Biochemistry 9533 – Ideas to Innovations  
Course Outline

1. Course Schedule

Attendance at all course meetings is mandatory. In the event of illness or absence for other unexpected reasons, please notify the instructors and Ms. Green in the Biochemistry office as soon as possible. Note that the course does not meet as a group every week, but only on the dates indicated below. However, successful completion of the course will require students to do substantial amounts of work outside of class time. We expect students to spend an average of about 15 hours per week on the course throughout the year.

Meetings in the FALL TERM are on Tuesdays, 4:00-5:00 pm, in MSB 346.

Meetings in the WINTER TERM are on Mondays, 1:30 to 3:00 pm, and Wednesdays, 9:30 to 11:00 am, in MSB 346.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>Tuesday, September 15</td>
<td>Introductions; course overview</td>
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<tr>
<td>Tuesday, September 22</td>
<td>Outline of types of proposals; groups will be announced</td>
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<tr>
<td>Tuesday, October 6,</td>
<td>Framework for developing feasible ideas; class discussion</td>
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<td>Tuesday, October 27</td>
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<tr>
<td>Tuesday, November 17</td>
<td>Informal presentations of ideas; class discussion</td>
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<tr>
<td>As needed, throughout October</td>
<td>Team meetings with one or more of the instructors</td>
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<tr>
<td>and November</td>
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<tr>
<td>Tuesday, December 15</td>
<td>Letter of Intent due</td>
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<tr>
<td>Mon &amp; Wed, January 11 &amp; 13</td>
<td>Finance and financial planning, human resources, market</td>
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<tr>
<td>Mon &amp; Wed, January 18 &amp; 20</td>
<td>research, business planning</td>
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<tr>
<td>Mon &amp; Wed, January 25 &amp; 27</td>
<td></td>
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<tr>
<td>Mon &amp; Wed, February 1 &amp; 3</td>
<td></td>
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<tr>
<td>Friday, February 12</td>
<td>Outline of final report due</td>
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<td>Friday, March 18</td>
<td>Draft of final report due</td>
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<tr>
<td>Wednesday, April 20</td>
<td>Final report due</td>
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<tr>
<td>Wednesday, April 27</td>
<td>Oral presentations</td>
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2. Instructor Information

There are no set office hours for this course. Appointments can be made with any of the instructors as needed.
Dr. Derek McLachlin*  
Dept. of Biochemistry, Western  
derek.mclachlin@schulich.uwo.ca  
MSB 349  
519-661-3072

Dr. Trevor Hunter  
Dept. of Economics, Business and Mathematics, King’s University College  
trevor.hunter@uwo.ca  
FB 303, King’s UC  
519-433-3491 x4338

Dr. David Edgell  
Dept. of Biochemistry, Western  
dedgell@uwo.ca  
MBL 108  
519-661-3133

Dr. Chris Brandl  
Dept. of Biochemistry, Western  
cbrandl@uwo.ca  
MBL 210  
519-850-2395

* Course coordinator

3. Course description

By the end of this course, students should be able to develop a novel idea for a biotechnology-related product, protocol, or line of inquiry into a feasible, well-supported, and appealing business or research proposal to implement that idea.

In support of this overall objective, and working in small teams, students will:

1. Examine related ideas or projects that already exist to assess the uniqueness of their proposed idea

2. Propose a practical experimental or development strategy for their idea, taking into account the capabilities and limitations of available technologies

3. Apply basic principles of budgeting, bookkeeping, marketing, and intellectual property protection to their innovation

4. Identify appropriate potential sources of funding for their innovation

5. Synthesize all relevant plans and information to create a convincing written argument for financial support of their proposed innovation

6. Give an impactful and persuasive oral presentation explaining the merits of their innovation

The instructors will assign students into teams in September. Starting in September and working through November, students will cooperate with their teammates to come up with novel ideas for biotechnology-related products, protocols, or lines of inquiry. After a period of research and reflection, during which time consultation with instructors is encouraged, teams will decide which one of their ideas is most amenable to further development and refining. In mid-December each team will prepare a
two-page letter of intent, outlining their idea, the rationale behind it, and the direction of future work that must be done to implement the idea.

In January, Dr. Hunter will lead students through a discussion of concepts relating to market analysis, competitive analysis, and business planning that will inform the development of their idea and aid them in the preparation of a five-page final report in the style of an NSERC grant proposal. Students will submit an outline of their final report in mid-February, a rough draft of their final report in mid-March, and the final report itself in mid-April. Each submission will be prepared by the team as a whole and will be informed by comments from the instructors on the previous submissions. At the end of April, each team will give a 15-minute presentation explaining their idea and their plans for its implementation, after which the team will answer questions from other students and the instructors.

Note that, because the feasibility of the idea will be discussed in the research and reflection phase in the Fall, for the final report and presentation students will be evaluated based on the comprehensiveness of their analysis rather than the quality of their idea.

4. Course Materials


Additional readings will be assigned during the course as needed.

5. Methods of Evaluation

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<thead>
<tr>
<th>Evaluation Item</th>
<th>Team or Individual</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Letter of Intent</td>
<td>Team</td>
<td>10%</td>
</tr>
<tr>
<td>Outline of final report</td>
<td>Team</td>
<td>10%</td>
</tr>
<tr>
<td>Draft of final report</td>
<td>Team</td>
<td>10%</td>
</tr>
<tr>
<td>Final presentation (includes written report and oral presentation)</td>
<td>Team</td>
<td>50%</td>
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<tr>
<td>In-class contributions and professionalism</td>
<td>Individual</td>
<td>20%</td>
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Note that for “Team” marks, all members of the team will be given the same mark. Specific guidelines for each evaluation item as well as rubrics will be supplied.

Written work submitted late will be penalized at a rate of 10% per day. All team members are expected to be present at the final oral presentation on April 27. If a student cannot attend the final presentation due to unforeseen circumstances, the remaining team members are expected to proceed with the presentation. Absence from any course meeting without a valid reason will affect the individual’s professionalism mark.
6. Statement on Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/appealsgrad.pdf

See also http://www.uwo.ca/univsec/appeals_discipline/index.html.

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).

7. Statement on Mental Health

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western’s Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page http://www.music.uwo.ca/, and our own McIntosh Gallery http://www.mcintoshgallery.ca/. Information regarding health- and wellness-related services available to students may be found at http://www.health.uwo.ca/

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at http://www.health.uwo.ca/mental_health/resources.html

To help you learn more about mental health, Western has developed an interactive mental health learning module, found here: http://www.health.uwo.ca/mental_health/module.html. This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating disorders. After successful completion of the module, participants receive a certificate confirming their participation.

8. Helpful Resources at Western for Graduate Students

Writing Support Centre – http://www.sdc.uwo.ca/writing/

SDC’s Learning Skills Services, Rm 4100 WSS – www.sdc.uwo.ca/learning

LS counsellors are ready to help you improve your learning skills. We offer presentations on 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.

The Student Success Centre – http://success.uwo.ca/