

### **Biology BSc or BSc Hons with Co-op Designation**

The goal of the Biology Co-op program is to provide hands-on job experience for students enrolled in the Biology BSc or BSc Hons programs. The BSc or BSc Hons with Co-op designation includes 120 credit hours of courses and three (3) work terms (each of four months duration); a fourth (4<sup>th</sup>) work term is optional. The course requirements and course credit hours are identical to those of a Biology BSc or BSc Hons degree. The Co-op work terms may be at private companies, research institutions, government laboratories or universities; some work terms may include field work or travel. The work terms will be graded on a Pass/Fail basis (work term reports form part of the grade). Work terms must receive a grade of “Pass” in order to count towards the Co-op designation.

#### **Entrance criteria:**

- At time of the application deadline (the deadline for applications is at the start of each semester, with work terms to start at the beginning of the next semester), students must have completed at least 33 credit hours, but not more than 60 credit hours, towards a BSc degree in Biology. Courses taken must include BIOL 100, BIOL 101 CHEM 104, at least one of CHEM 105/CHEM 140, and at least two 200-level Biology courses.
- In the semester before the requested first work term, students must be registered for at least two additional 200-level BIOL courses, with a total course load of at least 12 credit hours. This means that student would have completed at least four 200-level Biology courses and two Chemistry courses prior to the first work term.
- GPA of at least 70% overall and in courses required for the major.

#### **What if you don't meet the Biology Co-op entrance criteria?**

Applications from students that don't meet the entrance criteria (e.g. too many credit hours, not enough Biology courses) will be evaluated on a case by case basis, i.e. you can still apply for entry.

#### **To continue in the Co-op program, students must:**

- Maintain a GPA of at least 70% overall and in courses required for the major.
- Enrol in at least 12 credit hours in Fall and Winter academic semesters between work terms.

#### **Typical pattern (but not the only pattern) for entry into the Biology Co-op program:**

- Complete three academic semesters (typically Fall, Winter and Fall), which include BIOL 100, BIOL 101, CHEM 104, CHEM 105 and/or CHEM 140, and at least two 200-level Biology courses, with a GPA of at least 70%.

- Apply for entry into the Co-op program in January of academic term #4 (between 33 and 60 credit hours of course work completed at the time of application - as an example, a student who took 5 courses per semester for three semesters, and then applied for entry into Co-op in January, would have completed 45 credit hours at the time of application). The first work term would be in May-August of second year (i.e. after the completion of academic term #4).
- Register for at least two additional 200-level BIOL courses for academic term #4, with a total course load of at least 12 credit hours.

*Two possible sequences of academic terms and work terms (there are many other possible sequences as well):*

<b>Sept-Dec (Yr 1)</b> <i>Academics #1</i>	<b>Jan-Apr (Yr 1)</b> <i>Academics #2</i>	<b>May-Aug (Yr 1)</b>	<b>Sept-Dec (Yr 2)</b> <i>Academics #3</i>	<b>*Jan-Apr (Yr 2)</b> <i>Academics #4</i>	<b>May-Aug (Yr 2)</b> <i>Work- Term #1</i>	<b>Sept-Dec (Yr 3)</b> <i>Academics #5</i>
<b>Jan-Apr (Yr 3)</b> <i>Work- Term #2</i>	<b>May-Aug (Yr 3)</b> <i>Work- Term #3</i>	<b>Sept-Dec (Yr 4)</b> <i>Academics #6</i>	<b>Jan-Apr (Yr 4)</b> <i>Academics #7</i>	<b>May-Aug (Yr 5)</b> <i>Work- Term #4</i>	<b>Sept-Dec (Yr 5)</b> <i>Academics #8</i>	<b>Jan-Apr (Yr 5)</b>

<b>Sept-Dec (Yr 1)</b> <i>Academics #1</i>	<b>Jan-Apr (Yr 1)</b> <i>Academics #2</i>	<b>May-Aug (Yr 1)</b>	<b>Sept-Dec (Yr 2)</b> <i>Academics #3</i>	<b>*Jan-Apr (Yr 2)</b> <i>Academics #4</i>	<b>May-Aug (Yr 2)</b> <i>Work- Term #1</i>	<b>Sept-Dec (Yr 3)</b> <i>Academics #5</i>
<b>Jan-Apr (Yr 3)</b> <i>Work- Term #2</i>	<b>May-Aug (Yr 3)</b> <i>Academics #6</i>	<b>Sept-Dec (Yr 4)</b> <i>Work- Term #3</i>	<b>Jan-Apr (Yr 4)</b> <i>Academics #7</i>	<b>May-Aug (Yr 5)</b> <i>Work- Term #4 (optional)</i>	<b>Sept-Dec (Yr 5)</b> <i>Academics #8</i>	<b>Jan-Apr (Yr 5)</b>

\*Apply for entry in the Co-op program at the beginning of January (see schedule and deadlines on the Co-op website) if you wish to have a Spring/Summer work term. General rule: at latest, apply for entry into Co-op at the *start* of the semester *before* the semester in which you wish to have your first work term.

