MEDICAL BIOPHYSICS
MEDBIO 4710B

Biophotonics in Medicine and Life Science

Course outline for Winter 2022

1. Technical Requirements:
   - Stable internet connection
   - Laptop or computer
   - Working microphone
   - Working webcam

   Please Note: Since the entire course or part of it may be delivered online due to COVID-19, students must have a reliable internet connection and computer that are compatible with online learning and testing requirements.

Suggestions for computer requirements:
   - Operating system: MAC: OS X Yosemite 10.10.5 or higher, PC: Windows 7, 8, or higher
   - Processor/Ram: MAC: Intel / AMD Processor, 2 GB RAM, PC: Dual-core 2.4 Ghz CPU, 2 GB RAM or better
   - Web Browsers: Mozilla Firefox v20.0 or Higher Google Chrome v25.0 or higher
   - Plug-ins: Javascript Enabled & Third Party Cookies Enabled
   - Camera resolution: 800 x 600 resolution or better
   - Internet connection: Cable Modem, DSL or better (300 kbps download, 250 kbps upload)

2. Course Overview and Important Dates:

<table>
<thead>
<tr>
<th>Delivery Mode</th>
<th>Dates</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asynchronous</td>
<td>January 12 – January 31</td>
<td>online</td>
</tr>
<tr>
<td>Synchronous live</td>
<td>January 12 – January 31</td>
<td>online</td>
</tr>
<tr>
<td>In person</td>
<td>February 01 – April 08</td>
<td>In person</td>
</tr>
</tbody>
</table>

*Details about design and delivery of the course are listed below in Section 4.

<table>
<thead>
<tr>
<th>Classes Start</th>
<th>Reading Week</th>
<th>Classes End</th>
<th>Study day(s)</th>
<th>Exam Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 12</td>
<td>Feb 19-27</td>
<td>April 08</td>
<td>No exam</td>
<td>No exam</td>
</tr>
</tbody>
</table>

*March 14, 2021: Last day to drop a second-term half course without academic penalty
3. Contact Information

<table>
<thead>
<tr>
<th>Course Coordinator and Instructor</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Mamadou Diop</td>
<td><a href="mailto:mdiop@uwo.ca">mdiop@uwo.ca</a></td>
</tr>
</tbody>
</table>

Office hours: via Zoom. Every Friday during the Winter Term: 12:00—13:00. Please send email with brief details for an appointment, which is normally scheduled first-come first-served for 10 minutes. Alternate times are accommodated as best possible.

<table>
<thead>
<tr>
<th>Teaching Assistant(s)</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Dubovan</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course and Program Assistant</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathleen Petts/Elizabeth Oliveira</td>
<td><a href="mailto:askMBP@schulich.uwo.ca">askMBP@schulich.uwo.ca</a></td>
</tr>
</tbody>
</table>

Students may approach and discuss any course-related problems with the instructor. To request an appointment with instructor (preferably via email) use the contact information provided above.

4. Course Description and Design

Course summary
Theory, instrumentation, and application of biophotonics in pre-clinical and medical research, and clinical applications for the study of human cancers, musculoskeletal conditions, cardiovascular diseases, and neuromonitoring. Specific themes include instrumentation for light generation, transmission, and detection; theory and applications of optical spectroscopy and imaging of tissue blood content, blood oxygenation, blood flow, and metabolism; functional brain activation.

Prerequisites
Prerequisite(s): One of MEDBIO 34645A or PHYSICS 3380; and Registration in Year 4 of an Honours degree that contains a module offered by the Department of Medical Biophysics or, with special permission, registration in Year 4 of a BESc degree or an Honours BHSc, BMSc or BSc degree.

