PLANT BIOLOGY 530 - Honours Research Project
PLANT BIOLOGY 530 is required of, and open only to, Honours students in PLBI

This two-term course gives Honours students an opportunity to carry out advanced work in areas not covered in regular courses or to pursue specific topics in greater depth. The student is expected to put in at least 9 hours of work per week in this course. Honours students should approach a faculty member with whom they wish to work and discuss a possible project; this should be done well in advance of the commencement of classes.

Plant Biology 530 will be conducted within the jurisdiction of the Program of Plant Biology, however, the Supervisor may be associated with another program within the Department (e.g. CMMB) or in other departments in the Faculties of Science and Medicine. If the Supervisor is outside the Department, then co-supervision by a faculty member in Plant Biology is required; in this case, both signatures will be required before approval for registration will be granted. Both the supervisor and co-supervisor must be kept apprised of the project during the term and must approve the proposal. Both the supervisor and co-supervisor will also be involved in evaluation of the project and determination of the final grade. Projects undertaken outside the Plant Biology program must have a component that aligns with the Plant Biology program.

GUIDELINES PERTAINING TO REGISTRATION IN PLANT BIOLOGY 530

1. Bring a printed copy of all pages of this form with you when meeting with a potential supervisor and Co-Supervisor, if necessary. You MUST also bring an unofficial, current copy of your transcripts when meeting with potential supervisor(s). The second and third pages of this form must be completed and signed by the Supervisor and Co-Supervisor. Forms that do not indicate an agreed-upon value and due date for all course components will not be approved by the department. The last page of this form must be completed and signed by the student and submitted to the Supervisor with the final report for the project.

2. Return form to BI 186 for approval and registration NO LATER than 10 working days before the last date to change registration for the term, as indicated in the University Calendar. If approval is denied, you will be notified by e-mail. After the course is entered into the system, you will be able to register for the course online. You are not registered until the online registration has been completed.

3. Failure to complete the form correctly will delay your registration in this course.

4. If this is a sixth course, you must obtain consent of the Faculty - please obtain the appropriate form (Change of Registration) from the Registrar’s website (www.ucalgary.ca/registrar/forms_students/).

5. Students must have completed the BioSci core with a current GPA of 2.75 or higher.

6. Departmental approval will not be given to a 528 project course being carried out in the same lab/with the same supervisor as previous or simultaneous 528/530 project courses, unless there are extraordinary circumstances.

GUIDELINES PERTAINING TO THE CONDUCT OF PLANT BIOLOGY 530

1. Within three weeks of enrolling in the course the student must submit to the supervisor(s) a project proposal of no more than 5 pages outlining the objectives of the proposed research and details of how the student intends to achieve those objectives. These projects are expected to have a substantial laboratory or field research component. In the case of a co-supervised project, the Program Supervisor, the Out-of-Program Supervisor and the student will meet to approve the proposed project.

2. A final written report, in the form of a paper in a research journal, must be submitted to the supervisor(s) by the last day of classes for that term. In the case of co-supervised projects, this report will be assessed by both the Program and Out-of-Program Supervisor and a grade awarded as a result of consultation between these two individuals. The grade will be submitted to the Department of Biological Sciences by the Program Supervisor.

3. The student must also give an oral presentation on the work (suggested length of presentation is 20-25 minutes) prior to the start of the official exam period. At the end of this presentation the student will be expected to answer questions on the project.

4. The student is expected to carry out a research project over the period of the course with a minimal estimated time commitment of 9 hours per week, and is required to meet with the supervisor(s) on a periodic basis to discuss progress.
PLANT BIOLOGY 530 - Honours Research Project

This is to confirm that I/we am/are willing to supervise ________________________, I.D. ______________________
in PLBI 530 for the following terms/academic year __________________

The title for the course will be
HONOURS RESEARCH PROJECT

and it may count towards a major in PLANT BIOLOGY / BIOLOGICAL SCIENCES.

The following component values have been agreed upon by the student and supervisor(s):

<table>
<thead>
<tr>
<th>Course component</th>
<th>Due date (if applicable)</th>
<th>Suggested value range (%)</th>
<th>Agreed value in % (Total = 100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal</td>
<td>Within first month</td>
<td>10-25</td>
<td></td>
</tr>
<tr>
<td>Progress Report</td>
<td>Halfway through course</td>
<td>10-20</td>
<td></td>
</tr>
<tr>
<td>Research component (in 3 subcomponents, if desired)</td>
<td>N/A</td>
<td>30-55</td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Report</td>
<td>Last day of classes</td>
<td>15-35</td>
<td></td>
</tr>
<tr>
<td>Oral presentation</td>
<td>Last or second-last week of classes</td>
<td>10-20</td>
<td></td>
</tr>
</tbody>
</table>

Letter Grade Conversion
A+ ≥ 92, A ≥ 85, A- ≥ 80, B+ ≥ 77, B ≥ 73, B- ≥ 70, C+ ≥ 67, C ≥ 64, C- ≥ 60, D+ ≥ 55, D ≥ 50, F < 50

Student name (please print) ___________________________ Phone ___________________________

e-mail address ______________________________________

Address __________________________________________

Student signature ___________________________ Date ___________________________

Program Supervisor signature ___________________________ (please print name as well) Date ___________________________

Out-of-Department Supervisor signature ___________________________ (if relevant) (please print name as well) Date ___________________________

(Please provide e-mail & phone number if out of Department)

Signing this page indicates that both supervisors approve of the proposed project and have agreed upon the value and due dates for all course components.