The academic and work term sequences shown above are not the only possible sequences. However, regardless of the actual semester sequence used, students in the Biology Co-op Program must plan their academic terms so that they can complete the degree requirements of the BSc or BSc Hons in Biology.

There are typically few Science courses available in the Spring/Summer. Science courses that are typically available in Spring/Summer include CS 110, MATH 110 and STAT 100. Biology Co-Op students should also use non-work-term Spring/Summer semesters

to take Arts/Fine Arts courses (18 credit hours are required), ENGL 100, ENGL 110, and other elective courses.

For Co-op students only, Faculty of Science rules allow for 15 credit hours of courses to be taken in Spring/Summer (12 credit hours is the maximum for other students).

### **Time to Completion of a BSc Biology with Co-op**

Depending on the timing of the work terms (Spring/Summer, Fall, Winter) the Co-op program will take two to three semesters longer than a regular BSc or BSc Hons program, assuming that students take 15 credit hours of courses during academic semesters.

### **Course Requirements and Planning your Degree**

It is unusual, if not impossible, to be able to complete all work terms during Spring/Summer semesters exclusively. Therefore it is very important to plan your program carefully. Students must plan on taking courses during Spring/Summer.

### **Work Terms**

Work terms are arranged by the University of Regina Co-op Office (<http://www.uregina.ca/careercentre/coop/>). There is a system of interviews and “matching” between employers and students (run by a computer called “Placepro”). The Co-op Office also offers seminars about topics as résumé writing and workshops about how to prepare for an interview; attendance at these seminars is mandatory.

With special permission, double work terms (8 months duration) may be arranged. These double work terms must be approved by the employer, the student, the departmental Co-op coordinator and the Co-op Office. Double work terms require the writing of two work term reports.

Most, but not all, work terms are located outside of Regina (although always within western Canada to date). Also, summer jobs working for university faculty members or for agencies that do science, *may also count as a Co-op work term.*

### **Important University of Regina Co-op Rules**

- A maximum of one course (3 credit hours) may be taken during a work term, and only with permission of the employer.
- The Co-op program must end with an academic semester, and cannot end on a work term.

### **Work Term Report**

All students must submit a work term report early in the next semester after completion of the work term. The report will be 10-12 pages long (not including references or title page), double-spaced, and printed in serif (e.g. Times New Roman) 12 point font, on standard letter-size paper and using 2.5 cm margins.

Reports will be graded according to the following scale: Pass, Requires Revision, or Fail. Reports graded Requires Revision will be returned to the student and must be revised and re-submitted within 3 weeks. The revised report must receive a grade of Pass for the overall work term to receive a grade of Pass. Reports with a grade of Fail will not be re-written, and the associated work term will not receive a Pass.

For a double work term, two work term reports are required: one at the end of four months (completion of the first half of the double work term), and a second report at the end of eight months (after completion of the second half of the double work term).

### **Formats for Work Term Reports**

There are two possible formats for the work term reports. If you undertook a specific project during your work term, or if a specific project was substantial part of your work term, your report can describe this project, including a description of the hypothesis that was tested. The format of such a report would follow the format of a scientific paper or a lab report, and contains the following sections:

- Title page
- Abstract
- Introduction
- Materials and Methods
- Results
- Discussion (may be combined with Results into a Results & Discussion section)
- Literature Cited

Alternatively, if you were not involved in a specific project, but rather took part in various tasks/projects, then your work term report can focus on one aspect of the work that was undertaken. For example, you might describe the technical and theoretical bases of one of the techniques/methodologies that you employed. This type of report would include the following sections:

- Title page
- Abstract
- Introduction
- Discussion (with subheadings and a concluding summary)
- Literature Cited

For both types of reports, please cite literature/articles/references etc. A minimum of five references is required. An article from a website is eligible as a reference only if the article is evidently and obviously written by an authority on the topic or if the article is a reprint of a peer-reviewed journal article.

Regardless of the type of report that you write, a day-to-day account or log book of your work activities is *not* the goal.

Before starting work on your work term report, please check with your supervisor that it is acceptable for you to write about the proposed topic. There are occasions when experimental results are considered to be confidential, and the supervisor/employer may prefer that you don't incorporate the results into your report. Alternatively, we have occasionally arranged for the work term supervisor, rather than the co-op coordinator, to grade the work term report when confidential information is used in the report.

