

***FYSM 1607 (C): Cognitive Science: Thinking and Knowing*****Course Outline*****Fall/Winter 2019-20*****Class Information**

|                       |  |
|-----------------------|--|
| Dates:                | Monday and Wednesday   |
| Time:                 | 1:05 pm - 2:25 pm  |
| Location:             | Paterson Hall 215 (Fall); Paterson Hall 115 (Winter)   |
| Course prerequisites: | Normally restricted to students entering the first year of a B.A., B.Cog.Sc., B.Co.M.S., B.Econ. or B.G.In.S. program. |

**Instructor Information**

|               |  |
|---------------|--|
| Instructor:   | Dr. Nadiya Slobodenyuk   |
| Office:       | Dunton Tower 2207  |
| Phone:        | 613-520-2600 ext. 4210   |
| E-mail:       | NadiyaSlobodenyuk@cunet.carleton.ca  |
| Office Hours: | Tuesday 12 pm – 2 pm<br>Wednesday 11 am – 12 pm<br>Thursday 11 am – 2 pm<br>+ by appointment<br>+ whenever my door is open |

**1. Course Overview & Objectives:**

In this First Year Seminar, we will examine topics that are important to philosophy of mind, cognitive psychology, linguistics, computer science, and evolutionary theory. In doing so, we will look at the links that unite these areas in their goal of trying to understand both human and non-human minds (i.e. artificial intelligence and animal minds). You will learn about the various disciplines that comprise cognitive science both by examining some foundational issues in these disciplines and by looking at a number of topics that cognitive scientists are in the unique position of exploring in an interdisciplinary way. One of the main goals of this FYSM is to provide you the opportunity to take what you have learned from seemingly disparate disciplines and find a way to integrate this knowledge.

Ultimately, this course focuses on the most fascinating questions about the human mind! How is the mind organized? How is information represented in the mind? Why do we forget? How do we recognize faces? How do we make decisions? How do humans learn and what can machines learn? What is the role of the body in cognition? What is the role of smart technology in cognition? What is consciousness? Do animals have consciousness? And many more...

**2. Student Learning Outcomes:**

By the end of the course you will:

1. gain factual knowledge about cognitive systems and the field of cognitive science

You will also be able to:

2. relate early research in cognitive science to current developments in the field

3. integrate research from different disciplines into coherent theory of information processing
4. analyze from the methodological standpoint and critically evaluate empirical research
5. compare and critique interpretations of the empirical findings obtained on the basis of behavioral and physiological methods

Additionally, you will:

6. learn how to write clear and concise research summary
7. learn how to construct an evidence-based argument
8. learn how to present research

### **3. Text & Resources:**

There is no single textbook. The readings for this course include a range of articles and book chapters. The articles will be assigned on a weekly basis and will be available on the cuLearn course webpage.

On cuLearn course page, you will also find the course outline, schedule, course feedback tools, marking rubrics, and a variety of learning exercises and useful links. It is going to be a dynamic space with many opportunities for you to make a meaningful contribution to the course and connect with your peers.

Course cuLearn page also includes the PowerPoint lecture slides. Please note, however, that some material covered in class is not included on these slides. **The slides should not be regarded as a substitute for class attendance or class notetaking.**

### **4. Evaluation:**

Think of the course activities as different ways of leveling up in a game. You get points and rewards, you unlock skills, and ultimately, you reach a higher level of expertise in cognitive science. On this journey, you will have to complete quests and missions to gain knowledge and you will need to acquire skills. Course assignments and activities are designed to help you gain both knowledge and skills.

| <b>Activity</b>      | <b>% towards the final course mark</b> | <b>Short description*</b>  |
|----------------------|--|--|
| <b>Participation</b> | <b>20</b>                              |  |
| <b>Quiz 1</b>        | <b>8</b>                               | Multiple-choice and short answer questions   |
| <b>Quiz 2</b>        | <b>10</b>                              | Multiple-choice and short answer questions   |
| <b>Assignment 1</b>  | <b>8</b>                               | Research summary   |
| <b>Assignment 2</b>  | <b>10</b>                              | Thought paper  |
| <b>Quiz 3</b>        | <b>10</b>                              | Multiple-choice and short answer questions   |
| <b>Quiz 4</b>        | <b>10</b>                              | Multiple-choice and short answer questions   |
| <b>Assignment 3</b>  | <b>24</b>                              | Group project  |
| <b>Online quests</b> | <b>0</b>                               | Online quests do not <u>directly</u> contribute to your final mark, but the points you get in online quests can be used to raise your mark on quizzes! |
| <b>TOTAL: 100%</b>   |  |  |

\* Detailed descriptions are given below. Additional relevant documents and marking rubrics will be available on cuLearn.