Prerequisite checking – the student’s responsibility
Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

**Course Weight:** 0.5  
**Breadth:** Category C  
**Subject code:** MEDBIO

**Accessibility Statement**
Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Student Accessibility Services at 519-661-2147 for any specific question regarding an accommodation.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Location</th>
<th>Time</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>In person or virtual synchronous</td>
<td>AHB-1B08</td>
<td>Wednesday: 9:30 AM - 10:30 AM</td>
<td>weekly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Friday: 9:30 AM - 11:30 AM</td>
<td></td>
</tr>
<tr>
<td>Virtual asynchronous</td>
<td>N/A</td>
<td>3 hours</td>
<td>weekly</td>
</tr>
</tbody>
</table>

- Asynchronous pre-work must be completed prior to synchronous sessions
- Attendance at in person / synchronous sessions is mandatory
- Students have access to all course materials, assignments, exams, and tutorials through OWL: [http://owl.uwo.ca](http://owl.uwo.ca). Any changes will be indicated on the OWL site and discussed with the class.
- If students need assistance, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.
- Google Chrome or Mozilla Firefox are the preferred browsers to optimally use OWL.

5. **Course Syllabus**

**Teaching Rationale**

Online asynchronous and synchronous or in person lessons present and review fundamental background for biophotonics, including mathematics, physics, engineering and or physiology, as needed to understand an important concept or theme in biophotonics and its applications in medicine and life science.

The first part of each series of weekly lessons is weighted heavily on introducing foundational concepts, which may be a review for some and new for other students. This is necessary for establishing a common baseline and refresher that allows for discussions later in the course.
The instructor will moderate in-person or online synchronous discussion and debate, provide expert opinion/testimony and provide a debrief at the end of each discussion of a journal article.

Students are encouraged to ask questions to learn about any course material covered in lessons throughout the term.

Students are expected to become familiar with all required course readings and course materials posted on OWL, review all lessons, attend, and engage constructively in all scheduled classes and meetings, complete all assignments, and presentations. Students are encouraged to become familiar with recommended reading lists.

The culmination of the learning method will be the student group-led presentation of an assigned journal article related to a biophotonic theory, instrumentation, and/or application (covered in previous weeks’ lessons). Students who are not presenting will be required to submit a written assignment that provides a brief high level critical appraisal (e.g. identify and justify 2-3 significant points), a lay summary of the article, and be prepared to discuss the paper by submitting 2-3 questions before the presentation.

Foundational knowledge of biophysics will be assessed by weekly in-class quizzes (i.e. iClicker or equivalent), the written assignments, oral questions and answers, and discussions.

Course Learning Outcomes

Upon successful completion of this course, students will be able to:

- Explain the principles of biophotonics methods and instruments used to probe and image living tissues.
- Critically assess biophotonics approaches used to study the state (health or disease) of living tissues.
- Debate and justify recommendations on selection of biophotonics systems and methods used for specific applications (e.g. assessing disease)
- Propose plan for studying a specific disease using a combination of biophotonics systems and methods, including alternative approaches and mitigation strategies to address limitations.
- Critically appraise peer-reviewed scientific literature on the application of biophotonics in medicine and life science.

