

## **Biology 3326F (Cell Biology Laboratory) Course Outline**

### **1. General Course Information**

#### **Course Information**

Biology 3326F (Cell Biology Laboratory), **Fall 2026**

**Lectures/Tutorials:**

**Lab sections:**

#### **List of Prerequisites**

The prerequisites for this course are Biology 2290F/G, Biochemistry 2280A; a minimum mark of 70% in Biology 2382A/B.

Unless students have either the prerequisites for this course or written special permission from the Department of Biology to enroll in it, they may be removed and withdrawn from this course in accordance with university policy. This may be done after the add/drop deadline of the academic term, and the course will be marked as withdrawn (WDN) on their academic record. This decision may not be appealed.

### **2. Instructor Information**

**Instructor:** Dr. Alexander Timoshenko

**Teaching Assistants:**

**Laboratory Technician:**

Students must use their Western (@uwo.ca) email addresses and include Bio3326 in the subject line when contacting their instructor or TAs.

### **3. Course Syllabus, Schedule, Delivery Mode**

**Course description:** Biology 3326F/G is a laboratory course which provides hand-on training in current cell biological methods such as animal cell culture, microscopy, karyotype analysis, PCR, SDS-PAGE, fluorescence staining of cellular organelles, and bioimaging. A discovery-based component of this course focuses on application of the mentioned methods to study changes in protein expression and cytoskeleton organization in cells exposed to stress stimuli.

**Course Content and Learning Outcomes:** The work in this course is divided into two modules, outlined below. **The first module** is intended to give students an understanding of and experience with the basic animal cell culture techniques and cell line characterization and authentication. **The second module** is based on application of SDS-PAGE and fluorescence microscopy methods to study protein expression and remodeling of cytoskeleton systems in cultured cells in response to microenvironmental stress stimuli. The major training objectives are:

**Module I. Basics of Animal Cell Culture:** • Examining the microscope potential (upright vs inverted; magnification; numerical aperture; resolution; field of view; working distance) • Proper alignment of a bright-field light microscope (Köhler illumination) and a phase contrast microscope • Identification of cells and cellular components on slides and in cell culture flasks • Harvesting methods for adherent cell lines • Cell counts using hemacytometer • Cell density and confluency • Test for cell viability • Monitoring morphology of animal cells in culture • Bioimaging using an inverted microscope • Chromosome spreads from monolayer cultures • Staining procedure for chromosome spreads with Giemsa • Karyotype analysis of a cell line • Modal number of chromosomes and heteroploidy • Genetic instability in cell culture • Genomic DNA isolation • PCR assay for identifying cell lines • Agarose gel electrophoresis.

**Module II. Cell Stress Biology and Bioimaging:** • Preparation of cell lysates using RIPA buffer • Spectrophotometrical determination of protein concentration using Bradford assay • SDS-PAGE • Staining proteins in gels using Coomassie blue • Gel analysis using ImageLab software (Bio-Rad) • Fluorescence microscopy • Fluorochromes • Fluorescence microscope operation • Image capture • Direct fluorescence staining of actin microfilaments with phalloidin • Preparation of slides for fluorescence microscopy • Fixation procedure • Monoclonal and polyclonal antibody • Primary and secondary antibody • Indirect immunofluorescence staining • Blocking solution • Observation of microfilament, microtubules and intermediate filament modifications in response to stress stimuli • Bioimaging using fluorescence microscope • Northern Eclipse and ImageJ software.