- **Participation (20%)**

Participation is a key component of this course. To earn a full mark for participation you need to:

- 1) Attend classes (worth 10% of the participation grade).

You are allowed to miss 2 classes per term. Missing more than 2 classes without valid (e.g., health-related) reasons will affect your participation mark.

2) Participate in class discussions and activities (worth 10% of the participation grade).

- **Quizzes (38%)**

There are four quizzes spaced at approximately even intervals throughout the year. The quizzes will focus on the information covered in class and reading assignments. The quizzes will include some multiple-choice questions and some open-ended questions. The study guides for the quizzes will be posted on the course cuLearn page.

- **Assignment 1 (8%)**

This assignment involves writing a 2-page summary of a research paper. More details concerning this assignment will be provided in class and on the course webpage. This assignment will help you develop the ability to express complex ideas and results of empirical research clearly and concisely.

- **Assignment 2 (10%)**

This assignment involves writing a 2-page thought paper on one of the questions discussed in class. This assignment will help you develop the ability to construct evidence-based arguments.

- **Assignment 3 (24%)**

The last assignment in this course is a group project. Each group will have to write a research review paper on the topic of your choice and create a poster presentation of your paper. We will have a class discussion of the topics for this assignment and will spend some time in class working on the paper and the presentation. The last class will take a form of a poster workshop and will involve group presentations. You are welcome to invite your friends and family to attend the poster workshop.

Detailed information about the assignments and quizzes will be provided in class and will be available on the course cuLearn webpage.

- **Online quests (0%)**

Online quests do not directly count towards your final mark. However, by completing online quests you will be able to gain experience points which can be used to improve your marks on quizzes!

## **5. Important Dates:**

|  |                    |
|--|--------------------|
| Last day of registration for fall term and fall/winter courses.<br>Last day to change courses or sections (including auditing) for fall term and fall/winter courses.                      | September 17       |
| Last day to withdraw from fall term and fall/winter courses with a full fee adjustment. Withdrawals after this date will result in a permanent notation of WDN on the official transcript. | September 30       |
| <b>Quiz1</b>   | <b>October 7</b>   |
| <b>Assignment 1 DRAFT submission</b>   | <b>October 31</b>  |
| <b>Assignment 1 submission</b>   | <b>November 14</b> |
| Last day to request Formal Examination Accommodation Forms for April examinations to the Paul Menton Centre for Students with Disabilities.  | November 8         |
| <b>Quiz 2</b>  | <b>November 20</b> |

|                               |             |
|-------------------------------|-------------|
| Assignment 2 submission       | February 6  |
| Quiz 3                        | February 12 |
| Assignment 3 DRAFT submission | March 22    |
| Quiz 4                        | March 25    |
| Assignment 3 submission       | April 2     |

## 6. Course Outline & Working Schedule:

| Fall term                    |   |
|------------------------------|---|
| <b>Week 1</b>                |   |
| September 4                  | Introduction to FYSM 1607                                 |
| <b>Week 2</b>                |   |
| September 9<br>September 11  | Introduction to cognitive science                         |
| <b>Week 3</b>                |   |
| September 16<br>September 18 | Different types of minds                                  |
| <b>Week 4</b>                |   |
| September 23<br>September 25 | Mind / Body   |
| <b>Week 5</b>                |   |
| September 30<br>October 2    | Visual perception   |
| <b>Week 6</b>                |   |
| <b>October 7</b>             | <b>Quiz 1</b>   |
| October 9                    | Types of scientific papers. How to read a research paper. |
| <b>Week 7</b>                |   |
| <b>October 14</b>            | <b>Thanksgiving. No classes.</b>                          |
| October 16                   | Working on assignment 1: Research summary                 |
| <b>Week 8</b>                |   |
| <b>October 21</b>            | <b>Fall break. No classes.</b>                            |
| <b>October 23</b>            | <b>Fall break. No classes.</b>                            |
| <b>Week 9</b>                |   |
| October 28<br>October 30     | Attention   |
| <b>October 31</b>            | <b>Assignment 1 DRAFT submission deadline</b>             |
| <b>Week 10</b>               |   |
| November 4<br>November 6     | Attention   |
| <b>Week 11</b>               |   |
| November 11<br>November 13   | Memory  |
| <b>November 14</b>           | <b>Assignment 1 FINAL submission deadline</b>             |
| <b>Week 12</b>               |   |
| November 18                  | Career services workshop: Your career starts now*         |
| <b>November 20</b>           | <b>Quiz 2</b>   |
| <b>Week 13</b>               |   |

