

### Honours Research Project in Neuroscience NEURO 498/499 2024/2025

### **Coordinators:**

Dr Esther Fujiwara	Dr. Clayton Dickson	
Office: 12-103B CSB	Office: P-439 BioSci	
Phone: (780) 492-4104	Phone: (780) 492-7860	
Email: efujiwar@ualberta.ca	Email: cdickson@ualberta.ca	

### Web Page: Please see eClass

### **Course Description:**

Honours level individual study and research in Neuroscience conducted under the supervision of a member of the Neuroscience and Mental Health Institute (NMHI). NEURO 498 is taken in conjunction with NEURO 499. These two individual 6-credit courses are part of a 12-credit program across two terms resulting in an honours research thesis in Neuroscience.

Students spend the term in the laboratory of a faculty member from the Neuroscience and Mental Health Institute (NMHI) to carry out a research project related to current topics and methodologies in the supervisor's area of expertise in one of cellular, molecular, systems, or cognitive neuroscience. During NEURO 498 (Neuroscience I), students will develop background knowledge in this area of neuroscience research, design an experimental plan (in conjunction with their supervisor) to investigate a particular research question, learn the methodologies to be used, and begin experiments to address this research question. Completion of this course requires a written proposal summarizing background information and experimental design and methods for the project as well as an oral presentation to an examining committee.

Upon satisfactory completion of NEURO 498, students will continue in NEURO 499 (Neuroscience 2). They will continue their research and produce a final written honors thesis on their project. An oral presentation and thesis defense will occur at the end of term and will be evaluated by the same examining committee. In addition, students will present their research in a 3-minute thesis (3MT) format near the end of term.

**Course Objectives and Expected Learning Outcomes:** The primary objective of NEURO 498/499 is to provide students with intense training in laboratory research and experimental neuroscience. Students will perform directed research in the laboratory of a faculty member from the Neuroscience and Mental Health Institute (NMHI). Students will be involved in the complete process of scientific research: critical formulation of the scientific question and hypothesis, acquisition of background information and reference management, planning and performing experimental work, gathering data, and presenting results orally and in a written thesis.

**Course Prerequisites:** Consent of the Neuroscience and Mental Health Institute (NMHI). Restricted to students in the fourth year of the Honors program in Neuroscience. Registration in both courses can only be approved by the Neuroscience and Mental Health Institute (NMHI).

**Registration:** This course is not open for Bear Tracks registration. In order to register please follow these steps.

# 1- The student should find and secure a supervisor.

This is the most important step since the course involves working in an independent laboratory that is part of the NMHI. The supervisor *must* be affiliated to the NMHI and *must* be available during both exam periods (typically the last week of classes in both terms). The supervisor must provide the student with a scientific question that can be addressed and developed as a thesis proposal during Neuro 498 and tested experimentally during both Neuro 498 and Neuro 499.

Please note that the list of potential supervisors posted in our website is not exclusive and other researchers, perhaps not on the list, may take students in their labs. The link to our current list of member supervisors is found on the NMHI website.

# 2- Ethics and biosafety requirements.

Human/Animal ethics approval, as required for the project, **MUST BE IN PLACE** at the time of registration. Supervisors and students must take this into account when designing a project for these courses.

Laboratory and project-specific safety training must be provided to the student by the supervisor or any other qualified member of the supervisor's laboratory at the beginning of the course and prior to starting wet laboratory work, if applicable. Please note that the U of A also offers general safety training that could be required even before beginning laboratory work.

# 3- Identification of a second examiner.

As part of the course evaluation, you will require a 2<sup>nd</sup> person to act as an **arms-length** reader for the proposal/thesis and who will also act as an oral examiner during both presentations. In consultation with your supervisor, this person (who should also be a full independent member of the NMHI) should consent to perform this role before they are listed on the form. This person CANNOT be a co-supervisor or the day-to-day lab supervisor or another person that is involved in *any* way with the project.

