INTERNERSHIP IN BIOLOGICAL SCIENCE

Course Guide

CBS Associate Dean Academic
1. Introduction

Bridging the skills gap and the skills awareness gap between academic programs in post-secondary education and the work-force environment has been identified as a priority for educators at large (Brimble et al. 2012; Brown-Martin 2017; EAB 2016), the provincial government (MAESD Experiential Learning Strategy, 2017) and the University of Guelph (Strategic Mandate Agreement 2018-2020). To address this gap and prepare students for success in the workforce, the Ontario Government has proposed that each student should participate in at least one experiential learning opportunity before they graduate. The Ministry has outlined six criteria that a student activity must meet to qualify as experiential learning:

- The student must be in a workplace or a simulated workplace
- The student must be exposed to authentic demands that improve their employability, interpersonal skills, and transition to the workforce
- The experience should be structured with purposeful and meaningful activities.
- The student must apply university or college program knowledge and/or essential employability skills
- The experience should include student self-assessment and evaluation of the students’ performance and learning outcomes by the employer and/or university/college
- The experience should count towards course credit or credential completion, or be formally recognized by the college or university as meeting the five criteria above

The College of Biological Science at the University of Guelph is committed to fulfilling this goal of ensuring every student has the opportunity to participate in experiential learning during their program. As a first step, CBS conducted a review of its undergraduate curriculum to determine the existing and potential opportunities for experiential learning. The review identified a number of courses that currently incorporate experiential learning within the curriculum however not every student is required to complete the courses nor are they always the preferred learning environmental for all students. We also identified a number of courses that were close to meeting the MAESD criteria however many were lacking the application of content to a workplace or simulated workplace environment. CBS also conducted a review of the extracurricular activities that our students were undertaking throughout the year, outside of the classroom, as either paid or volunteer positions or professional development opportunities. The review identified that many of our students are engaging in meaningful employment and volunteer opportunities; however, they lack a formal mechanism to relate their experiences to three of the key criteria for experiential learning: 1) application of program knowledge, 2) evaluation of performance, and 3) an evaluation by the university.

Based on inventory of EL in and outside of the curriculum, CBS identified the need for a mechanism to transform these already-established and meaningful learning opportunities into a recognized experiential learning experience that is available to all students. This would allow students to not only continue to participate in these existing opportunities, but also to reflect on their experiences in a meaningful and structured way. With some guided instruction and real-world connection, this would allow them to advance personal goals, develop professional skills, and networks and recognize the
application of classroom knowledge within an authentic, workplace environment. The course that was created to meet these goals was the Internship in Biological Science (BIOL*3660).

This guide will outline the policies and processes associated with this course. It is a resource for students, faculty, staff and supervisors.

2. What is an Internship?
According to a US organization called the National Association of Colleges and Employers (NACE):

“An internship is a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Internships give students the opportunity to gain valuable applied experience and make connections in professional fields they are considering for career paths; and give employers the opportunity to guide and evaluate talent.”

3. Why Engage in an Internship?
Findings from a study conducted by NACE indicated that undertaking an internship was one factor that positively impacted a student’s level of employment six (6) months after graduation (Townsley et al. 2017). Additionally, research conducted by Crain (2016) found that internships can help students clearly identify career interests, connect course content to real-world experiences, set career goals, and provide networking opportunities.

Furthermore, the networking value of an internship, from both the student and employer perspectives should not be understated. Performing well during an internship can help provide a strong reference from a direct supervisor who can comment on a student’s specific employability skill level and quality of work, both of which can play a significant role in an organization’s hiring decisions (Saltikoff 2017).

Lastly, internships allow students to engage in a workplace setting when their declared major may not provide a cooperative education option. They allow students to take advantage of different types of experiences and they can vary in duration. Internship courses can also allow students to continue with their regular courses and, in the case of a paid position, they can help to offset semester expenses. Internships can also be conducted in the fall, winter, or spring/summer academic semesters, which can help create a more balanced and varied semester by providing alternate learning format for students.

4. What is a CBS Internship?
The Internship in Biological Science course provides an opportunity for independent learning in the biological sciences within a work-related environment (volunteer or paid). Students can work with an external organization or an academic or non-academic unit, on campus. Students will be expected to set
personal and professional goals for themselves related to the development of employability skills. They will be required to critically reflect upon their development throughout the experience through reflective writing. Finally, to complete the internship requirements, students will use their knowledge of the organization that they gained through the experience to propose a solution and a plan to address a ‘problem’ that is generated from the work the student completes.

5. CBS Internship Criteria

The internship is initiated when a student establishes a position with an organization, or unit within an organization (e.g. summer position, part-time job, volunteer opportunity). The organization will set the deliverables and requirements of the position, as well as hours and wages (if applicable). The student engages in the position, as outlined by the organization, and is expected to meet all requirements of the position. The student will simultaneously enrol in the Internship in Biological Science course to receive academic credit for their work experience with the organization. The College of Biological Science establishes the course requirements, which are guided by the work or volunteer experience, and are to be completed outside of work hours.