|                            |   |
|----------------------------|---|
| November 25<br>November 27 | Memory  |
| <b>Week 14</b>             |   |
| December 2                 | Library workshop: Recognizing different sources of information* |
| December 4<br>December 6   | Problem solving   |
| <b>Winter term</b>         |   |
| <b>Week 1</b>              |   |
| January 6                  | Embodied mind   |
| January 8                  | Extended mind   |
| <b>Week 2</b>              |   |
| January 13<br>January 15   | AI  |
| <b>Week 3</b>              |   |
| January 20                 | AI  |
| January 22                 | What is an argument? Evaluating arguments.                      |
| <b>Week 4</b>              |   |
| January 27<br>January 29   | Reasoning   |
| <b>Week 5</b>              |   |
| February 3<br>February 5   | Reasoning   |
| <b>February 6</b>          | <b>Assignment 2 submission deadline</b>                         |
| <b>Week 6</b>              |   |
| February 10                | Library workshop: Resources for cognitive science research*     |
| <b>February 12</b>         | <b>Quiz 3</b>   |
| <b>Week 7</b>              |   |
| <b>February 17</b>         | <b>Winter break, no classes.</b>                                |
| <b>February 19</b>         | <b>Winter break, no classes.</b>                                |
| <b>Week 8</b>              |   |
| February 24                | Working on group projects                                       |
| February 26                | Reasoning   |
| <b>Week 9</b>              |   |
| March 2<br>March 4         | Evolution of the mind   |
| <b>Week 10</b>             |   |
| March 9                    | Evolution of the mind   |
| March 11                   | APA-style literature review paper<br>Working on group projects  |
| <b>Week 11</b>             |   |
| March 16<br>March 18       | Consciousness   |
| <b>Week 12</b>             |   |
| <b>March 22</b>            | <b>Assignment 3 DRAFT submission deadline</b>                   |
| March 23                   | Consciousness   |
| <b>March 25</b>            | <b>Quiz 4</b>   |
| <b>Week 13</b>             |   |

|                |  |
|----------------|--|
| March 30       | Workshop: How to read your audit*              |
| April 1        | Finalizing group projects. Poster preparation. |
| <b>April 2</b> | <b>Assignment 3 submission deadline</b>        |
| <b>Week 14</b> |  |
| April 6        | Poster Workshop                                |

NOTE: The dates for quizzes and the deadlines will not change. However, the rest of the schedule is tentative and is likely to be adjusted based on the needs of the class.

\*Likely to change depending on the availability of the staff conducting the workshops.

## **7. Class Structure & Policies:**

In general, the course will follow a seminar format with a lecture component. You are expected to be an active participant in class discussions and activities.

You are also required to fully respect the class ground rules and policies:

- **Attendance**

Regular class attendance is required. You will need to take notes in class as there is no textbook for this course. Without attending the classes, you will be prepared for the quizzes and assignments poorly. **You are allowed to miss no more than two classes per term without any penalty.**

- **Use of mobile phones**

Strictly prohibited.

- **Use of laptops, tablets**

Allowed for taking notes.

- **Extra credit**

There is no extra credit in this course. Your final grade is a result of your performance on the exams and assignments.

Note that completing the optional quests on the course webpage will help you improve your mark greatly.

- **Communication**

I will be available for any questions, feedback, and help with the course material during my regular office hours. If necessary, extra office hours will be scheduled before and after each exam and major assignment. You are also welcome to pass by with any course-related questions or to talk about the meaning of life whenever my door is open. Please feel free to send me an e-mail on any course-related matter. I usually reply promptly and will certainly reply within 24 hours. I might not be able to reply during the weekend.

**Note that I will respond only to e-mails sent from your official Carleton University e-mail account containing your full name.**

If you do not have or have yet to activate your Carleton account, you may wish to do so by visiting

<http://carleton.ca/ccs/students/>

**Outside the classroom, e-mail is the main means of communication in this course. You will receive regular updates and reminders on your e-mail. It is your responsibility to check your e-mail regularly.**

- **Missed classes**

If you miss a class, please consult your classmates and ask for their notes. If there is a need, I can also discuss with you the material covered in class during my office hours.