# 4- Submit the registration form electronically to course administrator

Ms. Amber Lapointe at <u>nmhiedu@ualberta.ca</u> by **September 4, 2024.** Electronic registration forms are available on our website or can be requested at <u>nmhiedu@ualberta.ca</u>. See link below: <u>https://www.ualberta.ca/neuroscience-and-</u>%20mental-health-institute/media-library/neuro-498-and-499-2.pdf

**Important**: registration will not proceed without evidence of the following:

- Confirmation that the students have been added to the lab's Health, Safety and Environment ARISE database. Please see: <u>https://www.ualberta.ca/human-resources-health-safety-</u> <u>environment/environment-and-safety/hazard-management/hazard-</u> <u>controls/administrative-controls/health-safety-and-environment-</u> <u>database.html</u>
- Confirmation of up to date ethics approval for either or both Animal/Human protocols. The student must be registered on any approved protocol and have necessary training. If the protocol expiration date precedes the date of project completion, proof of renewal should be provided at the appropriate time. This is the responsibility of both the student and the supervisor.
- Confirmation of an acceptable arms-length second examiner that will be available during the exam period.
- Ability to register in BOTH 498/499.

### Specifics for NEURO 498

**Course Objective:** The objective of Neuro 498 is to develop and defend a thesis proposal based on one or two scientific questions suggested by the supervisor. The supervisor (or designated project lead) will guide the student through the complete process of scientific research: formulation of the scientific question and hypothesis, acquisition of background information and reference management, planning and performing experimental work, and presenting results orally and in a written report. The student may (and very likely should) perform initial experimental work during this term.

Course Format: The course comprises:

I: Workshop in the first month of classes (in person, location TBA). Details and timing for the workshop will be made available through eClass. This meeting is **MANDATORY** for all students since past experience shows that the students that do best in this class are the ones that engage and attend. This workshop will address any questions about the mechanics of the course and will outline best practices for conducting research at the honours level.

II: **Research performed in the selected laboratory.** Includes the writing of the thesis proposal and performing experiments.

III: **Thesis proposal:** Students will write a thesis proposal document and submit it at least one week before their scheduled oral presentation and exam. Details on the submission process will be available through eClass.

IV: **Oral Presentation and Exam.** Students are required to make a 15-minute oral presentation of the thesis proposal and to defend it in front of an examining committee. Exams will typically take place the last week of classes (usually the first week of December). Details on timing and location will be posted in eClass for precise scheduling.

**Method of evaluation:** The final grade for the course are on a 4-point scale, using the U of A's letter grade system, and will be determined from the aggregate marks obtained from the laboratory performance, written report and oral presentation each weighted as follows:

Laboratory performance (supervisor only): 20%

Written proposal: (average of supervisor's & 2nd examiner's marks): 40%

Oral presentation: (average of supervisor's, 2nd examiner's & coordinator's marks): 40%

# Details of Course Breakdown:

### Laboratory Performance (20%):

Students enrolled in NEURO 498 are expected to spend a <u>minimum of 20 hours/week</u> (<u>on average</u>) working in the lab of their supervisor. This time should be dedicated specifically to reading literature relevant to the particular project, writing the thesis proposal and/or performing experimental work. How this time is allotted during the week is up to the discretion of the student and supervisor. It is important to understand that most projects may require a higher number of dedicated hours in individual weeks, as well as a considerable degree of flexibility from the student to adapt to laboratory dynamics and experimental requirements. Students must discuss their project with their potential supervisor and agree on the specific time commitment required.

Students will begin experiments to answer their research question(s). This experimental plan will continue in NEURO 499. Students should understand and learn the details of the experimental procedures and techniques they use in their project. They are also expected to acquire good practices for data recording and storage and to be involved in data interpretation.

The student's lab performance will be assessed by the supervisor and/or a designated member of the supervisor's lab (senior graduate student, senior technician, post-doctoral fellow, or research associate) with whom the student would be working. Factors to be considered will include: (i) attendance, engagement, diligence and participation in the lab; (ii) aptitude for searching and understanding the literature; (iii) aptitude for team work, (iv) response to training in experimental techniques; (v) accuracy in experimental techniques, (vi) organizational and problem solving skills; (vii) contribution to data interpretation/ability to independently interpret data); and (vii) compliance with the safety and ethics guidelines. Please see section on "Student Responsibilities" below.

### Written Report- Thesis Proposal Document (40%)

Students will write a thesis proposal document. This document should indicate that the student: (i) is familiar with the literature pertinent to the scientific question they will investigate, (ii) knows how to formulate a hypothesis based on existing evidence, and (ii) is able to design an experimental plan (in conjunction with their supervisor) to test that hypothesis.

Some guidelines for the preparation of the thesis proposal are available in the document: "Guidelines for the Proposal" on eClass. The supervisor may choose to adapt the proposal organization to fit better their field of research but the length and font cannot be changed.

