosphere, general description and layering, interactions of incoming and outgoing radiations, greenhouse effect, atmospheric thermodynamics and stability, cloud physics, atmospheric dynamics, gravity waves and turbulence, atmospheric photochemistry, ozone layer, upper atmosphere, plasma and hydromagnetic effects, ionosphere, air glow and aurora.

PHYS-8670. Applications of Electron, Ion and Atomic Beams

Non-relativistic theory of charged particles in electric and magnetic fields. Review of matrix optics, electrostatic lenses, magnetic lenses, electrostatic and magnetic vector fields. Applications to energy and mass analysis. The Liouville Theorem and its consequences. Dense electron beams and applications.

PHYS-9140. Statistical Physics II

The theory of macroscopic quantum phenomena. (Prerequisite: PHYS-9130.)

PHYS-9680. Elementary Particles and Their Symmetries

Symmetries and conservation laws, group representations, and particle multiplets; Lie groups and algebras; generators and weights of $SU(n)$; the quark model; quantum chromodynamics; electro-weak interaction theory; supersymmetry; path integrals and Feynman diagrams.

POLITICAL SCIENCE

POLS-8100. Quantitative Methods in Political Science

The course will give an overview of quantitative methods and techniques which are core to the analysis of empirical data analysis in Political Science. The aim is to provide an understanding of statistical methods to be able to (1) conduct statistical tests in a variety of applications, and (2) quantify dependencies between variables. The course requires that students have had some introduction to questions of research design and basic descriptive statistics at the undergraduate level. Along with this introduction to various methods, their application through the use of statistical computer packages (e.g., SPSS) will also be a core part of the course. This course is also designed to help students obtain and analyze data for their major paper/thesis (Prerequisite: POLS-8000).

POLS-8200. Federalism in Canada

Analysis of selected topics in Canadian federalism. Topics may include federalism, federal/provincial relations, the social union, and the debate over the future of Quebec in Canada.

POLS-8300. International Organizations

A theoretical overview of International Organizations; the course will examine why these organizations exist, how they operate, and their impact on international affairs. The course may also focus on specific organizations, for example, the UN, the EU, ASEAN and/or the OAS.

POLS-8400. American Politics and Government

Analysis of selected topics in American politics and government. Topics may be selected from the institutional or behavioural areas of the discipline or may include a comparative analysis of Canadian and American politics.

POLS-8410. Political Economy, Mass Media and Democracy

This course examines the linkages between media, democracy and the larger political economy. Students will research a media conglomerate; identify media roles in how governments and publics interact. Hegemony, ideology and institutional/organization analyses will bring students an integrated understanding of the role of media in a democracy.

POLS-8420. Politics in the Developed World

An examination of the political systems of economically developed countries. Topics may include comparative government, managing ethnic conflict, new social movements, democratic development, and the development of international political and economic institutions.

POLS-8679. Islamic Political Thought

This course examines the rise and development of Islamic political thought from the formative period of Islam (622-661 CE) down to the contemporary era described here as the 'age of fundamentalism' (1920s – present). The focus of the course will revolve around ideas of significant Muslim thinkers, and, where appropriate, look into the political, legal and cultural traditions that provided the contextual milieu of these intellectual contributions. Preference would be given to those with a background in Political Theory and/or Islamic or Middle Eastern Politics.

PSYCHOLOGY

PSYC-8542. Emotional Development

An examination of emotional development from infancy through the adult years. Topics include an overview of cognitive-affective theories and research on developmental change in emotions and self-regulation strategies, and cultural variations in displays of emotional expression and control in families.

PSYC-8660. Community Psychology

An overview of the field of community psychology, with emphasis on societal and cultural approaches to community well-being, social problems, and effecting social change. Issues in theory, research, and practice in community psychology will be presented and discussed.

STATISTICS

STAT-8400. Theory of Probability

Basic probability model, random variables and their distributions, expectation, convergence of random variables and their distributions, independence, and conditional dependence. Zero-one laws, characteristic functions, generating functions, Law of large numbers, Central Limit Theorem.

STAT-8440. Multivariate Analysis

This course is aimed at giving theoretical and methodological background on inference procedure for the analysis of multivariate continuous data mainly under the assumption of normality.

STAT-8480. Non-parametric Statistics

Nonparametric tests including Wilcoxon, Mann-Whitney, Smirnov, Fisher's exact test, Cox and Stuart test for trend, runs test. Estimation. Theory and applications.

SOCIOLOGY AND CRIMINOLOGY

SACR-8250. International Development and its Discontents

Seminar on the central theoretical and empirical issues raised in understanding the ways in which national and global processes of socio-economic development are experienced locally.

SACR-8270. The Unruly City: Urban Analysis and Ethnography

The aim of this course is to consider the work of anthropologists, sociologists and others who have explored and attempted to conceptualise cities and urban spaces, urban cultures and social relations, and the intersections between cultural phenomena and urban transformation all within the context of political economic formations. The course further aims to familiarize students with the variable theoretical perspectives that have been brought to bear on urban life, and the way in which ethnographic research may be undertaken in cities. Students develop the skills to analyse and debate social issues and aspects of cities and urban life.