*By the end of the course, successful students will be able to:*

- ☒ Demonstrate a knowledge of animal cell culture models in cell biology.
- ☒ Perform animal cell line characterization using regular light, inverted and fluorescence microscopy, karyotyping, SDS-PAGE, and PCR assay.
- ☒ Comprehend methods used to authenticate animal cell lines.
- ☒ Prepare chromosome spreads, stain chromosomes, and analyze cell karyotype.
- ☒ Isolate and quantify genomic DNA and proteins in animal cells.
- ☒ Run horizontal and vertical electrophoresis to analyze biological molecules.
- ☒ Stain the cytoskeleton and cell nucleus using fluorescent probes.
- ☒ Operate with inverted and fluorescence microscopes and perform bioimaging of live and stained animal cells.
- ☒ Understand the complexity and nature of the cell cytoskeleton and its remodelling under stress conditions.
- ☒ Analyze data using professional software such as ImageLab and ImageJ.
- ☒ Organize and analyse research projects by formulating hypotheses for each laboratory experiment and providing an interpretation of collected data in laboratory notebooks.
- ☒ Demonstrate competence with reading primary research articles, scientific writing, data assessment, and critical thinking by reporting their experimental results in a form of research paper manuscript and poster presentation.
- ☒ Develop good teamwork habits by working in pairs and discussing the results with lab partners and in the class.

## 4. Course Materials

**Required textbook:** Student laboratory manual “**Biology 3326F/G Cell Biology Laboratory**”, version 2026-27, # M12372. The manual is available at the Dellelce Family Bookstore:

[https://bookstore.uwo.ca/textbook-search?campus=UWO&term=W2026A&courses%5B0%5D=001\\_UW/BIO3326F](https://bookstore.uwo.ca/textbook-search?campus=UWO&term=W2026A&courses%5B0%5D=001_UW/BIO3326F)

Students are welcome to use second-hand copies of this manual.

**Recommended readings available online through the Taylor Library:**

1. Freshney, R.I. (2016) **Culture of animal cells: a manual of basic technique and specialized applications, 7th Edition**, Willey-Blackwell.  
[https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL\\_UWO/f0kqif/alma991045397318105163](https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL_UWO/f0kqif/alma991045397318105163)
2. Knisely, K. (2021) **A Student Handbook for Writing in Biology, 6th Edition**, Macmillan Learning.  
[https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL\\_UWO/f0kqif/alma991045466219305163](https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL_UWO/f0kqif/alma991045466219305163)
3. Lodish, H., et al. (2021) **Molecular Cell Biology, 9th Edition**, Macmillan Learning. (**Chapter 4**, sections 4.1, 4.2; **Chapters: 7**, sections 7.4, 7.5; **Chapters 17, 18**).  
[https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL\\_UWO/f0kqif/alma991045357021005163](https://ocul-uwo.primo.exlibrisgroup.com/permalink/01OCUL_UWO/f0kqif/alma991045357021005163)

**Lecture notes, lab results, assignments, and grades will be available through OWL Brightspace:** All course materials will be posted to Brightspace: <https://westernu.brightspace.com/>. Any changes will be indicated on the course website and discussed with the class. Students are responsible for checking the course OWL Brightspace site regularly for news and updates. This is the primary method by which information will be disseminated to all students in the class. If students need assistance with the course OWL Brightspace site, they can seek support on the **OWL Brightspace Help** page <https://brightspacehelp.uwo.ca/>. Alternatively, students can contact the Western Technology Services Helpdesk by phone at 519-661-3800 or ext. 83800.

**Copyright and Audio/Video Recording Statement:** Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws. You must always ask permission to record another individual and you should never share or distribute recordings and available lecture handouts.

**Student Responsibilities and General Conduct in Teaching Laboratory:** All persons working in a laboratory are required to follow the Western University Safety Policy:

1. Laboratory dress code (shirt, long pants, socks and close-toed shoes).
2. Proper lab attire including safety glasses and lab coats.
3. Disposable gloves are to be worn in the laboratory.
4. **No food or drinks are allowed in the laboratory.**
5. Medical-grade (ASTM level 3) masks are advised in indoor instructional spaces.

**Technical Requirements:** Students will need **USB flash drives** to save data collected in the lab. It is also highly recommended that students bring a portable computer to labs and tutorials that can be used for data analysis. A personal computer will be required to write Module Tests in this class during tutorial time. When offered in online mode all students must have access to a stable internet connection, and a portable personal computer with working microphone and/or webcam.