6. Course Content and Schedule
<table>
<thead>
<tr>
<th>Week</th>
<th>class 1</th>
<th>class 2</th>
<th>Assessment</th>
<th>Grade weighting %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to the course and meet the instructor and TA</td>
<td>Confocal microscopy</td>
<td>class 2 quizzes</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Confocal microscopy</td>
<td>New microscopy methods: multi-photon microscopy, light sheet microscopy, and second harmonic generation microscopy</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>class 2 quizzes</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>New microscopy methods: multi-photon microscopy, light sheet microscopy, and second harmonic generation microscopy</td>
<td>Optical coherence tomography</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>class 2 quizzes</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Optical coherence tomography</td>
<td>Mock journal article presentation by the instructor; students will submit lay summary, comments on the article and questions but this will not be graded</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Optical biopsy</td>
<td>Optical biopsy</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assignment on optical microscopy</td>
<td>10</td>
</tr>
<tr>
<td>Week</td>
<td>Topic</td>
<td>Reading Material</td>
<td>Assessment</td>
<td>Notes</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>------------------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
<td>7</td>
<td>Laser speckle contrast imaging (LCI)</td>
<td>Diffuse correlation spectroscopy (DCS)</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>class 2 quizzes</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Near infrared spectroscopy (NIRS)</td>
<td>Journal article on microscopy/optical biopsy</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presentation and group discussion</td>
<td>30 for group presenting</td>
<td>10 for other students</td>
</tr>
<tr>
<td>9</td>
<td>Dynamic contrast enhanced NIRS</td>
<td>Monitoring cerebral metabolism with cytochrome c oxidase</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>class 2 quizzes</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Monitoring cerebral metabolic rate of oxygen (CMRO2) with NIRS</td>
<td>Journal article on LCI or DCS: application to preclinical research or cancer</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presentation and group discussion</td>
<td>30 for group presenting</td>
<td>10 for other students</td>
</tr>
<tr>
<td>11</td>
<td>Monitoring CMRO2/CCO</td>
<td>Journal article on NIRS: application to functional brain activation (fNIRS) or musculoskeletal disease</td>
<td>class 1 quizzes</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presentation and group discussion</td>
<td>30 for group presenting</td>
<td>10 for other students</td>
</tr>
<tr>
<td>12</td>
<td>Class discussion on optical microscopy and biopsy</td>
<td>Journal article on Dynamic contrast enhanced NIRS: application to cerebral blood flow</td>
<td>Presentation and group discussion</td>
<td>30 for group presenting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 for the other students</td>
<td></td>
</tr>
</tbody>
</table>
The themes and dates reflect the expected topics and sequence but are subject to change. Students will keep the 10 best marks on quizzes. The paper that will be discussed during the instructor-led mock journal presentation will be released to the students at least 2 weeks in advance. The assignment will be released to the students during the first week of the course so that they can work on it until the due date (end of week 5). Further, the 30% that is allocated to the group-led presentation will be divided as follows: 3% for presenting a plan of the presentation to the instructor/TA (2 weeks before the in-class presentation); 7% for the initial presentation (10-15 min) of the paper to the instructor/TA (1 week before the in-class presentation); 20% for the in-class presentation and discussion of the paper.

7. Evaluation

**MEDBIO 4710B**

<table>
<thead>
<tr>
<th>Component</th>
<th>Format</th>
<th>Due Dates</th>
<th>Grade Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 5 Assignment on Optical microscopy</td>
<td>Week 5</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Student Group presentation</td>
<td>Presenting group: Assigned by instructor</td>
<td>Weeks 8, 10, 11, 12, 13</td>
<td>1×30 for the presenting group</td>
</tr>
<tr>
<td></td>
<td>Engagement and participation (include attendance) in weekly lessons, classes, and student group presentations</td>
<td></td>
<td>4×10 for the other students</td>
</tr>
<tr>
<td>Quizzes</td>
<td>Quizzes will be conducted during the lectures</td>
<td>Weeks 1-11</td>
<td>20</td>
</tr>
</tbody>
</table>
Quizzes and Assignments

- Each week is associated with in class quizzes via iClicker: students will keep 10 best marks on quizzes.
- The instructors will release the Assignment during the first week so that the students can work on it until the due date (week 5).
- All assignments are due before 12:00 Noon EST (London, Ontario) on the due date.
- All student submissions are to be made through OWL unless directed otherwise.
- All files submitted by students shall be pdf format.
- Assignments will be submitted to Turnitin by the student.
- Students will have unlimited submissions to Turnitin prior to the due date.
- Assignments submitted after the class due date and time will be subject to an automatic late penalty of 10% that increases by an additional 10% every 24 h period afterwards until 48 hours after the deadline.
- Assignments submitted after 48 hours following the assignment due date, or not submitted at all, will receive a zero grade and be returned ungraded.

