Course Descriptions

Computer Science Stream

The following are descriptions of the courses available to ESP/IESP students in Computer Science stream for the 2018-2019 academic year.

Please read the descriptions carefully before listing your Seminar preferences on your Course Selection Form.

Please note: courses are subject to change.

- All ESP/IESP students must register for one First Year Seminar (Section A, below)
- All ESP/IESP students must register in two Elective Courses (see descriptions below in Section B)
  - Students registered in the Computer Science stream have set electives; according to requirements for this program (see your Course Selection Form).
  - Each elective will be supported by an ESP/IESP Workshop. See the Course Schedule for times

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.

Section A: First Year Seminars

All First Year Seminars are titled: “Selected Topics in the Study of Academic Discourse” but have different selected topics. See the descriptions below:

First-Year Enriched Support Program Students should choose from these Seminars:

Selected Topic: The Power of Persuasion: Arguments in Academic & Popular Culture
FYSM 1900 A (1.0 Credit) Fall/Winter
Instructor: Jennifer Gilbert

When we choose what to buy, who to vote for (and whether to vote), what career we might be interested in and where we want to go to school, we are surrounded by arguments from family members, friend groups, faith and school institutions, and corporations - arguments that we may or may not recognize AS arguments. Even the most banal daily decisions we make, such as what to wear and what to watch, are influenced by cultural dialogues that are so convincing we may not even be aware we were persuaded.

In this course, you will learn about the power of persuasion. You will learn how to read, understand, and dissect arguments, and how to make persuasive arguments of your own.

We will examine arguments in our everyday world as well as in the academic realm. You will learn about presenting arguments powerfully and ethically. You will have practice using language and images persuasively, and learn about the roots of powerful argumentation drawing on principles from classical rhetoric.

- What are the different kinds of arguments?
- How can we make persuasive appeals from emotion, character, and logic (pathos, ethos, logos)?
- How can we detect fallacies in the arguments we are exposed to (and avoid them in the arguments we make!)?

Making a persuasive argument is a foundational academic skill for successful university students; it is also a life-skill. Learning about the tools of argumentation can help you be more critical and more open-minded.

Students learn through attending class every week for lectures, discussions, and teamwork in small and large groups. Your attendance and weekly contribution to the activities in the seminar is tracked and is part of your final grade.
There are weekly readings assigned from the textbook, and tests on the reading material. There are both informal and formal writing assignments.

Your grade in this full credit course will be based on: three tests, two papers, your contribution in a class debate, a class presentation (solo or with a partner) AND your weekly attendance and contributions to the class.

First-year students engaging in all aspects of this course will acquire strong reading, analysis, research, and writing skills applicable to all future university study.

Selected Topic: Passion Turned into Academics
FYSM 1900 F (1.0 Credit) Fall/Win
Instructor: Petra Watzlawik-Li

Did you know you could turn almost any interest into an academic research topic?

The goal of this course is for you to discover a topic you are passionate about and research it academically. But how do you truly discover or develop your passion? And how are passion and perseverance connected? To find out, you will read and learn about research that has been done in the field of psychology, sociology, and others. How do people become experts in anything (school, sports, music, etc.)? Is it natural talent or effort? How do coaches teach grit to teams? Does having a fixed or growth mindset matter?

This is a project spanning over the full course and you will receive a lot of feedback and support along the way. Who knows, maybe you will even find a new academic interest that you will major in!

Selected Topic: Introduction to Abnormal and Forensic Psychology
FYSM 1900 G (1.0 Credit) Fall/Win
Instructor: Kate Pardoel

Do you watch a lot of psychodramas and crime shows? Are you fascinated by bizarre, deviant, and pathological behaviour? Have you always wondered what drives some people to commit horrible crimes, and what really happens to them after they’re sentenced to prison? If you’re anything like me, you’ve probably been told many times that you have an unhealthy amount of interest in the darker side of human nature, and that you should probably find some more uplifting books and cheerful hobbies. If you can relate to any of the above, then this seminar may be the right choice for you.