## 5. Methods of Evaluation

The table below outlines the University-wide grade descriptors.

|           |          |                                                                 |
|-----------|----------|-----------------------------------------------------------------|
| <b>A+</b> | 90-100   | One could scarcely expect better from a student at this level   |
| <b>A</b>  | 80-89    | Superior work which is clearly above average                    |
| <b>B</b>  | 70-79    | Good work, meeting all requirements, and eminently satisfactory |
| <b>C</b>  | 60-69    | Competent work, meeting requirements                            |
| <b>D</b>  | 50-59    | Fair work, minimally acceptable                                 |
| <b>F</b>  | below 50 | Fail                                                            |

The overall course grade - **out of 100** - will be calculated as listed below:

| Component                   | Notes                                                      | Value     |
|-----------------------------|------------------------------------------------------------|-----------|
| Tutorial attendance         | Tutorial attendance will be taken                          | <b>1</b>  |
| Lab participation           | Lab attendance is mandatory                                | <b>4</b>  |
| Pre-lab questions (quizzes) | They will be given before some labs (5 min, short answers) | <b>6</b>  |
| Lab notebook                | Marked 2 times by TAs (Module I and Module II)             | <b>15</b> |
| Module tests                | Two in-class online tests (40 min, 12 points each)         | <b>24</b> |
| Midterm assignment          | Written report                                             | <b>25</b> |
| Poster Project              | Final poster presentations                                 | <b>25</b> |

### Tutorial attendance

**Tutorials are mandatory** and attendance will be taken. Each unexcused absence will be counted as 'zero' and used to calculate the average grade for all tutorial sessions.

### Lab Participation

The lab participation will be evaluated by your TAs and the average grade will be submitted to the instructor based on following four grading criteria, each is worth of 1 point:

- 1. Lab Safety** (lab coat, safety glasses, long pants, socks and close-toed shoes, confine long hairs, no food/drinks in the lab).
- 2. Punctuality and Readiness** (late to class, no lab notebook, did not read manual, knowledge of protocols and workflow).
- 3. Performance and Professionalism** (extra time, not doing right, proper labelling on slides, cleaning lab benches, lab reports in class, quality of raw data as posted on Brightspace, teamwork, cell phones, inappropriate behaviour).
- 4. Engagement** (enthusiasm, proactive contribution, asking relevant questions).

### Pre-lab Questions (Quizzes)

This course has **seven** 5 min quizzes (1 point each), which will be given as short-answer questions at the beginning of specific lab classes to test your knowledge of experimental protocols and readiness to the lab exercises. Only **six best grades** will be considered for final grade calculations.

## Lab Notebook

Complete and accurate record keeping is one of the most important elements in any piece of laboratory work. Your lab notebook **must be with you** whenever you are in the lab. Here are a few guidelines to keep in mind:

**(a)** Make entries in the notebook **as and when** you do things. Do not transcribe records for the sole purpose of making the book "look neat". It is important to note exactly what you did.

**(b)** The notebook should contain **everything** that is relevant to your project including literature, methods, protocols, images, etc. Keep notes or copies of your literature searches, relevant papers, ideas for solving problems in your lab notebook.

**(c) All raw data must be entered in the notebook.** There will be some breaks between exercises in the lab; use them to enter all required information in your notebook. Tape in all images you collect. Raw data files (images, spreadsheets with calculations etc) should be also posted on OWL Brightspace.

**(d)** Lab notebooks should be sufficiently complete to allow any laboratory-literate person to duplicate your experiments and analyses. When it comes time to prepare your manuscript and poster presentation, your lab notebook will be your primary source of information.

The lab notebooks will be checked two times by TAs. The grades will be averaged and contribute to **15%** of your final grade. Grade zero will be assigned for each missing submission because we expect that you consistently take care about records in your lab notebook, **i.e. the lab notebook is not considered as a home-take assignment.** The following **Lab Notebook Markers** will apply:

1. TOC, pages and entries dated, overall clarity and readability of your records (3 points).
2. Purpose of experiment, hypothesis if applied (2 points).
3. Experimental procedure, protocols (3 point).
4. Raw data, drawings, photos, calculations, figures, tables, etc (5 points).
5. Interpretation, ideas (2 points).

