Course Descriptions
Science Stream

The following are descriptions of the courses available to ESP/IESP students in Science stream for the 2020-2021 academic year.

Please read the descriptions carefully before selecting 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)
- First-year IESP students enroll in FYSM 1900 E
- All ESP/IESP students must register in two Elective Courses (see descriptions below in Section B)
  - Students registered in the Science stream have set electives; according to requirements for this program (refer to the 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: Communication and Cognition in Animals
FYSM 1900 C or H (1.0 Credit) Fall/Win
Instructor: Petra Watzlawik-Li

Humans are not alone in the capacity for communication and cognition. You will be surprised at the communicative abilities and cognitive processes of many other animals (such as dolphins, elephants, canines (wolf and dog), chimpanzees and other primates, birds (parrots and crows), octopuses, etc.). We will delve into the world of researchers (e.g. comparative psychologists, neuroscientists, psychobiologists, behavioural ecologists, linguists, primatologists) to discover the most current information on animal cognition, learning, problem solving, social relationships, and tool design/use.

Before we start looking at other animals, we will have a quick look at human language. What are considered to be the design features of human language? And how do humans acquire language (hint: it’s not merely imitation)? We will review some of the cognitive processes, such as Theory of Mind (ToM) that go along with the stages of language acquisition, and also what happens when a child is kept from interacting (e.g. Genie the Wild Child). We will also look at non-verbal communication such as body language and micro-expressions.

We will also try to understand why humans and other animals have such strong bonds and how that has resulted in service and therapy animals such as https://carleton.ca/wellness/dogs/
In this course you will get to practice the academic skills that you need to be successful at university (time management, summary writing, notetaking, research, and essay writing). You will also be presenting your research either by “live online” or by creating a video similar to this one: https://youtu.be/-DJrHw_uMgg

This video is me, telling you a bit about this course. 😊

Don’t worry though, we will go through the steps for acquiring all of these skills and will be practicing them too!

**Selected Topic: The Psychology of Creativity**  
**FYSM 1900 F (1.0 Credit) Fall/Win**  
**Instructor: Eve Blouin-Hudon**

Creativity ranges across a wide variety of subjects and life events. Because of this, it is difficult to define creativity in terms of outcome (e.g., a painting is a creative outcome but so is a scientific paper), since what feels creative to some may be completely different for others. In this course, we will explore the psychology of creativity to answer questions such as: What is the use of creativity (adding meaning to the world, well-being)? What makes a person creative (personality, childhood development, culture)? How can we cultivate our own personal creativity (flow, collaboration, intuition)?

For the *Exploring the psychology of creativity* course, theories of creativity will be applied to real-world and self-related experiences. To this end, each class in this year-long seminar will be divided into three core components: (1) A theoretical portion, (2) an active experimentation portion, and (3) a reflection portion. This course will be based on discussion, collaboration, and participation. As such, formal lectures will be minimal and much of the learning will occur during collaborative activities and reflection.

**Selected Topic: The Psychology of Motivation, Self-control, Memory, Learning and Other Things Related to Academic Success (and Dealing with Procrastination)**  
**FYSM 1900 I (1.0 Credit) Fall/Win**  
**Instructor: Allan Blunt**

Welcome to Carleton University and congrats on becoming a Raven! You have officially taken a first step toward achieving your academic and career goals. In order to help you reach those goals this course explores lots of research aimed at understanding and improving memory, learning, motivation, self-regulation, emotion regulation, career management, and more. Although we will be discussing lots of theory and research, there is a very practical purpose to this course — to help you achieve your academic goals. So, if you decide to take this class, embrace the ideas and practice the methods we discuss, you will be taking another step toward your goals. Along the way, you will also develop your research skills, writing skills, citation skills, test-taking skills and presentation skills — all essential for your continued success at university. Even though I can’t guarantee your success, I can definitely say that if you decide to take this seminar you will learn some very interesting and useful information — and that’s not a bad thing.