Note regarding Academic Consideration/Self-Reported Absences and submissions of Late assessments

- The default due date for late assignments is 36 hours after the end of the approved reported absence period or in the case that your request is still being processed by Academic Counselling, 36 hours following your expected return to class (whichever event is earlier).
- If an accommodation is not granted by Academic Counselling or if the submission is late or deemed late according to documentation from Academic Counselling, then the same grade penalties will apply as the original assignment. Assignments will not be graded until the absence accommodation has been approved/disallowed by the appropriate process.
- Whether you have used Self-reported Absences or Student Academic Counselling, you will be advised that within 24 hours of the end of the reported absence period to contact (by email please) Dr. Diop to confirm you will be submitting late and when should expect it (see above). Please include ‘Student Academic Consideration MEDBIO 4710B Assignment X ‘ in the subject line. Submissions will be made through the course OWL site unless directed otherwise.
- Please be advised that you must follow all university procedures regarding the Self-reported Absences (SRA) or your SRA will be voided.

Evaluations and Feedback on Assignments

- Normally, individual feedback with grades are released after all current and previous assessments from the class have been graded or submitted for grading.
• After individual feedback on an assessment is returned, students should wait at least 24 hours to digest feedback before contacting the Teaching Assistants or instructor; to ensure a timely response, reach out within 7 days.
• Click here for a detailed and comprehensive set of policies and regulations concerning examinations and grading at Western.
• In MEDBIO 4710B, students will need to communicate scientific concepts, principles, and other content in an effective form that is appropriate for the discipline.
• Listed below are examples of summative feedback on the grading of student assignments in the context of this course.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>90-100</td>
<td>The written answer is excellent in all elements. Potential improvements are minimal. Congratulations.</td>
</tr>
<tr>
<td>A</td>
<td>80-89</td>
<td>The written answer excels in some components, but specific improvements to the writing quality, structure, content, and or synthesis are required for full marks.</td>
</tr>
<tr>
<td>B</td>
<td>70-79</td>
<td>The written answer is eminently satisfactory in many elements, but specific improvements to the writing quality, structure, content, and synthesis are required for full marks.</td>
</tr>
<tr>
<td>C</td>
<td>60-69</td>
<td>The written answer fulfills the technical requirements, demonstrates competency with the subject matter, but requires revisions, edits, additional content, and synthesis of material. Improvements to the writing quality, structure, content and logic are required for full marks.</td>
</tr>
<tr>
<td>D</td>
<td>50-59</td>
<td>The written answer meets the minimum of technical requirements. Extensive revisions, edits, additional content, and synthesis of material are required. Improvements to the writing quality, structure, content and logic are required for full marks.</td>
</tr>
<tr>
<td>F</td>
<td>below 50</td>
<td>The written answer contains serious flaws in writing, logic, facts, structure, content, and or arguments.</td>
</tr>
</tbody>
</table>

8. Online Participation and Engagement

• Student attendance at synchronous live classes is mandatory. Attendance is essential to participation which is evaluated.
• Students are expected to participate and engage with content as much as possible.
• Students will be graded on the quality of their comments and knowledge of assigned reading material. Participation includes students’ willingness and ability to answer questions, respond to comments, and engage in case discussion activities, etc. Criteria used to assess participation include but are not limited to:
  o Did the student answer questions on the case?
Did the student demonstrate an understanding of biophysics and other related basic medical sciences concepts, theories, methods, and applications in the case?

Did the student tie the week’s case with concepts from previous cases and lectures?

Did the student constructively and critically add to class discussion (including commenting on comments made by others)?

Did the student knowledgably and critically discuss case?

Did the student use the cases to inform a discussion of current events and vice versa?

Was the student respectful of others and open to their ideas?

Did the student display a willingness to engage in activities?

Note regarding Academic Consideration/Self-Reported Absences for Missed Classes

- Attendance at scheduled synchronous class is mandatory and essential to participation. The default grade for missing class is an assigned zero mark for participation unless there is an approved Academic Consideration.
- Normally academic accommodation for approved absences will be decided by the instructor on a case-by-case basis.

Students are required to turn on and use the video camera and microphone audio in the Zoom call when directed by the instructor.