## Module Tests

Two module tests (12 points each, multiple-choice questions format) will be offered online as OWL Brightspace quizzes during tutorials at the end of each lab module. The length of each test is 40 min. Test #1 will cover module I (microscopy, animal cell culture, karyotyping, PCR) and Test #2 will cover module II (SDS-PAGE, cytoskeleton, fluorescence microscopy, cell staining and bioimaging). There will be only one make-up for each module test on **Monday, next week** and missing tests will not be reweighted.

## Midterm Assignment

Bio3326F/G assignments are designed to introduce you to scientific writing and to provide you with proper understanding of formal requirements to **research paper manuscripts** for scientific journals. The assignments will be based on your original experimental results obtained in the module I of the lab course (i.e. animal cell culture, PCR, and karyotype of animal cell lines) and their critical analysis using the literature data. The midterm assignments are allowed to be prepared by two students working together on the same bench, who can share their results, implying that the same grade will be applied to co-authors. We expect that such format will encourage the teamwork and discussion of the collected data. The midterm assignment is to be organized as a formal manuscript for **The Journal of Cell Biology** as per **the Instructions to Authors** of this journal (separate handout) and is expected to be

submitted by deadline as an electronic copy on Brightspace. Should extenuating circumstances arise, students **do not need** to request Academic Consideration and they are permitted to submit their assignment up to 48 hours past the deadline without a late penalty (The 48-Hour No-Late-Penalty Period). **The midterm assignment must be completed to pass the course.**

## Poster Project

BIO3326F/G posters are group projects of 3-4 students usually working on the **same lab bench**. The electronic version of posters (no hard copies) will be presented as a teamwork by group members during special sessions during lab hours. The poster project will be based on the results of your lab work over the module II including effects of stress on protein expression (SDS-PAGE) and the cytoskeleton remodelling in cells. The poster presentations will be your final report in this class. **Please note that the PowerPoint file of your poster should be submitted on Brightspace one day in advance of your presentation, i.e. by 1:30pm on the preceding day.** The peer evaluation may change the portion of your poster group mark by up to 10%. A separate handout provides you with the guidelines and instructions for the preparation and peer evaluation of BIO3326F/G Poster. Presentation is an essential requirement of this course. If a student misses it, they will be offered a make-up opportunity or a rescheduled date; the student must request Academic Consideration through the Student Absence Portal (SAP) to access this opportunity. **The poster project and presentation must be completed to pass the course.**

## Information about Missed Coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs*, posted on the Academic Calendar: [https://uwo.ca/univsec/pdf/academic\\_policies/appeals/academic\\_consideration\\_Sep24.pdf](https://uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf) . This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person. The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult [Accessible Education](#). For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage: [https://registrar.uwo.ca/academics/academic\\_considerations/](https://registrar.uwo.ca/academics/academic_considerations/) . All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.

**Attendance in the labs and completion of all lab exercises are mandatory in this course.** If you miss a lab class due to a valid reason, you should request Academic Consideration through the SAP to avoid 5% deduction from your final grade for each missing lab. If a student misses **more than 3 labs** and therefore do not demonstrate sufficient mastery of those technical skills to progress and data collection for reports, they may not receive credit for the course or receive a grade of Incomplete (INC) with subsequent academic outcomes.

Missed assignments, tests, and presentations will not be reweighed to other parts of the course.

## How to be Successful in This Class?

Students enrolled in this class should understand the level of autonomy and self-discipline required to be successful outside the lab hours:

1. Invest in a planner or application to keep track of your courses. Populate all deadlines at the start

- of the term and schedule time at the start of each week to get organized and manage your time.
2. Make it a daily habit to log onto Brightspace OWL to ensure you have seen everything posted.
  3. Take notes as you go through the lecture/tutorial material. Keeping handwritten notes or even notes on a regular Word document will help you learn effectively.
  4. Connect with others. Try forming an online study group and try meeting on a weekly basis for study and peer support.
  5. Do not be afraid to ask questions. If you are struggling with a topic, check the online discussion Forums or contact your instructor and or teaching assistant.
  6. Reward yourself for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.
  7. Take advantage of office hours with your instructor.