Supervisors are encouraged to provide students with suggestions on the structure and the content of the thesis proposal, and to revise preliminary drafts, **but should not** contribute significantly to the final document.

Students will submit the thesis proposal through eClass by their scheduled due date (at least 1 week prior to the date of their examination). The course coordinators will distribute the document to the supervisor (and co-supervisor when applicable), and the external examiner. Late submission of this document may result in mark penalties.

For an idea of how examiners will evaluate the proposal please see "Guidelines for Marking Proposal" on eClass.

### Oral Presentation and Exam (40%)

Students are required to make an oral presentation of the thesis proposal and to defend it in front of an examining committee composed by the supervisor (and co-supervisor when applicable), an external expert faculty and the course coordinators.

Students will prepare an oral presentation on their thesis proposal. The presentation must be no more than 15 minutes long. The presentation should include background information on the research topic identifying the gaps in knowledge that needs to be filled and/or the problem that needs to be solved. It should present a rationale for the study and propose one or more hypotheses. The student should present the goals and research objectives of the study, highlighting the original contributions of his/her study by explaining how his/her research questions or approaches are different from previous research. The student should propose experiments to test the hypotheses and indicate how the data will be analyzed. The presentation should also importantly include the significance of the work proposed. The presentation will be followed by questioning from the committee members (the supervisor, the 2<sup>nd</sup> examiner, and the course coordinator). Students will be expected to demonstrate knowledge of the general background literature relevant to their particular research topic, the rationale for their hypothesis, and details and soundness of the experimental approaches proposed. They must show an appreciation of good experimental design and be aware of the technical difficulties and pitfalls inherent to the chosen methodology. They should also be able to defend the significance of their project.

After the presentation, there will be some time so that feedback concerning the student's performance at the oral exam can be provided. In addition, at a separate time that is convenient for both, the supervisor and the student are encouraged to meet formally to discuss the performance and outcome. In particular, the supervisor should point out the strengths and weaknesses of the student's oral presentation and written report, as discussed by the examining committee.

<u>Selection of oral presentations dates and times (to be completed in October)</u>: The student, in consultation with the supervisor (and co-supervisor, if applicable) and the external examiner must select a date and time for the Neuro 498 examinations. Neuro 498 oral presentations will take place during the last week of classes (typically the first week of December in the fall term). NB: although Neuro 499 oral presentation schedules will only be available sometime in February, it is ESSENTIAL that the student ensures that both the supervisor/co-supervisor AND the external examiner are available during both exam periods (typically the first week of April for Neuro 499). Available dates/times will be posted through eClass through a calendar signup on a first-come, first-served basis. For any other details please contact Ms. Amber Lapointe at <u>nmhiedu@ualberta.ca</u>. The notices and precise deadlines for selecting and securing exams dates and times will be posted in eClass.

#### Specifics for NEURO 499

**Course Objective:** The objective of Neuro 499 is to perform experiments to test the hypothesis formulated during Neuro 498 and write and defend a thesis based on the experimental work performed during both semesters. The supervisor (or designated project lead) will analyze together with the student the raw data and provide guidance of how to achieve finalized results from these raw data, highlighting the most appropriate ways to present the result, how to perform statistical analysis, etc. They will also discuss the implications of the results, the potential pitfalls and alternatives and the overall significance of the work performed by the student.

Course Format: The course comprises:

I: **Mandatory individual check-in** (typically in the first month of classes). Appointment slots to be posted via eClass

II: **Research performed in the selected laboratory.** Includes performing experiments and writing the thesis.

III: **Honours Thesis Document**: Students will submit the thesis proposal through eClass by their scheduled due date (at least 1 week prior to their examination). The course coordinators will distribute the document to the supervisor (and co-supervisor when applicable), and the external examiner.

IV: **Three Minute Thesis (3MT):** Two 80-minute sessions scheduled for the last week of March. Schedule to be determined and will be posted on eClass.

V: **Oral Presentation and Exam.** Students are required to make an oral presentation in front of an examining committee of their honours thesis project. In-person oral presentations will typically take place the last week of classes. Schedule sign-up to be posted on eClass.