Instructors will use the class list to identify all registered students in the classroom and breakout rooms (i.e. the official Zoom Call). Zoom Call server records each participant’s login, logout and call activity data, which will be used for verification of attendance. Instructors(s) or other assigned individuals will evaluate the ability of each student to provide significant, meaningful, constructive and respectful contributions to classroom discussions during the lecture period and Case study. Instructors may also instruct students to post their answers to study questions on the Forum and or engage with material posted on the OWL Forum.

Students should also participate asynchronously by interacting in the forums with their peers and instructor.

Pay attention to the Lessons for each Week. Participation on the online Forums may be a required as part of the Assignments and or Participation Engagement activities for the week.

9. Communication:
• Students should check the Course Announcements, and the Forum for updates.
• You are advised to sign up for automatic notifications but this system is not a replacement for regularly checking the OWL website.
• Students will be notified of the availability of grades through OWL.
• This course will use Zoom for holding Lessons on Tuesday and Thursdays. It is accessed through OWL. Log on access for Lessons is restricted to users with uwo addresses.
• This course will use the Forum in OWL.
• Students should post all course-related content on the appropriate Forum so that answers to questions etc. are accessible to the whole class.
• Students can and are encouraged to post answers, comments, solutions etc. to other students’ questions.
• Anonymous postings will be permitted in some forums.
• The Forums will be monitored and used by the teaching assistants, Dr. Diop. Some Forum topics and threads may be moderated and/or graded.
• Students must use their official UWO account when communicating via email with Dr. Diop and the teaching assistant(s).

Office Hours:
• E-mail Dr. Diop to request an appointment.
  o Please include ‘student appointment request MEDBIO 4710B’ in the subject line.
  o Please included your student number, and indicate your availability; normally 9 am-5 pm EST.
  o Dr. Diop will send a Zoom invite for confirmed appointments.

10. Course Materials
All resources will be accessed through the OWL course website at https://owl.uwo.ca/portal
Students with OWL issues should contact the Western Technology Support at 519 661-3800

READ ABOUT THE FIRST TIME USING MEDBIO 4710B OWL Site
The first-time students use the MEDBIO 4710B OWL site, they will be required to complete the Academic Integrity task/assignment. Students will not have full access to course materials until that task is completed. Students will only have full access to the Schedule, Course Readings, Lessons, Assignments and Forum, after submitting the Academic Integrity documents.
Course Readings

Course Readings will be accessible by logging into OWL, Course Readings or Western Libraries Electronic Reserves using a student Western account. A hard copy of the Cardiovascular Physiology textbook may be available for temporary loan through Library Reserves. Students can purchase their own licenses for the e-textbooks from the publisher or access them through the Course Readings and OWL.

Due to licensing restraints, there is a limit to the maximum number of users that can access simultaneously the AccessMedicine online textbooks versions of the Cardiovascular Physiology, and Pulmonary Physiology textbooks. Please be considerate of your classmates and remember to logoff after reading, downloading or printing the content for personal study.

Instructors will direct students to required reading material through OWL.

During the semester, instructors will also post additional required readings and may direct students to optional readings for their lessons or course materials posted on OWL.

Contact with Instructors regarding course materials:
Students may approach and discuss any course-related problems with the instructor. Please make an appointment (preferably via email) utilizing the contact information provided above, unless directed by the instructor regarding office hours.

Collaborative work on Assignments:
Students are encouraged to work together, but each student shall take total responsibility for their own submitted work.

The default position is that each Weekly Assignment submission will be the work of an individual.
Each instructor will tell you whether the Weekly Assignments prepared as groups are acceptable.
Students will have to work together on a team assignment and thus, each student shall bear total responsibility for this submitted work, which means the creations and products of other members of the team member(s).

Peer-to-peer assessments will be used to inform instructors’ evaluations of each group member’s work on the Group Case Study.

