Course Descriptions & Schedule: Engineering Stream

Please read carefully!

This document provide the descriptions and schedules for the Seminar Courses (Section A) and Elective Courses available to ESP students in the Engineering stream for the 2025-2026 academic year. Please read the descriptions carefully before selecting your course preferences on your ***Course Selection Form***. Please note: All courses are subject to cancellation and/or change.

- All ESP students must register for one credit in a first-year seminar (see Section A below).
- All ESP students must register in two Elective Courses (see descriptions below in Section B)
    - Students registered in the Engineering stream have set electives; according to requirements for this program (see your *Course Selection Form*).
    - Each elective will be supported by an ESP Workshop. See the *Course Schedule* for times.

Each elective course has a corresponding ESP workshop that will appear on your schedule as ESPW 1000.

Half-credit courses are marked with an asterisk (*) and are worth 0.5 credits and run during either the Fall or Winter semester. Full-credit courses are worth 1.0 credits and run during the entire Fall/Winter session. With each of your Elective Courses (Section B), you will also attend a two-hour weekly ESP Workshop. See the Student Guide for information about Workshops.

A Guide to Reading the Schedules

Course:	Name of the course and how many credits it's worth.
Code/Semester:	The course code and its semester. Some courses are full credits (Fall/Win) and run from Sept-Apr. Others are half credits and run in either the Fall (Sep-Dec) or Winter (Jan-Apr) sessions. For the First Year Seminars, some course codes are different for the same class. This is indicated by the / and you are welcome to select either course section based on your preferred day/time.
Day/Time:	M=Mon, T=Tues, W=Wed, **R=Thurs**, F=Fri. Classes may be held once per week for 3 hours or two times per week for 1.5 hours, or once per week for 2 hours plus a discussion group of 1 hour. For example, courses listed **MW are offered both Mon and Wed**, and classes **listed TR are offered Tues and Thurs** at the times listed. As well, the / represents two different times for different course codes (see above notes). Please read the times carefully.
Instructor:	Name of the Instructor/Professor.
Time Tutorial/Labs:	Some courses (usually those that have two hours per week for the lecture time) have discussion groups for 1 hour per week. These are led by Teaching Assistants assigned to the course and are a graded component of your courses. Groups are often offered at different times. We'll register you in just one of the discussion groups listed (one that has space available and works with your other course).
ESP Workshop:	This is the ESP Workshop assigned to the course with its day/time listed. It's there to help you succeed in the course and is an important and mandatory part of our program.
Facilitator:	Name of facilitator who runs the corresponding ESP workshop.

Course and Workshop Schedules

Section A: First Year Seminars (1.0 Credits)

All FYSMs are titled: "Selected Topics in the Study of Academic Discourse" but have different selected topics.

Course: **Death to Procrastination: The Psychology of Motivation and Academic Success**
Code/Semester: FYSM 1900 B / FYSM 1900 D Fall/Winter
Day/Time: T 11:35-2:25 / R 11:35-2:25
Instructor: Allan Blunt

Course: **Fantasies, Fears, and Fandom: A Critical Guide to Popular Culture**
Code/Semester: FYSM 1900 G Fall/Winter
Day/Time: R 8:35-11:25
Instructor: Susan Burhoe

Section B: Engineering Stream Courses (2.0 Credits)

Course:	**General Chemistry I**
Code/Semester:	CHEM 1001 B Fall
Day/Time:	WF 11:35-12:55
Instructor:	Sean Barry
In Person Labs*:	A1: M 6:05-8:55 A2: T 6:05-8:55 A3: M 1:35-4:25 A5: T 1:35-4:25 A6: W 8:35-11:25 A7: W 1:35-4:25
ESP Workshop:	ESPW 1000 Y | F 2:35-5:25
Facilitator:	Asfiya Aziz

Course:	**Calculus for Engineering or Physics**
Code/Semester:	MATH 1004 A Fall
Day/Time:	TR 4:35-5:55
Time Tutorial/Labs:	AT: R 6:05-6:55
Instructor:	Angelo Mingarelli
ESP Workshop:	ESPW 1000 Z | M 8:35-11:25
Facilitator:	Adam El-Takkale

Course:	**General Chemistry II**
Code/Semester:	CHEM 1002 B Winter
Day/Time:	WF 11:35- 12:55
Instructor:	Daniel Gregoire
In Person Labs*:	A1: M 6:05-8:55 A2: T 6:05-8:55 A4: T 8:35-11:25 A5: T 1:35-4:25 A6: W 8:35-11:25
ESP Workshop:	ESPW 1000 V | R 6:05-8:55
Facilitator:	Asfiya Aziz

Course:	**Linear Algebra for Engineering or Science**
Code/Semester:	MATH 1104 G Winter
Day/Time:	MW 2:35-3:55
Time Tutorial/Labs:	GT: M 1:35-2:25
Instructor:	Charles Starling
ESP Workshop:	ESPW 1000 P | F 8:35-11:25
Facilitator:	Adam El-Takkale

Course and Workshop Descriptions

Section A: First Year Seminars (1.0 Credits)

All FYSMs are titled: "Selected Topics in the Study of Academic Discourse" but have different selected topics.

