The following are descriptions of the courses available to ESP/AESP students in Science stream for the 2017-2018 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/AESP students must register for one First Year Seminar (Section A, below)
- All ESP/AESP 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 (see your *Course Selection Form*).
  - Each elective will be supported by an ESP/AESP Workshop. See the *Course Schedule* for times

Each elective course has a corresponding ESP/AESP workshop that will appear on your schedule as ESPW 1000. Each workshop is 3 hrs/wk.

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 Strange World We Live In: Introduction to Social Sciences**  
FYSM 1900 B (1.0 Credit) Fall/Win  
Instructor: Rodney Nelson

The purpose of the course is to introduce students to the concepts found in Sociology and Anthropology. We will explore human behaviour from both an individual and group perspective including our everyday social interaction with others around us. Have you ever wondered why we act the way we do? Why do we all face the door in an elevator? Why do we shake hands when we meet someone? You will be asked to become an observer in your world to understand social behaviours. This will help you understand your own behaviours and actions as a member of society. The course will also explore cultures around the world and their ever changing social conditions. Are we all different or do we share more in common than we think? Prepare to take a journey of exploration and discovery into the strange world of human interaction.

You will be asked to do individual observations of social situations and be prepared to discuss them in class. Coursework will also include working in groups, research proposal writing, short essays and a research project that will be presented to the class. Most important of all is to have fun, enjoy and meet other students.
To understand how humans and other animals communicate and think, we will look at research from disciplines such as psychology, neuroscience, cognitive science, sociology, biology and linguistics.

We will start by learning the design features of human language and how 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).

Humans are not alone in the capacity for communication and cognition. You will be surprised at the communicative abilities and cognitive processes of many 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 (psychologists, neuroscientists, psychobiologists, behavioural ecologists, linguists, primatologists, etc.) to discover the most current information on animal cognition, learning, problem solving, social relationships, and tool design/use.

Finally, we will review the possible benefits of interspecies communication and look at how humans have learned to communicate with dogs (e.g. airport bomb sniffing dogs, therapy dogs), use horses for psychological therapy, and attempts at teaching primates language.

What do Tupac, Samantha Bee, Riz Ahmed, Josh Blue, Stephen Colbert, Margaret Atwood, Malala Yousafzai, Ivan Coyote and Viola Davis 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. Lastly, class activities include strategies for creating social change.

This course draws on different academic disciplines: linguistics, sociology, communications and others. This course aims to help you develop a deeper understanding of language and power, as well as provide opportunities to develop strong academic tools for reading, researching, analysis and writing – skills that are valuable for university and beyond.
Selected Topic: The Creative Self: Identities as works-in-progress
FYSM 1900 H (1.0 Credit) Fall/Win
Instructor: Jennifer Gilbert

Are you curious about identities? Do you enjoy creative and thought-provoking activities in a relaxed atmosphere? Are you open-minded and interested in artistic expression? Then this course is for you!

This is a full-credit course about identity theory. The curriculum examines what identities are, how identities are formed and change over time, and why identities are important. The reading material for the course includes articles from cultural studies, sociology, and psychology. We will also read and discuss memoirs and graphic novels that explore identity and growth from personal viewpoints. Our goal is to build critical and intellectual capacity to read and learn from interesting and challenging texts, and to better understand identities.

This course takes an arts-based approach to teaching and learning. In practical terms, what does this mean for you as a student? It means that you will express yourself through fun and creative activities in class including doodling, writing, and other means of expression. We will visit the Carleton Art Gallery, and we will watch and listen to videos of talks, poetry, music, and films.

One of the major projects in the course is an art project, presented in a student-organized coffeehouse and art show at the end of the year. Dramatic performance, drawing, painting, creative fiction or non-fiction, music, short films, sculpture, installations, stand-up comedy, arts-and-crafts, poetry - these are just some of the creative modes of expression that students have chosen in the past for their projects.

The writing assignments in this course include regular short blog entries and an academic research project on an identity-related topic of your choice. The blogs will provide you with an opportunity to work on your writing along with the chance to reflect on what was learned in class. Your research project will build your university-level academic research and writing skills.

By participating actively in this course, you should expect to make friends, have fun, AND gain amazing skills with reading and writing, with critical thinking and with creative thinking.

Selected Topic: The Psychology and Science of Academic Success
FYSM 1900 I (1.0 Credit) Fall/Win
Instructor: Allan Blunt

Hi. Below you will find two brief descriptions of this course: mine (Al, the instructor) and Nick’s (a former ESP student, now a mechanical engineering student and ESP mentor). You could just skip mine and read Nick’s if you want, but here’s mine anyway:

This course is about being a successful (or more successful) student. More specifically, we will discuss core psychological research and theory that informs our understanding of the following: procrastination, metacognition, task management, willpower, goals, memory, learning, motivation, temptation and more. The psychological research and principles to be discussed may be informative to your success at university, but only if you are willing to embrace new ideas and change (in terms of academic behaviours and attitudes).

Now here’s Nick’s (better and more real, I think):

My name is Nick Squires and I took Al’s course last year (2016/2017). Over the two semesters I learned about key factors/strategies/techniques that helped me obtain success in my first-year studies. In my opinion, some of the most important factors discussed in this class were things I struggled with in high school — writing skills, study strategies, note-taking strategies, planning, time-management, procrastination, goal setting, motivational factors, and self-regulation. We also discussed a wide range of research relating to our academics and daily lives. Through relevant weekly assignments you get to apply the knowledge from class in a way that benefits your progression even further. I’d say that through this class I was able to better myself not only in the classroom, but also in my personal life. Unfortunately, Al makes you take some tests and write a couple of papers. The tests are fair and you can do great if you prepare, and by developing your writing skills the small assignments set you up to do well on the papers. Overall, this was a class that I was always excited to attend because I knew each week I would take another step to becoming a better student and reaching my goals. I can confidently say that this class was a major factor contributing to my success.

Back to me (Al). Well, if that sounds potentially interesting and useful to you then jump abroad. Whatever you decide, I hope you have a great year at Carleton. Good Luck!
Section B: Elective Courses

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

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

- There is no outline currently available for this course.
- Lecture three hours/week 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. Robert Burk
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.

- There is no outline currently available for this course.
- Lecture three hours/week plus a lab three hours/week and a discussion group one hour/week.

Math: Linear Algebra I (Fall)
*MATH 1107 H [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.

- The course outline will be posted here when available: https://carleton.ca/math/wp-content/uploads/MATH-1107C-W16.pdf
- Lecture three hours/week plus tutorial one hour/week.

Math: Elementary Calculus (Winter)
*MATH 1007 E [0.5 credit]
Prof. Taqi Shatnawi

- Course outline: below is an example from a previous year, for reference. Note: the course outline may be different this year:
  - Lecture three hours/week plus tutorial one hour/week.