<u>Method of evaluation:</u> The final grade for the course are on a 4-point scale, using the U of A's letter grade system, and will be determined from the aggregate marks obtained from the laboratory performance, written report and oral presentation each weighted as follows:

3-minute thesis (coordinator assigned): 10%

Laboratory performance mark (supervisor-assigned): 10%

Written report (average of supervisor, second examiner): 40%

Oral presentation (average of supervisor, second examiner's & coordinator): 40%

### Laboratory Performance (20%):

Students enrolled in NEURO 499 are expected to spend a **minimum of 20 hours/week** (on average) working in the lab of their supervisor. This time should be dedicated specifically to performing experimental work, continuing to read the pertinent literature, and writing the final thesis document. Again, how this time is allotted is up to the discretion of the student and supervisor and can involve a follow-up discussion from that in Neuro 498. Students are expected to continue the experiments they started during the fall term (NEURO 498), analyze their results and reach their conclusions.

The student's lab performance will be assessed by the supervisor and/or a designated member of the supervisor's lab (senior graduate student, senior technician, post-doctoral fellow, or research associate) with whom the student was working. Factors to be considered will include: (i) attendance, engagement, diligence and participation in the lab;

(ii) aptitude for searching and understanding the literature; (iii) aptitude for team work, (iv) response to training in experimental techniques; (v) accuracy in experimental techniques, (vi) organizational and problem solving skills; (vii) contribution to data interpretation/ability to independently interpret data); and (viii) compliance with the safety and ethics guidelines. For more details, please see section on "Student Responsibilities" below.

### Written Report- Honours Thesis Document (40%)

Students will produce a written honours thesis on their project. This document should demonstrate that the student: (i) has performed experiments to test the hypothesis proposed during Neuro 498, (ii) knows how to present the results, (iii) is able to find major patterns in the observations, highlighting relationships, trends and generalizations among the results, (iv) is able to interpret the results in terms of their relationship with the original question design and whether they are in agreement or disagreement with previous work, and (v) is able to highlight the significance of the results.

Some guidelines for the preparation of the thesis are available in the document entitled "Guidelines for the Thesis" on eClass. The supervisor may choose to adapt the thesis organization to fit better their field of research. The length and font cannot be changed.

Supervisors are encouraged to provide students with suggestions on the structure and the content of the thesis and to revise preliminary drafts, but should not contribute significantly to the final document.

Students should submit the thesis proposal through eClass by their scheduled due date (at least 1 week prior to their examination). The course coordinators will distribute the document to the supervisor (and co-supervisor when applicable), and the external examiner. Late submission of this document may result in mark penalties.

The supervisor (and co-supervisor when applicable), and the external examiner will read and mark the report before the oral examination takes place.

For an idea of how examiners will evaluate the thesis please see "Guidelines for Marking Thesis" on eClass.

# Oral Presentation and Exam (40%)

Students are required to make an oral presentation of the thesis project and to defend it in front of an examining committee composed by the supervisor (and co-supervisor when applicable), an external expert faculty and the course coordinators.

**Honours Thesis Presentation:** Students will prepare an oral presentation on their work for the final exam. The presentation must be no more than 15 minutes long. The presentation will be followed by questioning from the committee members. Students will be expected to know the general background literature relevant to their particular research topic, the rationale for their hypothesis and details and soundness of the experimental approach used. They should know the details of the methods used and understand the basis of the other methods described in the thesis as part of their experiments but not performed by the students themselves. They should be able to discuss the significance, strengths and limitations of their findings and put them in context with current knowledge in the field.

After the presentation there will be some time so that feedback concerning the student's performance at the oral exam can be provided. In addition, at a separate time that is convenient for both, the supervisor and the student are encouraged to meet formally. In

particular, the supervisor should point out the strengths and weaknesses of the student's oral presentation and written report, as discussed by the examining committee.

Three Minute Thesis (3MT) (10%): Students are asked to prepare a 3-minute "elevator pitch" during which they would explain the breath and significance of their research project to a non-specialist audience. Students are not required to use slides but they can a single one if they so choose. This academic exercise is based on the 3-minute thesis competition for graduate students. Students should follow the <u>3MT link on the GPS</u> website for more info and resources

Students will present their 3MT at a scheduled time, typically in the last week of March. This will be in person, at a schedule and location TBD. Presentation slots will be available for sign-up through eClass. **All students are expected to attend both sessions.** The course coordinators are responsible for grading this aspect of the course.

