This course is only available to MBB honours students who have chosen to take Option B, whereby the Directed Research spans two consecutive semesters, and have completed MBB 491-5.

Two-thirds of a full-time commitment to laboratory research in an area of molecular biology or biochemistry for preparation of a thesis for the honours degree in MBB.

**Prerequisites:** MBB 491, MBB 308, MBB 309W and MBB 331, enrollment in the MBB honours program and permission of the MBB department. Minimum 3.0 cGPA and udGPA.

- Establish that your supervisor for MBB 491 is willing to supervise you for MBB 492.
- Attach a copy of your advising transcript to this form.
- You and your supervisor will recruit two other faculty members to serve on a committee that will determine your grade in the course. At least one member of the committee must be an MBB faculty member.
- In consultation with your supervisor, revise your MBB 491 Letter of Intent (LOI) as appropriate, including any progress made in MBB 491 that is relevant to the project. Your committee must read and approve the LOI and sign this approval form before you submit it to the MBB office by the end of the last day of exams of the semester preceding the **Directed Research semester**.
- You will be registered for this course once the LOI, advising transcript and signed form have been received and approved by the chair of the MBB Departmental Undergraduate Curriculum Committee (DUCC).

Note that students cannot hold an NSERC or VPR USRA while taking MBB 492.

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Student Name:  
Student Number:  E-mail address:  
Faculty Supervisor:  (print/sign)  
Committee member:  (print/sign)  
Committee member:  (print/sign)  

By signing this form, you indicate that you approve of the LOI and agree to serve as a committee member. This entails providing feedback on the proposal, evaluating and grading the thesis as well as participating in and grading the oral defense.

DUCC Chair  
Date:  

Revised: May 30, 2019
<table>
<thead>
<tr>
<th>MBB 492 Letter of Intent</th>
<th>Name: ________________________________</th>
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<tr>
<td><strong>Background (Why is this research important?)</strong></td>
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<tr>
<td><strong>Research Question (What question are you trying to answer?)</strong></td>
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<tr>
<td><strong>Scientific approach (How will you attempt to answer this question?)</strong></td>
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Resize sections as needed within a single page. Use 12 pt font size.

Revised: May 30, 2019
MBB 492 Directed Research course guidelines

In the semester preceding your Directed Research semester:
Typically MBB 492 constitutes a continuation of the research project started in MBB 491 and is done under the supervision of the same faculty member as for MBB 491. You and your supervisor will need to recruit two other faculty members to serve on a committee that will determine your grade in the course. At least one member of the committee should be an MBB faculty member. You should prepare a one page LOI describing the goal(s) and outlining possible experiments for the MBB 492 portion of your research project. This LOI may be very similar to the LOI submitted for MBB 491. Email your LOI to your committee members, who must read and approve this document and sign your approval form. Hand in the signed approval form and your transcripts and LOI to the MBB office by the last day of exams of the preceding semester for approval by the chair of the MBB DUCC. Keep a copy your reference. Once your LOI is approved you will be registered in this course.

Before you begin your Directed Research semester: Typically, a 10 unit Directed Research course means working two thirds of full-time in the lab on your project (i.e. 23-26 hours per week). You should keep a good record of your experimental work, and you will likely attend lab meetings at which you may be asked to present your work in progress. Your lab performance will constitute 40% of your final grade for MBB 492.

By the end of the second week of classes of the Directed Research semester: A written proposal (maximum of 5 pages of double-spaced text, plus figures and references) must be provided to your committee members and supervisor via email. Please also send an electronic copy to the MBB Undergraduate Program Assistant at mbbugrad@sfu.ca. The proposal may be very similar to your final report for MBB 491 with an emphasis on the work that will be performed in the current semester. The proposal should provide a description of the proposed research, including the research problem in question, the objective/aims of the proposed research, relevant background information, which may include findings/results from your MBB 491 work, the scientific approach to addressing the research problem and the expected outcomes. References should be included. It may also be helpful to provide an approximate timeline of experimental goals through the semester. Samples are available to peruse in the MBB office. Your committee members will provide feedback on your written proposal by the end of week 4 but the proposal will not count toward your final grade. You are encouraged to seek feedback if it is not provided.

Towards the end of the Directed Research semester: You should start writing your final report in the form of an honours thesis - the first part may be an expansion of the initial proposal, followed by sections outlining results and discussion (separate or combined), conclusions and possibly a prospectus (future experiments). The grade for the thesis will constitute 30% of your mark for MBB 492. You should also contact your committee to organize a date for a public oral presentation of your work, to be evaluated as part of your final grade. This should be done well in advance of the desired date to ensure all committee members are available and a room is free. The MBB department will publish a schedule of Directed Research course presentations to encourage people to attend. It is imperative that you keep mbbugrad@sfu.ca apprised of your defense date, time, etc.

At end of the Directed Research semester: Oral presentation: at or near the end of the semester, you will give a 30 minute talk on your research, open to the public. This talk will usually follow the outline of your thesis (introduction, results, discussion etc.). This will be followed by questions from your committee. Your performance in this oral defense will constitute 30% of your mark for MBB 492.

Summary of grade distribution: lab performance, 40%; thesis, 30%; thesis defense, 30%.

Revised: May 30, 2019