Individual Study Semester (Option A) – Application Form

MBB 481-5  Honours Thesis
MBB 482-5  Research Performance
MBB 483-5  Honours Thesis Defense

The ISS provides students with the opportunity to carry out full time laboratory research in molecular biology and biochemistry. The end result will be the writing of an Honours thesis and an oral defense. Students will submit a research proposal at the end of the second week of classes, for which they will receive feedback from the committee members, and they will submit a final Honours thesis near the end of the semester. The grade for MBB 481-5 will be based on the thesis and will reflect the quality of the writing, the demonstration of an understanding of the research project and the ability to clearly document research results. The grade for MBB 482-5 encompasses the research performance component of the ISS. This grade will take into consideration the quality of the research, the motivation of the student and the general intellectual involvement in the project. The grade for MBB 483-5 will reflect the quality of the oral presentation, the demonstration of an understanding of the research project and the ability to clearly describe research results and answer questions.

Prerequisite: MBB 331 and MBB 308 and/or MBB 309, enrolment in the MBB or Biological Physics Honors Program, a minimum of 3.0 cGPA and 3.0 udGPA and permission of the MBB department. Students may not receive credit for both MBB 481-5 and MBB 493-15.

- Attach a copy of your advising transcript to this form before seeing the instructor.
- Find a faculty member willing to supervise you in this course.
- You and your supervisor will also need to recruit two other faculty members to serve on a committee, which 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, prepare a one page Letter of Intent (LOI) describing the goal(s) and outlining possible experiments for your proposed research project. Your committee must read and approve this document and sign this form.
- You will be registered for this course once the LOI and signed form have been received and approved by the MBB chair of the departmental undergraduate curriculum committee (DUCC).

Please refer to back of this sheet for more details.

Student: ___________________________ (print and sign name)
Student Number: __________________ E-mail address: __________________
Faculty Supervisor: ____________________________ (print and sign name)
Committee member: ____________________________ (print and sign name)
Committee member: ____________________________ (print and sign name)
Committee members: By signing this form you indicate that you approve of the Letter of Intent and agree to serve as a committee member. This entails providing feedback on the proposal, evaluating the thesis as well as participating in and grading the oral defense.

DUCC Chair ____________________________ Date: ______________
MBB 481/482/483 ISS guidelines (revised July 31, 2017)

In the semester preceding your ISS semester: You will need to find a supervisor willing to supervise you. The supervisor can be an MBB faculty member, MBB associate or adjunct faculty member, or a member of another department pending approval by the MBB DUCC. The sooner you arrange this, the more options are available to you, as labs do fill up. You and your supervisor will also need to recruit two other faculty members, to serve on a committee, which will determine your grade in the course. At least one member of the committee should be an MBB faculty member. You should get extensive feedback from your prospective supervisor re: options for, and the scope of particular research projects in the lab. In consultation with your supervisor you should prepare a one page Letter of Intent (LOI) describing the goal(s) and outlining possible experiments for your proposed research project. Email your LOI to your committee members, who must read and approve this document before you submit it to the MBB office by the last day of exam of the preceding semester. You should hand in the approval form with signatures and your letter of intent to the MBB office for approval by the Chair of the MBB departmental undergraduate curriculum committee (DUCC). Keep a copy of this sheet for your reference. Once your LOI is approved, you will be registered in these courses.

Before you begin your ISS: Your supervisor will outline expectations regarding lab work. Typically, a 15 credit ISS means working full-time on your project (40 hours per week); 5 or 10 credits proportionately less. 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 and progress. Your grade for MBB 482 will be based on your lab performance. Students are required to take the lab facilities tour and the complete set of SFU safety workshops; these are typically scheduled in the second week of each semester.

By the end of the second week of classes of the ISS semester: A final written proposal (maximum of 5 pages, double-spaced, excluding figures and references) must be provided to your committee members and supervisor via email. Please also send an electronic copy to the Undergraduate Program Assistant at mbbugrad@sfu.ca. 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, the scientific approach to addressing the research problem and the expected outcome. 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. You are encouraged to seek feedback if it is not provided.

Towards the end of the ISS semester: You should start writing your final report in the form of an Honours thesis. The format should be as follows: title page, abstract, methods, introduction, results, discussion (or combined results and discussion with a conclusion section), references. A prospectus (future experiments) may also be included in the discussion/conclusions sections. Figures, accompanied with legends, can be embedded in the text or after the references. The final thesis should be submitted in electronic form to your committee members three days before your oral presentation. 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 ISS presentations and encourage people to attend.

At end of ISS 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 (intro, results, discussion etc.). This will be followed by questions from your committee. Your performance in this oral defense will constitute your mark for MBB 483.

At the end you will receive 3 separate grades:

- MBB 481-5 Honours Thesis - written reports (proposal and thesis)
- MBB 482-5 Research Performance - quality, motivation, intellectual involvement
- MBB 483-5 Honours Thesis Defense - oral presentation

http://www.sfu.ca/mbb/undergraduate-program/degree-programs/honours/how-to-apply.html