All of the course material was developed by me, except for the career management modules, which were developed by Rene Guardado. All lecture material, assignments and instructions are online in pdfs for easy access. In addition, I have created many (big) bite-sized lecture and how-to videos to help guide you through the content, course requirements, and online learning system (cuLearn). Also, to help keep you on track, I will post weekly update videos, and mentors will provide regular guidance as well. We will also have weekly video conferencing sessions for questions, review and what-nots. Mentors will also provide additional academic and social supports to help you through this most unusual year. As well, throughout the year I will provide academic advising resources and one-on-one advising video chats in my other capacity as academic advisor.

One last thing — it is only fair that you should know a bit about the grading scheme before you commit. Your final grade will be most likely based on the following:

1) Review Tests (worth 10% of overall grade) — fourteen multiple-choice, best 10 count, 3 attempts per review test allowed, highest grade counts
2) Four tests (6.25% x 4) — multiple-choice, cumulative, only one attempt allowed per test
3) Final exam (25%) — multiple-choice, cumulative, only one attempt allowed
4) Summaries Assignment (15%) — three short (550 words) peer-reviewed research article summaries
5) Term Paper (15%) — short review paper (1500 words) building on the summaries assignment
6) Online Presentation (5%) — three-minute thesis based on the term paper
7) Reflection Paper (5%) — short reflection paper based on the course material (1000 words)

Note that all tests are open book and completed online, and all assignments and papers are submitted online. Detailed written and video instructions for papers, assignments, tests and what-nots are provided on cuLearn.

Best of luck and cheers.

**First-Year IESP Students choose:**

**Selected Topic: Understanding Indigenous Youth Wellness and Life Promotion**

FYSM 1900 E (1.0 Credit) Fall/Winter

**Instructor: Sarah Blackwell**

Have you, or someone you are close with been affected by the negative effects of intergenerational trauma on mental health?

This course will highlight mental health risk factors and the positive influences that make Indigenous youth resilient to life’s challenges. Students will learn about the areas that contribute to youth wellness from the perspective of the medicine wheel. Readings, scholarly writing and self-reflective writing, will focus on life promotion, cultural continuity, mental health, identity, and policies that impact social change. Through exploration of their personal life story, and influential Indigenous writers, students will further understand the resiliency factors in their own life and those they care about. In this way, they will be able to effect change and become strong literary advocates promoting youth wellness in their own communities. This course is conducted online, and will include a weekly greeting from the Instructor to introduce each module. Students will be expected to participate weekly by logging into CU Learn, and/or Zoom and other platforms to be determined, during class-time to engage in weekly readings, discussion topics and online group work.

*This course is a requirement for students in the Indigenous Enriched Support Program and is therefore reserved for IESP students.*
Section B: Elective Courses

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

Chemistry: General Chemistry I (Fall)
*CHEM 1001 A [0.5 credit]
Prof. David Brock

This math-intensive course covers introduction to periodicity, gas laws, equilibrium, bonding, electrochemistry, and organic chemistry. This is a specialist course for students intending to take second year chemistry.

- Course descriptions can be found here: https://calendar.carleton.ca/undergrad/courses/CHEM/
- Lecture online plus a lab three hours/week and a discussion group one hour/week.

Chemistry: General Chemistry II (Winter)
*CHEM 1002 A [0.5 credit]
Prof. David Brock

This math-intensive course covers an introduction to solution chemistry, acids and bases, thermodynamics, and kinetics. Specialist course for students intending to take second year chemistry.

- Course descriptions can be found here: https://calendar.carleton.ca/undergrad/courses/CHEM/
- Lecture online plus a lab three hours/week and a discussion group one hour/week.

Math: Elementary Calculus I (Fall)
*MATH 1007 D [0.5 credit]
Prof. Mark Blenkinsop


- The course outline will be posted here when available: https://carleton.ca/math/course-outlines-fall-2016winter-2017/
- Lecture three hours/week plus tutorial one hour/week.

Math: Linear Algebra I (Winter)
*MATH 1107 C [0.5 credit]
Prof. Moussa Larbani

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.

- The course outline will be posted here when available: https://carleton.ca/math/course-outlines-fall-2016winter-2017/
- Lecture three hours/week plus tutorial one hour/week.