Death to Procrastination: The Psychology of Motivation and Academic Success.
FYSM 1900 B / FYSM 1900 D (1.0 Credit) Fall/Win
Instructor: Allan Blunt

You have the brains. You have the potential. It is down to me to teach you some theories and techniques that can help you maximize that potential. It is my strong belief that every student who enters my class has the right stuff. But something messes things up for many of them — PROCRASTINATION. I have been studying procrastination for 30 years, and I can tell you this for sure, procrastination is a tricky beast. It is tied into and affects so many things like motivation, self-control, emotions, time management, stress, anxiety, distractions, goal setting, self-identity, learning, and academic success. It is a beast and you need to attack it head-on because university is procrastination's playground. Another thing that can mess things up for many students are ineffective learning/study methods. Therefore, we are going to look at some powerful research and theory related to learning and memory, with the aim of helping you develop more effective study/learning methods that have been demonstrated to boost grades, in many cases substantially. So, that's the course in a nutshell — it is a psychology course about motivation, learning, academic success and killing procrastination (or at least taming it). My final words — if you can solve your procrastination puzzle and put in some decent effort then everything else should fall into place, and university will become YOUR playground. Good Luck!

Fantasies, Fears, and Fandom: A Critical Guide to Popular Culture
FYSM 1900 G (1.0 Credit) Fall/Win
Instructor: Susan Burhoe

Popular culture is everywhere – from the shows we binge, the games we play, and the music we love to the ads, memes, and celebrity gossip that flood our feeds. But what does it all mean? In this course, we'll explore how 20th- and 21st-century popular culture both reflects and shapes how we see the world, ourselves and others. From Hollywood fantasies to video game panics, pop culture is more than entertainment; it's a powerful lens through which we understand society.

You'll be introduced to key concepts in cultural theory and learn how to "read" cultural "texts" like music videos, ads, memes, TV shows, and brand names. We'll examine themes of identity, power, and resistance through the lenses of race, gender, class, sexuality, and dis/ability. Why are we so fascinated by celebrities? How does advertising shape our sense of self? What does The Last of Us tell us about cultural anxieties?

We'll also dig into broader debates about representation. Who gets seen and heard in popular culture—and who doesn't? Whose stories dominate, and whose are left out?

Expect lively discussions, engaging media clips (from TV and film to internet culture), and collaborative activities. Assignments include short reflections, an exam, and a project where you'll analyze a pop culture topic of your choice in an essay, video, or podcast. Along the way, you'll also build key academic skills to support your success in university.

Note: this course precludes additional credit for CIED 1001; it is reserved for students who have not taken CIED 1001 previously.

Section B: Engineering Stream Courses (2.0 Credits)

General Chemistry I (Fall)
***CHEM 1001 B [0.5 credit]**
Prof. Sean Barry

Topics include atomic structure, periodic trends, structure and bonding, gas laws, intermolecular forces, equilibrium, acids and bases, and buffers. Examples relate to health, energy, materials, and the environment.

- An example of a course outline from Fall 2024 can be found here.
    - Please note that this course outline is subject to change for the current academic year
- Lectures/tutorials four hours a week, laboratory three hours a week.

General Chemistry II (Winter)
***CHEM 1002 B [0.5 credit]**
Prof. Daniel Gregoire

Topics include thermodynamics and spontaneity, kinetics, electrochemistry, organic chemistry, transition metal complexes, and green chemistry. Examples relate to health, energy, materials, and the environment.

- An example of a course outline from Winter 2025 can be found here.
    - Please note that this course outline is subject to change for the current academic year
- Lectures/tutorials four hours a week, laboratory three hours a week.

Calculus for Engineering or Physics (Fall)
***MATH 1004 A [0.5 credit]**
Prof. Angelo Mingarelli

Limits. Differentiation of the elementary functions. Rules of differentiation. Inverse trigonometric functions. Applications of differentiation: max-min problems, curve sketching, approximations. Definite and indefinite integrals, techniques of integration. Applications to areas and volumes.

- An example of a course outline from Fall 2022 can be found here.
    - Please note that this course outline is subject to change for the current academic year
- Lectures three hours a week, tutorial one hour a week.

Linear Algebra for Engineering or Science (Winter)
***MATH 1104 G [0.5 credit]**
Prof. Charles Starling

Systems of linear equations. Matrix algebra. Determinants. Invertible matrix theorem. Cramer's rule. Vector space R^n; subspaces, bases. Eigenvalues, diagonalization. Linear transformations, kernel, range. Complex numbers (including De Moivre's theorem). Inner product spaces and orthogonality. Applications.

- An example of a course outline from Fall 2022 can be found here.
    - Please note that this course outline is subject to change for the current academic year
- Lectures three hours a week, tutorial one hour a week.