The purpose of this course is to introduce students to the study of abnormal behaviour and forensic psychology. We will start by looking at how abnormal behaviour was perceived in ancient times, and by learning about how definitions of crime and appropriate punishments have changed throughout history. Next, we will spend some time learning about the criteria currently used in diagnosing abnormality and about how research is conducted in the field of psychology. From there, the focus of the course will shift to criminal behaviour and exploring how psychology contributes to the criminal justice system. We will spend some time discussing topics like the biggest risk factors for criminal behaviour and different types of offenders (think young, female, or mentally ill offenders, serial offenders, and psychopaths), as well as topics related to catching and imprisoning offenders such as risk assessments and eyewitness testimony. We will wrap up the course by considering what happens once offenders reach the end of their sentences. Can all offenders be rehabilitated and safely reintegrated into society? How do we decide which ones should be released and how do we ensure that they stay on the straight and narrow?

Now, on to the bit you really care about – how your grades will be assigned. Your grade in this seminar will be based on a series of tests, short assignments, and attendance. Over the course of the year you will be required to write 5 tests, and your best 4 will count towards your final grade (4 x 15% = 60% total). All tests will be comprised of multiple choice and short-answer questions, and all of the content will be drawn from the course lecture slides. You will also be required to complete 7 short (1-2 page) content-related assignments. Like with the tests, your lowest mark will be dropped, so the assignments will account for 30% of your final grade (6 x 5% each). The assignments are designed to give you the opportunity to practice different discipline-specific skills, as well as a chance to work on more general academic skills like critical thinking and writing. The remaining 10% of your grade is for class attendance. You will earn .5% per class you attend (up to a maximum of 10%), and given that there are more than 20 classes over the course of the year, there are a few ‘freebie’ absences thrown in there – use them wisely ☺!
Selected Topic: Power and Culture
FYSM 1900 H (1.0 Credit) Fall/Win
Instructor: Beth Hughes

What do Tupac, Stephen Colbert, Margaret Atwood, and Malala Yousafza all have in common? They have used words and images to powerfully express creativity, originality and arguments influencing our culture. In this course, we look at politics, pop culture and advertising by playing with language. Topics covered include slang, swearing, graffiti, persuasion, argumentation, privilege, equity and inclusiveness. We also critique racism, sexism, ageism and ableism in texts as a means of considering how the use of power also creates and promotes these types of discrimination. Throughout the year, will use gamification, that is “meaningful play,” for fun and learning to explore ideas and an historical event to understand how these ideas have been recognized, debated and disputed over time. Lastly, class activities include strategies for creating social change.

This course draws on different academic disciplines: linguistics, sociology, communications, history and others. This content aims to help you develop a deeper understanding of Culture and power, as well as provide opportunities to develop strong academic tools for reading, researching, analyzing and writing in any of the ESP streams – skills that are valuable for university and beyond.

“Got questions?” Please email me and come for a chat and coffee. beth.hughes@carleton.ca

Selected Topic: A Procrastinator’s Guide to the Psychology of Academic Success
FYSM 1900 I (1.0 Credit) Fall/Win
Instructor: Allan Blunt

I am a procrastinator, hence the title. And as a procrastinator, I have learned how to deal with the distracting voice in my head that whispers — *you can do it later, buddy…. loads of time to go, Al … you’ll feel more like doing it tomorrow, old buddy … and you know you work better under pressure anyway*. Sound kind of familiar? If it does, maybe you should think about taking this course. Because in this course we will discuss lots of research and ideas that can help you learn faster, better, smarter, and just maybe — reduce procrastination. So, what are these exciting, life-changing topics, you ask (with a wee bit of sarcasm). Well, here’s a list of many of them: academic self-regulation, metacognition, monkey mind and time management, dealing with distractions and cognitive load, making memories stick, anxiety and test-taking, searching for self-identity, goal setting done right, creating emotions that matter, boredom and mind-wandering, willpower over temptations, and some others I am currently developing. Wow, that sounds amazing, you say (without a trace of sarcasm). Yep, you’re right — it is! I have pulled together tons of research to help me (and you) achieve my guiding goals: to help you become a more effective learner, and to help you succeed at university and at other things (because many of the ideas in this course can be applied to other areas of your life).