Note on Plagiarism: “Students must write their essays and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence” (see Scholastic Offence Policy in the Western Academic Calendar).

11. 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 follow online etiquette expectations provided on OWL and listed below in section 12.
  - All course materials not already covered by copyright and thus, created by the instructor(s) are copyright © ‘name of instructor’ and the instructors of MEDBIO 4710B, and shall not be re-used, distributed without their specific permission.
  - Respect the privacy and wishes of your instructors and classmates. Audio, and video recordings of tutorials by students are not permitted in this course.
  - Synchronous lessons are for the purpose of the education of students registered in University of Western Ontario MEDBIO 4710B. Live sessions are not to be viewed by anyone but the students registered in this course. Any re-broadcasting of content by students is prohibited.
  - Students may be asked to complete a pledge of Academic Integrity before some assessments, and the student shall abide by the pledge else suffer the penalty of Academic Misconduct.

12. Western Academic Policies and Statements
Some components of this course will involve online interactions. To ensure the best experience for both you and your classmates, please honour the following rules of etiquette:

- please “arrive” to class on time
- please use your computer and/or laptop if possible (as opposed to a cell phone or tablet)
- ensure that you are in a private location to protect the confidentiality of discussions in the event that a class discussion deals with sensitive or personal material
- to minimize background noise, kindly mute your microphone for the entire class until you are invited to speak, unless directed otherwise
- In order to give us optimum bandwidth and web quality, depending on the number of participants on a call, you may be asked to turn off your video camera unless you are invited to speak.
- When in breakout rooms, please leave your video camera on.
- Please be prepared to turn your video camera off at the instructor’s request if the internet connection becomes unstable
- unless invited by your instructor, do not share your screen in the meeting

Your instructors will act as moderators for the class and will deal with any questions from participants. To participate please consider the following:

- if you wish to speak, use the “raise hand” function and wait for the instructor to acknowledge you before beginning your comment or question.
- You can also raise your hand if video is turned on!
- remember to unmute your microphone and turn on your video camera before speaking
- self-identify when speaking.
- remember to mute your mic and turn off your video camera after speaking (unless directed otherwise)
- Some functions of Zoom are under the control of moderators in order to assure security and privacy. For example, screen sharing may be enabled on case-by-case situation.

General considerations of “netiquette”:

- Keep in mind the different cultural and linguistic backgrounds of the students in the course.
- Be courteous toward the instructor, your colleagues, and authors whose work you are discussing.
- Be respectful of the diversity of viewpoints that you will encounter in the class and in your readings. The exchange of diverse ideas and opinions is part of the scholarly environment. “Flaming” is never appropriate.
- Be professional and scholarly in all online postings. Cite the ideas of others appropriately.
Note that disruptive behaviour of any type during online classes, including inappropriate use of the chat function, is unacceptable. Students found guilty of Zoom-bombing a class or of other serious online offenses may be subject to disciplinary measures under the Code of Student Conduct.

**Accommodation Policies**
Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The accommodation policy can be found here: Academic Accommodation for Students with Disabilities.

**Academic Consideration for Student Absence**
Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the term, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the student’s final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours,
- assessments worth more than 30% of the student’s final grade,
- if a student has already used the self-reporting portal twice during the academic year

If the conditions for a Self-Reported Absence are *not* met, students will need to provide a Student Medical Certificate if the absence is medical, or provide appropriate documentation if there are compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student’s Home Faculty.**

For Western University policy on Consideration for Student Absence, see Policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs
and for the Student Medical Certificate (SMC), see:

This document is provided for information use by undergraduate students and graduate students registered or planning to register at Western University. All material that is not subject to existing copyright is © 2022 of the MEDBIO 4710 instructor. Current as of January 4, 2022.
For a downloadable student medical certificate see: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

Students seeking academic accommodation on illness grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counselling office of their home Faculty and provide documentation. The instructor or department cannot grant academic accommodation.

**Accommodation for Religious Holidays**

The policy on Accommodation for Religious Holidays can be viewed [here](#). Students should consult the University’s list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the [Western Multicultural Calendar](#).