## 6. Additional Statements

### 6.1 Religious Accommodation

When a recognized religious holiday either requires a student to be absent from the University, or requires or prohibits an activity that makes it impossible for them to complete an academic requirement scheduled that day, they are entitled to accommodation. No student will be penalized for an absence for religious reasons, and an alternative means of satisfying the requirement will be arranged. This accommodation is provided in accordance with the University's policy on Accommodation for Religious Holidays:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_religious.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf)

The student should submit their requests through the Student Absence Portal (SAP), identifying the conflict and the specific course component(s) affected (e.g., test, midterm, exam).

**Midterms and Tests:** If a religious observance conflicts with a midterm test and makeup, they must submit their request no later than **one week** before the test. The instructor will arrange an early sitting of the test.

If a suitable arrangement cannot be reached between a student and their instructor, they should consult the Undergraduate Chair of the Department of Biology, and if necessary, the Associate Dean (Academic) of the Faculty of Science.

For a list of recognized religious observances, please visit the calendars posted on the Equity, Diversity & Inclusion website - <https://www.edi.uwo.ca> (About Us – Resources – Additional Resources – Calendars).

### 6.2 Academic Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Accommodation\\_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf).

### 6.3 General Academic Policies

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

**Use of @uwo.ca email.** In accordance with academic policy, the centrally administered e-mail account provided to students will be considered the individual's official university email address:

[https://www.uwo.ca/univsec/pdf/policies\\_procedures/section1/mapp113.pdf](https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf)

It is the responsibility of the account holder to ensure that emails received from the University at their official university address are attended to in a timely manner.

**Requests for Relief.** If you require Requests for Relief, please consider the following links:

Policy on Request for Relief from Academic Decision:

[https://uwo.ca/univsec/pdf/academic\\_policies/appeals/requests\\_for\\_relief\\_from\\_academic\\_decisions.pdf](https://uwo.ca/univsec/pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf)

Procedures on Request for Relief from Academic Decision (Undergraduate):

[https://uwo.ca/univsec/pdf/academic\\_policies/appeals/undergrad\\_requests\\_for\\_relief\\_procedure.pdf](https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf)

## 6.4 Scholastic Offences

Policy on Scholastic Offences:

[https://uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_offences.pdf](https://uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_offences.pdf)

Procedures on Scholastic Offences (Undergraduate):

[https://uwo.ca/univsec/pdf/academic\\_policies/appeals/undergrad\\_scholastic\\_offence\\_procedure.pdf](https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf)

**Use of Electronic Devices During Assessments.** In courses offered by the Faculty of Science, the **possession** of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, hidden cameras and wireless earbuds. Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at a student's desk, on their person, or within reach during an assessment will be treated as a scholastic offence, **even if the device is not in use**. Effective September 2026, the typical penalty for this offence is a failing grade in the course AND a 12-month prohibition on retaking the course. Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is their responsibility to review and comply with these expectations.

**Use of Generative AI Tools.** Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is **not permitted** in the completion of any course assessments, including but not limited to assignments, lab reports, presentations, tests, and final examinations. Using such tools for content generation, code writing, problem solving, translation, or summarization—when not explicitly allowed—will be treated as a **scholastic offence**. If the use of generative AI is permitted for a particular assessment, the conditions of use will be specified by the instructor in advance. If no such permission is granted, students must assume that use is prohibited. It is the student's responsibility to seek clarification before using any AI tools in academic work.

**Use of Software for Assessments.** All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>). Computer-marked multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

## 6.5 Support Services

**Academic Advising.** Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, requests for relief, exam conflicts, and many other academic-related matters: <https://www.uwo.ca/sci/advising/>.