### Grade Evaluation:

Final grades in this course are on a 4-point scale, defined as follows based upon the percentage mark obtained:

Range (%)	Letter grade	4 point grade	Descriptor
94-100	A+	4.0	Outstanding
85-93%	A	4.0	Excellent
81-84%	A-	3.7	Very good
77-80%	B+	3.3	
73-76%	В	3.0	Good
70-72%	B-	2.7	
64-69%	C+	2.3	
61-63%	С	2.0	Satisfactory
57-60%	C-	1.7	
54-57%	D	1.0	Minimal Pass
1-53%	F	0.0	Fail

Grades are unofficial until approved by the NMHI and the Faculty of Science.

### Missed Exam Dates and Late Submissions:

A student who misses the deadline for submission of their written work or who misses their exam date due to incapacitating illness, severe domestic affliction or other compelling reasons must contact the course coordinators immediately. Upon consultation with the examining committee, a penalty of 5% per day may be applied to the mark assigned for the written/oral component.

In all cases, coordinators may request adequate documentation to substantiate the reason for the absence, at their discretion. Please remember that any deferral for submission/completion is a privilege, not a right, and is subject to the final decision of the coordinators, in consultation with the examining committee.

When a deadline presents a conflict based on <u>non-medical protected grounds</u>, students must apply to the Academic Success Centre for accommodations via their <u>Register for</u> <u>Accommodations website</u>. Students can review their eligibility and choose the application process specific for *Accommodations Based on Non-Medical Protected Grounds*.

It is imperative that students review the dates of all course assessments upon receipt of the course syllabus, and notify the coordinators **AS SOON AS POSSIBLE** to ensure the timely application of the accommodation. Students who apply later in the term may experience unavoidable delays in the processing of the application, which can impact the accommodation.

Any deferral of term work is a privilege and not a right; there is no guarantee that a deferral will be granted. Please remember that misrepresentation of facts to gain a deferral is a serious breach of the *Code of Student Behaviour* and will be treated accordingly.

#### STUDENT RESPONSIBILITIES:

*Safety:* All students must receive the appropriate safety training for their respective lab environment (e.g. BL1, BL2 facility, etc.), and must complete the UAlberta WHMIS safety course.

Additional safety training is the responsibility of the supervisor and could include online courses in biosafety, chemical safety, as well as in-person training regarding laboratory safety procedures (eye wash stations, fire precautions, etc.). If the student will be working with animals, they will need part 1 training, and possibly part 2 training. For researchers working with human or clinical data, there may be additional training needed. Please consult with your supervisor and also consult the U of A Research Office's link for <u>Research Ethics</u>.

Official resources on safety and laboratory requirements is available through the office of <u>Health, Safety + Environment</u>.

All individuals who are responsible for and working in laboratories or otherwise conducting research are excepted to uphold the strictest requirements for safety.

*Ethics & conduct:* All students must report their experimental results honestly. Primary data should be submitted to the supervisor. There is a zero tolerance policy at the UofA for data fabrication, manipulation, or plagiarism. Examples of data manipulation include: reporting only the "trials that worked" from a series of experiments, splicing of western blots, etc. Examples of plagiarism include: copying text from another source verbatim, or referencing someone else's published ideas without proper citation, etc. For information and resources please consult this link from the office of Academic Integrity to avoid plagiarism.

**Academic Integrity:** The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should consult the <u>Academic Integrity website</u> for clarification on the various offences. If you have any questions, ask your course coordinator. All forms of dishonesty are unacceptable at the University. Any offence will be reported to the Associate Dean of the Faculty of Science, who will determine the disciplinary action to be taken (please refer to the Academic Discipline Process.) Typical sanctions include conduct probation, a mark reduction, a mark of zero on an assessment, a grade reduction, a grade of F8 in a course, a remark on the transcript, and/or a recommendation for suspension or expulsion from the University of Alberta.

**Collaborations:** The University of Alberta recognizes collaboration as an important part of intellectual and academic development. Collaboration can produce creative and innovative ideas and research; however, if students engage in inappropriate collaboration, it gives them unfair academic advantage and is a violation of the Code of Student Behavior. Much like citing your sources in a paper, it's all about being transparent. When assigning you a grade, your professors need to know how much of the work was your own and to what extent you received help. It is acceptable that you include in your written documents and/or oral presentations data (in the form of figures, tables, etc.), schemes, diagrams, etc. from other people from your research group if the contributions of other are highlighted appropriately. For more information, follow the <u>(in)Appropriate Collaboration</u> <u>link on the Academic Integrity website</u>

**Guidelines for Respectful Engagement:** Students from many different backgrounds participate in this course. This course naturally involves coordinated interactions with members of the University community at large. Sexist, racist, homophobic comments and other inflammatory remarks are not conducive to learning nor research, and are absolutely not permitted. All participants are governed by the Code of Student Behaviour. Be mindful when discussions involve controversial topics or issues, and consider the possibility that members of our community may have themselves directly experienced some of these issues and/or may have different perspectives because of these issues. Please participate in a respectful and considerate manner.