**Special Examinations**

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examinations dates. These dates as well as other important information about examinations and academic standing can be found [here](#).

A Special Examination must be written at the University or an Affiliated University College no later than 30 days after the end of the examination period involved. To accommodate unusual circumstances, a date later than this may be arranged at the time permission is first granted by the Dean of the Faculty. The Dean will consult with the instructor and Department Chair and, if a later date is arranged, will communicate this to Registrarial Services. If a student fails to write a scheduled Special Examination, permission to write another Special Examination will be granted only with the permission of the Dean in exceptional circumstances and with appropriate supporting documents. In such a case, the date of this Special Examination normally will be the scheduled date for the final exam the next time the course is offered.

**Statement on Academic Offenses**

“Scholastic offences are taken seriously, and undergraduate students are directed [here](#) to read the appropriate policy, specifically, the definition of what constitutes a
Scholastic Offence. Graduate students are directed here http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

Accessibility Statement
Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Accessible Education (AE) at 661-2111 x 82147 for any specific question regarding an accommodation or review The policy on Accommodation for Students with Disabilities.

Correspondence Statement

The centrally administered e-mail account provided to students will be considered the individual’s official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner. You can read about the privacy and security of the uwo email accounts here.

Turnitin and other similarity review software

All assignments will be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. Students will be able to view their results before the final submission. 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 Western University and Turnitin.com.

All of the remote learning sessions for this course will be recorded.
The data captured during these recordings may include your image, voice recordings, chat logs and personal identifiers (name displayed on the screen). The recordings will be used for educational purposes related to this course, including evaluations. The recordings may be disclosed to other individuals under special circumstances. Please contact the instructor if you have any concerns related to session recordings.

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation, or the participant has the prior written permission of the instructor.

13. BMSUE Academic Policies and Statements

Cell Phone and Electronic Device Policy (for in-person tests and exams)
The Schulich School of Medicine & Dentistry is committed to ensuring that testing and evaluation are undertaken fairly across all our departments and programs. For all tests and exams, it is the policy of the School that any electronic devices, i.e., cell phones, tablets, cameras, or iPod are strictly prohibited. These devices MUST be left either at home or with the student’s bag/jacket at the front of the room and MUST NOT be at the test/exam desk or in the individual’s pocket. Any student found with one of these prohibited devices will receive a grade of zero on the test or exam. Non-programmable calculators are only allowed when indicated by the instructor. The program is not responsible for stolen/lost or broken devices.

**Copyright and Audio/Video Recording Statement**

Note that MEDBIO 3501A does not allow for students to make audio/video recordings of group sessions such as Tutorials. This policy is in place to so that synchronous live sessions take place in a safe environment that encourages participation from all students.

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. Other courses may allow recording, but you must always ask permission (consent) to record another individual and you should never share or distribute recordings.

**Rounding of Marks Statement**

Across the Basic Medical Sciences Undergraduate Education programs, we strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. **Final grades** on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75. Marks WILL NOT be bumped to the next grade or GPA, e.g. a 79 will NOT be bumped up to an 80, an 84 WILL NOT be bumped up to an 85, etc. The mark attained is the mark you achieved, and the mark assigned; requests for mark “bumping” will be denied.

**14. Support Services**

The following links provide information about support services at Western University.
- Office of the Registrar
- Academic Counselling (Science and Basic Medical Sciences)
- Appeal Procedures
- Student Centre [http://student.uwo.ca](http://student.uwo.ca)
- Student Development Services

This document is provided for information use by undergraduate students and graduate students registered or planning to register at Western University. All material that is not subject to existing copyright is © 2022 of the MEDBIO 4710 instructor. Current as of January 4, 2022.
Health and Wellness
USC Student Support Services
Students that are in emotional/mental distress should refer to Student Health Care
https://www.uwo.ca/health/shs/index.html for a complete list of options about how
to obtain help.