**Mental Health Support.** Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

**Gender-Based and Sexual Violence.** Western is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who has gone through these traumatic events. If a student has experienced GBSV (either recently or in the past), they can find information about support services for survivors, including emergency contacts, at:

[https://www.uwo.ca/health/student\\_support/survivor\\_support/get-help.html](https://www.uwo.ca/health/student_support/survivor_support/get-help.html).

To connect with a case manager or set up an appointment, please contact [support@uwo.ca](mailto:support@uwo.ca).

**Accessibility for Coursework.** A student may contact the course instructor if they require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to them. If they have any questions regarding accommodations, they may also contact Accessible Education at [http://academicsupport.uwo.ca/accessible\\_education/index.html](http://academicsupport.uwo.ca/accessible_education/index.html)

**Learning Development and Success.** Learning-skills counsellors at Learning Development and Success (<https://learning.uwo.ca>) are ready to help students improve their learning skills. The facility offers strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

**Student Councils.** Student-run support services are offered by the University Students' Council (<https://westernusc.ca>) and the Science Students' Council (<https://www.westernssc.ca>).

**This course is supported by the Science Student Donation Fund.** Students registered in the Faculty of Science or the Schulich School of Medicine and Dentistry contribute a Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. Students may opt out of the Fee by the end of September of each academic year by completing the online form linked from the Faculty of Science's Academic Advising site. For further information on the process of awarding grants from the Fund or how these grants have benefitted undergraduate education in this course, consult the Chair of the Department or email the Science Students' Council at [info@westernssc.ca](mailto:info@westernssc.ca).

## 6.6 Professionalism & Privacy

Western students are expected to follow the [Student Code of Conduct](#). Additionally, the following expectations and professional conduct apply to this course:

- ☒ Students are expected to be professional and scholarly in all online postings. Use proper grammar and spelling. Cite the ideas of others appropriately.
- ☒ All course materials created by the instructor are copyrighted and cannot be sold/shared.
- ☒ Recordings are not permitted (audio or video) without explicit permission.
- ☒ Permitted recordings are not to be distributed.

- ☒ Students will be expected to take an academic integrity pledge before some assessments.
- ☒ All recorded sessions will remain within the course site or unlisted if streamed.

## 7. Equal Opportunity and Evaluation Policy

All individuals involved in the offering of Biology 3326F/G were, at one time, undergraduate students themselves. Accordingly, your professor and your teaching assistants thoroughly understand the importance of course grades and the hard work that you will invest into this course. They are there to help you achieve your goals. We want you to do well in the course, but we also have to be fair. The university is committed to academic integrity and has high ethical and moral standards. All students will be treated equally and evaluated using the criteria presented in this course outline and their respective weights. The evaluation criteria are based strictly on actual achievement, not on effort or how hard the student tried. Claims of an excellent academic history, of attendance in the course components, or of personal issues (family, relationship, financial, etc.) cannot be used to justify a higher grade in the course because they are not criteria for evaluation. There is no extra work available for extra credit or to “make up” another grade. We do not offer any extra assignments, essays, or other work of any kind to any student. The requirement for a higher grade in order to, for example, maintain a scholarship, enter a program, or obtain a higher GPA for various reasons, is not a justifiable reason for increasing your grade. If we increased or “bumped” your grade (*i.e.* gave you a grade that you did not legitimately earn), it would be unfair to the other students and also a great disservice to the scholarships and programs who are evaluating all students on the basis of their grades.

## 8. Land Acknowledgment

We acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee and the Lūnaapéewak, on lands connected with the Dish with One Spoon Covenant Wampum between the Anishinaabeg and Haudenosaunee and the London Township and Sombra Treaties of 1796. With this, we respect the longstanding relationships that Indigenous Nations have to this land, as they are the original caretakers. We acknowledge historical and ongoing injustices that Indigenous Peoples (First Nations, Métis and Inuit) endure in Canada, and we accept responsibility as a public institution to contribute toward revealing and correcting miseducation as well as renewing respectful relationships with Indigenous communities through our teaching, research and community service.

*Good Luck with your Studies!*