If you are witness to, or the target of abusive or offensive behaviour, as a result of your participation in this course please inform the coordinators immediately. You can also contact the NMHI educational coordinator (Ms. Amber Lapointe: <u>nmhiedu@ualberta.ca</u>) and/or the NMHI undergraduate coordinator (Dr. Silvia Pagliardini: <u>HonNeuro@ualberta.ca</u>) and/or the NMHI Education lead (Dr. Elena Posse de Chaves) and/or the director of the NMHI (Dr. Doug Zochodne) and/or the Department Chair of your supervisor.

#### **Student Services and Resources**

General information about various student services, including academic, financial, health and wellness, safety, and career development, can be found on the website for <u>Current</u> <u>Students</u>. Additional information can be found on the <u>Campus Life</u> website.

Academic Success Centre (1-80 SUB): The <u>Academic Success Centre</u> provides professional academic support to help students strengthen their academic skills and achieve their academic goals. Individual advising, appointments, and group workshops are available year round in the areas of Accessibility, Communication, Learning, and Writing Resources. Modest fees apply for some services.

**Writing Services** (1-42 Assiniboia Hall): <u>Writing Services</u> offers free one-on-one writing support to students, faculty, and staff. Students can request consultation for a writing project at any stage of development. Instructors can request class visits and presentations.

**First Peoples' House:** <u>The First Peoples' House</u> provides an environment of empowerment for First Nations, Métis, and Inuit learners to achieve personal and academic growth.

**Health and Wellness Support:** There are many health and community services available to current students. For more information, visit the <u>Health and Wellness</u> <u>Support for Students</u> website.

**Feeling Stressed, Anxious, or Upset?** It is normal for us to have different mental health experiences throughout the year, particularly as we adjust to returning to campus as we move through a pandemic. Know that there are people who want to help. You can reach out to your friends and access a variety of supports available on and off campus at the <u>Need Help Now</u> webpage or by calling the 24-hour Distress Line: 780-482-4357 (HELP).

#### Students Eligible for Accessibility-Related Accommodations:

In accordance with the University of Alberta's <u>Discrimination, Harassment, and Duty to</u> <u>Accommodate policy</u>, accommodation support is available to eligible students who encounter limitations or restrictions to their ability to perform the daily activities necessary to pursue studies at a post-secondary level due to medical conditions and/or non-medical protected grounds. Accommodations are coordinated through the <u>Academic</u> <u>Success Centre</u>, and students can learn more about eligibility on the <u>Register for</u> <u>Accommodations website</u>.

It is recommended that students apply as early as possible in order to ensure sufficient time to complete accommodation registration and coordination. Students are advised to review and adhere to published deadlines for accommodation approval and for specific accommodation requests (e.g., exam registration submission deadlines). Students who request accommodations less than a month in advance of the academic term for which they require accommodations may experience unavoidable delays or consequences in their academic programs, and may need to consider alternative academic schedules.

Office of Universal Design and Accessibility Facilitation: In cases of temporary conditions that hamper a student's ability to complete an assignment or write an exam (e.g., broken arm), the Office of Universal Design and Accessibility Facilitation can help determine what temporary accommodations are required. To request assistance in such cases, please email the Dean of Students Office at doshelp@ualberta.ca.

**Office of the Student Ombuds:** The <u>Office of the Student Ombuds</u> offers confidential interviews, advice and support to students facing academic, discipline, interpersonal and financial difficulties.

Office of Safe Disclosure and Human Rights: <u>The Office of Safe Disclosure and Human</u> <u>Rights (OSDHR)</u> provides confidential disclosure services as well as advising and consulting on any issue relating to Human Rights, Discrimination, Harassment, and Accommodation issues. There are several ways to contact them, including anonymous options.

**Disclaimer:** Any typographical errors in this syllabus are subject to change and will be announced in class and/or posted on the course website (e.g., eClass).