

This section contains the descriptions of courses offered at the University of Calgary. The courses are arranged in alphabetical order by course title not by abbreviation. In order to better understand the notations used throughout this section, an illustrated example of a course description is provided.

All courses listed are not necessarily offered every year and students should consult the Master Timetable for an official listing of those courses that will be offered in a given session.

Since this Calendar is published a considerable time before the opening of the academic year, the University reserves the right to make whatever changes circumstances may require including the cancellation of a particular course.



Course Numbers:

- The number of the course indicates the level of the course.
- Junior level: 200's
 - Senior level: 300's and 400's
 - Upper level undergraduate: 500's
 - Graduate level: 600's and 700's

Hours of Instruction:

The hours of instruction per week are indicated with this code.

- **M** More than a full course; refer to individual course description for hours.
- **F(3-3)** Full course; equivalent of 3 hours of lectures and 3 hours of lab each week for 2 sessions.
- **F(3-1S-3)** Full course; equivalent of 3 hours of lectures, 1 seminar hour, and 3 hours of lab each week for 2 sessions.
- **Q(3-0)** Quarter course; equivalent of 3 hours of lectures each week for 1 half session.
- **H(3-3/2)** Half course; equivalent of 3 hours of lectures every week and 3 hours of lab every other week for 1 session.
- **E(0-3)** Eighth course; equivalent of 3 hours of lab each week for one quarter session.

The figures "S" or "T" attached to a number signify seminar or tutorial hours.

Cross-Listed Courses:

Courses which are listed under two departments and which can be taken for credit from either department, but not both. The credit is determined by the student's registration.

Prerequisite:

Must be completed before registering in this class.

Corequisite:

Must be completed at the same time as this class.

Not Included in GPA:

A course with this notation is graded as CR (Completed Requirements) or F (Fail). The course is not included in the calculation of the grade point average.

Medical Science 609
(Biochemistry 609)

H(3-2T)

Gene Expression

The flow of genetic information from DNA to final protein product. The subject will be covered in two courses offered in alternating years: gene structure and regulation of transcription, including gene structure and organization, chromatin structure, regulation of transcription and post-translational processing; and the activity of genes during development including stored messenger ribonucleoprotein particles and translational control in gametes, the switch from maternal to zygote genome control of development in early embryos and the molecular basis of morphogenesis and differentiation.

609.01. Gene Structure and Regulation of Transcription

609.02. Genes and Development

Prerequisite: Medical Science 537 (Biochemistry 537) or equivalent.

Note: Credit for both Medical Science 609.02 and 751.14 will not be allowed.

Notes:

Certain courses carry the notation "Not open to students with credit in course number XXX" or "Credit for both course number XXX and course number XXX will not be allowed." Students may take these courses if they wish, but credit for both courses will not be granted towards their degree.

Faculty of Communication and Culture

African Studies	AFST
Canadian Studies	CNST
Central and East European Studies	CEST
Communications Studies	COMS
Development Studies	DEST
East Asian Studies	EAST
General Studies	GNST
Law and Society	LWSO
Leisure, Tourism and Society	LTSO
Museum and Heritage Studies	MHST
Northern Planning and Development Studies	NPDS
Science, Technology and Society	STAS
South Asian Studies	SAST
Women's Studies	WMST

Faculty of Continuing Education

Continuing Education	CTED
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Faculty of Education

Applied Psychology	APSY
Campus Alberta Applied Psychology	CAAP
Education In-Service	EDIS
Education Teacher Preparation	EDTP
Educational Research	EDER

Faculty of Engineering

Chemical Engineering	ENCH
Civil Engineering	ENCI
Computer Engineering	ENCM
Electrical Engineering	ENEL
Engineering	ENGG
Geomatics Engineering	ENGO
Manufacturing Engineering	ENMF
Mechanical Engineering	ENME
Petroleum Engineering	ENPE
Software Engineering for Engineers	ENSF

Faculty of Environmental Design

Environmental Design	EVDS
Environmental Design Architecture	EVDA
Environmental Design Planning	EVDP

