CMMB 528 – Research Project in Cellular, Molecular and Microbial Biology

CMMB 528 is an optional two-term course that students in Biological Sciences may choose to take as part of their requirements towards fulfilling a major in CMMB or Biological Sciences.

CMMB 528 will be conducted within the jurisdiction of the Program of Cellular, Molecular and Microbial Biology. Students usually only complete one CMMB 528 course. Departmental approval will not be given to a 528/530 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.

To be eligible to register in a 528 course, students must have completed 72 units, and have GPA of 2.75 or higher (over the most recent 30 units).

If the Supervisor is not a member of Biological Sciences, a Co-Supervisor from the Department of Biological Sciences is required. In this case, both will have to approve the webform submission before you can be enrolled into the course.

Both the Supervisor and Co-Supervisor must be kept apprised of the project during the term and must be involved in the evaluation of the project and determination of the final grade.

Projects undertaken outside the CMMB program must have a component that aligns with the CMMB program.

Getting a Supervisor
It is the responsibility of the student to decide on a general topic of interest for this course and to approach a suitable faculty member regarding supervision. This must be done in advance of initiating enrolment into the course.

Have a project idea but unsure who to approach as a possible Supervisor?
Students who have a project in mind but are unsure which faculty members would be potential supervisors should view the research themes carried out by faculty members in Biological Sciences (https://science.ucalgary.ca/biological-sciences/research/research-areas).

GUIDELINES PERTAINING TO THE CONDUCT IN CMMB 528

Time commitment
Estimated time commitment is a minimum of 10-12 hours per week (on the project as a whole, which can include lab work, reading, writing, etc.), plus the time required to meet with the Supervisor(s) periodically to discuss progress.

Evaluation criteria
Evaluation criteria include the preparation of a research proposal, a progress reports, research components, a final report, and an oral presentation that is usually given the last or second-last week of classes. Students must agree with the Supervisor(s) on course content and weighting of components. The final grade will be assigned by the Supervisor(s).

Other specific notes:
1. A student must turn in a project proposal and literature review to the supervisor, and co-supervisor where appropriate, within six weeks. Students producing unsatisfactory proposals will be required to either rewrite the proposal or withdraw from the course. A student cannot continue in the course until a satisfactory proposal is submitted, which must be within two months of starting the project.
2. At the completion of the project, a final report written in the format of a research journal paper must be submitted to the Supervisor by the last day of classes or other date agreed with supervisor. In the case of co-supervised projects, the report will be assessed by both the Supervisor and the Co-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 faculty member no later than 11 days following the last day of classes.
3. All CMMB 528 students must present an oral presentation on the research they have carried out during the time registered in the course. The presentation will normally occur during the Biological Sciences Undergraduate Research Symposium usually held in early April. Data presented in the seminar and report must be the student’s own data, collected over the period of the course.
GUIDELINES PERTAINING TO REGISTRATION IN CMMB 528

GPA requirement
To be eligible to register in CMMB 528, students must have completed 72 units, and have a GPA of 2.75 or higher (over the most recent 30 units).

Meeting with potential Supervisor (and Co-Supervisor if applicable):

1. Provide a current unofficial copy of your transcript.
2. Agreed-upon value and due date for all course components must be determined with your Supervisor(s).
3. Students must be aware that there is an Independent Project Agreement & Checklist form to be completed and signed by the student and Supervisor(s). The last page of the form (Checklist) must be completed and signed by the student and submitted with the final report for the project. The form is available at: https://science.ucalgary.ca/biological-sciences/current-students/undergraduate/procedures-policies-and-forms
4. Be sure to ask about and/or discuss with potential Supervisor(s):
   - Type/topic of research, expectations of the student and of the Supervisor(s), time requirements (e.g., 10-12 hours per week in total on the independent project), course components that will be required and graded, deadlines for submission of course components

Once the prospective Supervisor has indicated their willingness to supervise you on your project:

Complete the webform (https://science.ucalgary.ca/usc-independent-research-course-application) NO LATER than 10 working days before the add/swap deadline in the term (https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html).

- If approval is denied at this point, you will be notified by e-mail.
- If approval is granted, staff in the USC will enrol you into the course and you will be notified by email.

CMMB 528 – Research Project in Cellular, Molecular and Microbial Biology will count towards a major in CMMB or Biological Sciences.

The following component values will be discussed and agreed-upon by the student and supervisor(s) during their initial meeting:

<table>
<thead>
<tr>
<th>Evaluation criteria/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 6 weeks</td>
<td>10-25</td>
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<tr>
<td>Progress Report</td>
<td>Halfway through course</td>
<td>0-20</td>
<td></td>
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<tr>
<td>Research component (in 3 subcomponents, if desired)</td>
<td>N/A</td>
<td>20-45</td>
<td></td>
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<tr>
<td>1</td>
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<td>3</td>
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<tr>
<td>Final Report</td>
<td>Last day of classes or shortly thereafter such that the final grade is submitted no later than 11 days following the last day of classes</td>
<td>25-45</td>
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<tr>
<td>Oral Presentation</td>
<td>Last or second-last week of classes</td>
<td>10-20</td>
<td></td>
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</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