So, apart from all of the amazing content, how will I be graded, you ask (with a concerned tone). That’s a very fair question. You will be graded on the following: attendance (15% of grade — 22 classes, you can miss 4 without penalty); small application assignments (7.5% of grade — 14 applications, lowest 4 dropped); mini-reflections (7.5% — 6 one-page mini-reflections, lowest 2 dropped); term reflection papers (10% of grade — 2 five-page papers, lowest dropped); and tests (60% of grade — 6 short-answer/multiple-choice style tests, lowest 2 dropped). Nice that you drop the low grades, you say, but it sounds like a lot of work. Nah! The work is spread over both terms and my intention is not to overwhelm anybody, rather my intention is to help you transition to university. All of the material comes from the lecture modules. All of the slides have been developed by me and will be provided to you online — free of charge! As well, each module contains several practice questions for the tests (hint: sometimes practice questions appear on the tests). And there is no graded group work in this course — you are in control of your grade. Well, that’s it. If you have any questions about the content and requirements, you can pop by my office before you sign up or maybe I will see you at a registration session in July or August. Welcome to university and good luck! (The fine print: As an inherent procrastinator, I reserve the right to change any or all the above at the last minute. Cheers, Al)
Section B: Elective Courses

All elective courses listed below will be accompanied by a three hour/week ESP/IESP Workshop (this will appear on your schedule as ESPW 1000). Please see the Class and Workshop Schedule sheets enclosed for day and time information; and read the ESP/IESP Registration Guide and Student Handbook for a description of workshops.

Computer Science: Introduction to Computer Science I (Fall)
*COMP 1005 A [0.5 credit]
Prof. TBA
A first course in programming, emphasizing problem solving and computational thinking. Topics include pseudocode, variables, conditionals, iteration, arrays, objects, functions, sorting, searching, and simulation.
- The course outline below is an example from a previous year. Note: outline may be different this year: https://service.scs.carleton.ca/sites/default/files/course_outlines/Course%20Outline%20-%20Fall%202017%20-%20COMP1005%20-%20Updated.pdf
- Lecture three hours/week plus a tutorial 1.5 hours/week.

Computer Science: Introduction to Computer Science II (Winter)
*COMP 1006 B [0.5 credit]
Prof. TBA
A second course in programming emphasizing problem solving and computational thinking in an object-oriented language. Topics include abstraction, mutable data structures, methods, inheritance, polymorphism, recursion, program efficiency, testing and debugging.
- The course outline below is an example from a previous year. Note: outline may be different this year: https://service.scs.carleton.ca/sites/default/files/course_outlines/W18-1006-Course-Outline-Corrected.pdf
- Lecture three hours/week plus a tutorial 1.5 hours/week.

Math: Elementary Calculus I (Fall)
*MATH 1007 F [0.5 credit]
Prof. Wojciech Jaworski
- The course outline below is an example from a previous year. Note: outline may be different this year: https://carleton.ca/math/wp-content/uploads/MATH-1007H-W15.pdf
- Lecture three hours/week plus tutorial one hour/week.

Math: Linear Algebra for Engineering or Science (Winter)
*MATH 1104 I [0.5 credit]
Prof. TBA
Systems of linear equations; vector space of n-tuples, subspaces and bases; matrix transformations, kernel, range; matrix algebra and determinants. Dot product. Complex numbers (including de Moivre's Theorem, and n-th roots). Eigenvalues, diagonalization and applications.
- Course outlines can be accessed from this page when available: https://carleton.ca/math/wp-content/uploads/MATH-1104I-W17.pdf
- Lecture three hours/week plus tutorial one hour/week.