When describing your proposed work term report topic to your supervisor, indicate that any results/data incorporated into the report will only be used for the work term report

(no other dissemination will occur), and that the only reader of the report will be the Biology Dept. co-op coordinator.

*Title page* - The title should be informative, indicating specifically the subject of the report. Include your name and student number on the title page, as well as the location (including company or organization name) and dates of the work term.

Work term reports will be graded on the basis of both content and style. In terms of content, the student is expected to demonstrate that he/she has a genuine *understanding* about the work performed or the technique described. This understanding encompasses both why the work was performed, and why the work was performed in a particular manner; i.e. what is the theoretical basis?

In terms of style, the report must be clearly and concisely written, and organized in a logical manner. As many people have pointed out, there is no point in having brilliant ideas if they can't be communicated. Communication is an essential skill in science, and in most other careers as well.

It is a good idea to start working on the report early during your work term. Do not leave the report writing until one or two days before the due date; this is a recipe for a poorly-prepared document. Many people find that once a document is "completed", it's a good idea to NOT immediately hand it in. Instead, hang to the document for a week and then re-read it. This distance in time will provide a fresh perspective on the document, and will allow you to read what you actually wrote rather than what you meant to write. Take this opportunity to do the final editing of any sections whose meaning is not instantly clear. THEN, and only then, hand in the report. This method will lead not only to improved work term reports, but also improved lab reports and term papers in your course work.

Furthermore, for those students who have troubles with writing, there is a lot of help available. For example, the U of R's Student Success Centre has a Writing Service (<http://www.uregina.ca/student/ssc/>) that can help you learn how to proofread, and evaluate and edit your own work. As well, there are numerous websites and books devoted to the basics of writing (e.g. topic sentences, paragraph usage, grammar, punctuation) and also about scientific/technical writing.

### **Due Date for Work Term Report**

Due dates are set by the U of R Co-op Office; please see the schedule on the Co-op website. Please e-mail your completed work term reports to [harold.weger@uregina.ca](mailto:harold.weger@uregina.ca); the report should be in Word or a similar word processing program (not as a PDF please; PDFs are difficult to edit).

### **Other Considerations**

Most employers expect that Co-op students will have a valid driver's licence. If you don't have a driver's licence it is important to provide that information to the Co-op Office *before* you interview for jobs. Also, some positions require a security check (e.g. positions at Agriculture and Agri-Food Canada).

Students entering the Co-op program must be available to attend the mandatory Co-op seminars (e.g. résumé-writing and interviewing workshops).

Lastly, if you have personal considerations, medical issues etc, that preclude participation in certain types of employment, at the time of application please indicate the types of employment that are simply not suitable. For example, if you must work exclusively in Regina, there is no point in interviewing for an out-of-town position. Or, if occasional over-time work is not an option for you, this should also be indicated. Similarly, if field work is not possible for you, please indicate that beforehand. The Co-op Office tries to maximize the efficiency with which students and employers are matched, but the Office needs to have the required information in order to perform the matches, and potential employers prefer to interview candidates that might conceivably work for them.

### **Further Information**

For further information about the Biology Co-op program, please contact the Biology Co-op Coordinator:

Dr. Harold Weger (LB 255)

E-Mail: [harold.weger@uregina.ca](mailto:harold.weger@uregina.ca)

Tel: (306)585-4479

Fax: (306)337-2410

For further information about U of R Co-op programs in general, please visit the U of R Co-op office (RC 163).

Website: <http://www.uregina.ca/careercentre/coop/>

E-mail: [coopoff@uregina.ca](mailto:coopoff@uregina.ca)

Tel: (306)585-4600

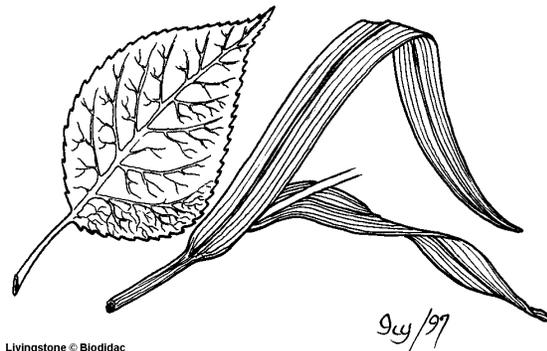
Fax: (306)585-4659

### **Co-op Schedule**

The Co-op schedule (for information sessions, workshops, application due dates etc) is always available on the Co-op website. It's important to keep track of the schedule.

### **Canadian Association for Co-operative Education (CAFCE)**

The Biology Co-op program is accredited by CACFE (<http://www.cafce.ca/>).



Livingstone © Biodidac