- **Marking**

Students have the right to see their marked work during the regular office hours.

- **Carleton grading system**

Letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100    B = 73-76    C - = 60-62

A = 85-89    B - = 70-72    D+ = 57-59

A - = 80-84    C+ = 67-69    D = 53-56

B+ = 77-79    C = 63-66    D - = 50-52

F        Failure. No academic credit

ABS     Absent from the final examination

DEF     Official deferral (see "Petitions to Defer")

FND     "Failed, no Deferral" – assigned when the student is absent from the final exam and has failed the course on the basis of inadequate term work as specified in the course outline.

Standing in a course is determined by the course instructor, subject to the approval of the Chair and Faculty Dean.

All final grades are subject to the Dean's approval.

- **Makeup policy**

If health-related or unforeseeable personal circumstances prevent you from attending the test, you are expected to inform me before the test. Any supporting documents must be presented in a timely manner as well. You will be given a chance to retake the missed exams at a time agreed upon with the instructor.

If you receive zero for cheating or plagiarism on one of the assignments or an exam, you will NOT be given a second chance to fix your grade.

- **Request for academic accommodation**

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: [carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf](http://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf)

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. [carleton.ca/pmc](http://carleton.ca/pmc)

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per

Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: [carleton.ca/sexual-violence-support](https://carleton.ca/sexual-violence-support)

#### Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: [students.carleton.ca/course-outline](https://students.carleton.ca/course-outline)

- ***Learning support services***

Centre for Student Academic Support and Student Academic & Career Development Services offer a variety of services designed to support student learning. For example, they offer group study rooms, free drop-in sessions with study skills specialists and writing tutors, free academic skills workshops, networked computers, a tutor referral service, and supportive peer helpers. Visit their websites for more information:

<https://carleton.ca/csas/>

<https://carleton.ca/sacds/>

- ***Official final examinations period***

Fall 2019 courses: Dec. 9-21, 2019 and Winter 2019 courses: April 13-25, 2020 (may include evenings & Saturdays or Sundays)

For more information on the important dates and deadlines of the academic year, consult the Carleton 2018-2019 Calendar: <http://calendar.carleton.ca/academicyear/>

- ***Petitions to defer***

Students unable to complete a final term paper or write a final examination because of illness or other circumstances beyond their control or whose performance on an examination has been impaired by such circumstances may apply within five working days to the Registrar's Office for permission to extend a term paper deadline or to write a deferred examination. The request must be fully and specifically supported by a medical certificate or other relevant documentation. Only deferral petitions submitted to the Registrar's Office will be considered.

- ***Academic integrity***

The University Senate defines plagiarism as "presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own." This can include:

- reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings;
- failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks;



- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence, which cannot be resolved directly with the course's instructor. The Associate Deans of the Faculty conduct a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They range from a mark of zero for the plagiarized work to a final grade of "F" for the course, and even suspension from all studies or expulsion from the University.

To learn more, please see the section on academic integrity on the Registrar's webpage:

<https://carleton.ca/registrar/academic-integrity/>

- **Copyright policy**

Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s). **The PowerPoint presentations, lectures notes, and other materials available to you on cuLearn may not be distributed online.**

- **ICS Resources (613-520-2600, phone ext. 2522)**

|   |                        |
|---|------------------------|
| Department of Cognitive Science (2522)                  | 2201 DT (Dunton Tower) |
| Registrar's Office (3500)                               | 300 Tory               |
| Student Academic and Career Development Services (7850) | 302 Tory               |
| Paul Menton Centre (6608)                               | 501 University Centre  |
| Writing Tutorial Service (1125)                         | 4th floor Library      |
| Learning Support Services (1125)                        | 4th floor Library      |

- **Academic advising**

Visit the Cognitive Science Undergraduate Office, DT 2201 to discuss your program. Advisors can answer questions concerning:

- Course selection and meeting program requirements
- Your audit and transfer credits
- Gaining access to courses that are closed
- Information concerning prerequisites and preclusions
- Course equivalencies and substitutions
- Information about whether to pursue the (Honours Project Course) or the Thesis stream and CGPA requirements
- Community Practicum Course
- Concentrations
- Exchanges and course selection

- **Departmental Drop Box policy (Located outside 2202A DT)**

Mail received prior to 8:30am will be date stamped with yesterday's date. Mail received before 8:30am on Monday's will be date stamped with the previous Friday's date.

Please include your name, student number, course code and instructor's name. If any of this information is missing it may delay getting your paper to your instructor.