This information is collected under the authority of the Freedom of Information and Protection of Privacy Act and the Universities Act. It is required to document registration in the course and will form part of the student record. If you have any questions about the collection or use of this information, please contact BI 186.

for Departmental use only

Departmental Approval (BI 186) ___________________________ Date ___________________________

Approved ___________________________ Forwarded to TT ___________________________ Registered ___________________________ DTTS ___________________________
RETENTION OF DATA AND AUTHORSHIP AGREEMENT

The following constitutes an agreement between:

Colleague or Student: ____________________________________________

Laboratory Supervisor: __________________________________________

This statement is to attest that, during the period of your research program in my laboratory, all original materials and data will be kept in a form that can be recovered and re-evaluated in the laboratory. All data and notebooks have to remain in the lab as required for publication purposes and pending federal and university regulations; failure to do so will result in a failing grade in the course. When your project is complete, you must also sign and submit the checklist on the next page to your Supervisor; failure to do so will result in a failing grade in the course.

Any person who has substantially contributed academically to a study being reported in a publication or presentation, either in the conception, design or execution of any experimental work, interpretation of data or drafting the article, should be included as an author or given other appropriate acknowledgement. It is understood that the results that you will produce in the laboratory may lead to primary publication(s) that may be co-authored by both of us following recognized journal rules. In any such case, neither of us shall submit any of this work for primary publication without the other, except by mutual consent.

In the case of such a joint authorship, it is your responsibility to provide up-to-date contact information to me after you leave the laboratory so that you can be contacted to provide input into manuscript preparation and give permission to have your name included as a co-author on the manuscript. Failure to update me with your contact information could jeopardize your co-authorship on future publications. Thus, should you not provide me with up-to-date contact information or should you refuse to be added as a co-author, I can submit work for primary publication without you as co-author.

I reserve the right to utilize any of these data for purposes of teaching, reviews, textbooks or grant applications. If I utilize any of your work for these purposes, I will acknowledge it by joint authorship, reference to your abstract, paper or thesis, or (if yet unpublished) by an appropriate statement such as ‘your name, unpublished observations’.

If you independently provide novel contributions to the work that results in a patent, your rights of partial ownership will be governed by the current rules for Intellectual Property as outlined on the webpage of the Office of Vice President Research (http://www.ucalgary.ca/research/office-vice-president-research/compliance)

Signatures:

____________________________________  ______________________
Supervisor                              Date

I agree with this statement:

____________________________________  ______________________
Colleague or Student                    Date

This information is collected under the authority of the Freedom of Information and Protection of Privacy Act and the Universities Act. It is required to document the agreement. The information will form part of the student record. If you have any questions about the collection or use of this information, please contact BI 186.
INDEPENDENT PROJECT COMPLETION CHECKLIST

☐ The student (_________________________________) has cleaned up all of her/his laboratory experiments and instruments to the satisfaction of the supervisor.

☐ The supervisor has been made aware of the presence of any hazardous materials and chemicals that the student has used, and arrangements have been made for proper storage or removal.

☐ Biological materials generated during the course of the work have been disposed of, or properly preserved and stored with adequate documentation.

☐ The student certifies that s/he has made mutually acceptable arrangements with the supervisor for the storage of all data, materials and documents generated during the project.

☐ The student has provided up-to-date contact information and has submitted a final report to the Supervisor or Course Coordinator (or satisfactory arrangements have been made for the submission of this report). Please indicate these arrangements and initial (___): ____________________________________________

☐ The student has returned all key(s) to the laboratory and any other work spaces to the Biological Sciences Office

   Confirmation by Biological Sciences office staff (initial): __________

☐ When the student leaves the laboratory, all personal effects will have been removed and her/his laboratory space will have been left in a satisfactory condition. If the student has arranged to remain in the laboratory subsequent to the completion of this project, all of the criteria stated above must be fulfilled to the supervisor’s satisfaction before the student leaves the laboratory.

Signatures:

____________________________________  __________________________  
Student  Date

____________________________________  __________________________  
Supervisor  Date

____________________________________  __________________________  
Co-Supervisor (if relevant)  Date

The Supervisor is responsible for submitted this completed and signed form to David Bininda in BI 186 when the student’s final grade is submitted. Grades for independent project courses will not be approved without submission of this form.