Faculty of Fine Arts

Art	ART
Art History	ARHI
Dance	DNCE
Drama	DRAM
Fine Arts	FINA
Music Education	MUED
Music History and Literature	MUHL
Music Performance	MUPF
Music Theory and Composition	MUTC

Haskayne School of Business

Accounting	ACCT
Bachelor of Accounting Science	BACS
Entrepreneurship and Innovation	ENTI
Finance	FNCE
Human Resources and Organizational Dynamics	HROD
Management Information Systems	MGIS
Management Studies	MGST
Marketing	MKTG
Operations Management	OPMA

Risk Management and Insurance	RMIN
Strategic and General Management	SGMA
Tourism and Hospitality Management	TOUR

Faculty of Humanities

Comparative Literature	COLT
English	ENGL
Hindi	HNDI
Humanities	HUMN
Philosophy	PHIL
Religious Studies	RELS
Term Abroad Program	TAP

Department of French, Italian, and Spanish

French	FREN
Italian	ITAL
Romance Studies	ROST
Spanish	SPAN

Department of Germanic, Slavic, and East Asian Studies

Chinese	CHIN
Dutch	DTCH
German	GERM
Japanese	JPNS
Russian	RUSS
Slavic	SLAV

Department of Greek and Roman Studies

Greek	GREK
Greek and Roman Studies	GRST
Latin	LATI

Faculty of Kinesiology

Athletic Therapy	ATTH
Dance Education	DCED
Dance Education Activity/Theory	DEAT
Kinesiology	KNES
Outdoor Pursuits	ODPU
Outdoor Pursuits Activity/Theory	OPAT
Physical Education	PHED
Physical Education Activity Theory	PEAT

Faculty of Law

Law	LAW
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Faculty of Medicine

Health and Society	HSOC
Medical Science	MDSC
Medicine	MDCN

Faculty of Nursing

Nursing	NURS
Nursing Offsite	NUOS

Faculty of Science

Chemistry	CHEM
Computer Science	CPSC
Science	SCIE

Department of Biological Sciences

Biology	BIOL
Biotechnology	BTEC
Botany	BOTA
Cellular, Molecular and Microbial Biology	CMMB

Ecology	ECOL
Marine Science	MRSC
Zoology	ZOOL

Department of Geology and Geophysics

Geology	GLGY
Geophysics	GOPH

Department of Mathematics and Statistics

Actuarial Science	ACSC
Applied Mathematics	AMAT
Mathematics	MATH
Pure Mathematics	PMAT
Statistics	STAT

Department of Physics and Astronomy

Applied Physics	APPH
Astronomy	ASTR
Astrophysics	ASPH
Medical Physics	MDPH
Physics	PHYS
Space Physics	SPPH

Faculty of Social Sciences

Anthropology	ANTH
Archaeology	ARKY
Economics	ECON
Geography	GEOG
Historical Studies	HTST
International Relations	INTR
Political Science	POLI
Psychology	PSYC
Social Sciences	SOSC
Sociology	SOCI
Strategic Studies	STST
Urban Studies	UBST

Department of Linguistics

Linguistics	LING
Native Languages	NTVE

Faculty of Social Work

Social Work	SOWK
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Collaborating Faculties

Architectural Studies (CC, EV)	ARST
Biochemistry (MD, SC)	BCEM
Community Rehabilitation (ED, SW)	CORE
East Asia (CC, HU, SS)	ETAS
Energy and the Environment (EN, EV, HA, LA)	ENEV
Environmental Science (SC, SS)	ENSC
Film (CC, FA, HU)	FILM
Indigenous Studies (CC, FA, HU, SS, SW)	INDG
Innovation (CC, EN, HA, HU, SC, SS)	INNO
Latin American Studies (CC, HU, SS)	LAST
Software Engineering (EN, SC)	SENG
Transportation Science (EN, SS)	TRAN

Other

Academic Writing	ACWR
Co-operative Education	COOP
English Language Foundation Program	ELFP
Informatics	INFO
Internship	INTE
University	UNIV