For the ‘work’ experience to qualify for this course, the following criteria must be met:

a. The activity must comprise no less than 100 hours and span from 3 to 14 weeks in duration
b. The experience must involve a sustained activity in a workplace (volunteer or paid), with clear responsibilities that are related to an application of biological science knowledge or methods, and development of select employability skills.
c. A workplace Supervisor must be identified, who is a professional staff member with expertise in the field to which the experience relates.
d. The workplace Supervisor must be committed to providing regular feedback to the student.
e. The workplace activities/project must be outlined on the workplace agreement form.
f. The workplace Supervisor must sign the workplace agreement form indicating they are committed to provide the necessary resources, facilities and training to complete the experience and to meet the defined goals/project.
g. The student must sign the workplace agreement form indicating they are committed to performing the outlined activities to the best of their abilities and in a professional manner.

Additional criteria: Students must identify and confirm an academic evaluator prior to completing the application form.

6. Exclusions

Opportunities that would not qualify for an internship:

i) Co-op placements
ii) Peer Helper placement
iii) Work Study Positions recognized on the co-curricular transcript
iv) Positions that have already been completed

7. Learning Outcomes of the Internship
By the end of the experience the student should be able to:

a. Assess their own strengths and areas for improvement related to employability skills
b. Identify at least three (3) employability skills that were strengthened during their experience within a workplace environment
c. Apply scientific knowledge, skills and methodologies gained in the classroom to identify problems, evaluate ideas, interpret quantitative information and propose solutions in the workplace environment
d. Accurately and effectively communicate ideas, arguments and analyses through written work, oral presentations and other media
e. Reflect on the ethical, economic, commercial and social implications of applying scientific knowledge in the workplace
f. Apply knowledge of one’s own personal and professional growth, gained through the experience, to plan for further personal and professional development within and beyond the undergraduate degree

8. Internship Positions
It is the responsibility of each individual student to secure an experience with an organization for the work or volunteer experience. CBS is not responsible for securing industry experiences and does not guarantee that all students will have an opportunity to fulfill the requirements of an internship that is eligible for the course. While an internship is highly recommended, it is not required. Finding an experience/position with an organization does not guarantee course enrolment. Qualification of an experience as an internship is up to the discretion of the Course Instructor. When reviewing the application form the Course Instructor will ensure that the criteria’s list above are met and that there is evidence that there is the opportunity for the learning outcomes to met within the position.

Supports related to resume and cover letter writing, as well as the interview process can be found on the Career Services website.

9. Course Registration
The Internship in Biological Science is restricted to students who are enrolled in any CBS major. Students must have completed at least 7.50 credits and have a cumulative average of 60% or higher. Meeting these minimum admission requirements does not guarantee admission into the course. Students must find an Academic Evaluator to supervise them prior to submitting the application form to the Course Instructor. The Course Instructor gives consent to register for the course.
To be considered for the course, each student must complete the Internship Application Form. This form is to be completed by the applicant and the external organization supervisor. Please note that the supervisor from within the organization must be a professional/full-time staff member.

Once the application form is completed, it should be submitted to the Course Instructor, along with a University of Guelph Undergraduate Course Waiver form. An accurate and up-to-date description of the position/experience must be submitted with the application form to ensure that the position/experience meets the criteria of the internship requirements. This could be the job posting or, if that is not available, a statement from the External Supervisor. If the application is approved, the Course Instructor will sign the course waiver form, which will allow the student to enrol in the course.

A copy of the application form will stay with the Course Instructor and, another copy will be given to the student for their records. Students should ensure that their External Supervisor also has a copy of the form.

All students, regardless of where the placement is (on- or off-campus) must have their supervisor complete the Letter to Placement Employers. This document should be submitted along with the Internship Application Form and course waiver form.

**10. International Internship**

Internships can be undertaken anywhere in the world. For International paid positions, proof of meeting the appropriate Employment Standards must be provided with the course registration form. The course registration form will not be approved by the Course Instructor without this proof. For international positions, the Course Instructor will only consider requests to register that are accompanied by proof of health and travel insurance.

Information regarding Employment Standards in Canada can be found on the Government of Canada website.

Students may apply international experiences to the internship course. Students are required to complete DepartSmart, an on-line pre-departure orientation, prior to undertaking an international experience. The Centre for International Programs also provides additional information regarding travel insurance, travel advisories and registration of Canadians abroad, which helps the Government of Canada notify you of any emergencies abroad that may impact you.

**11. Liability an Insurance Waivers**

**Paid or Unpaid (Volunteer) Internships**

The internship can be either paid or unpaid positions. A formal internship is not required of an organization. If the position is paid, the organization will set the wages. For all paid positions, the employer is responsible for protecting their employees under the Workplace Safety and Insurance Act.
As an employee, students would be paying into and would submit for worker’s compensation through the employer, in the case of a workplace injury.

If the experience is an unpaid position, and the employer/organization is off campus (including out of province or international), the Letter to Placement Employers must be completed and signed by the employer.

All students, regardless of where the placement is, on- or off-campus (including out of province or international) must complete a Student Declaration of Understanding prior to starting the placement.

All students, regardless of where the placement is (on- or off-campus) must complete the pre-placement due diligence checklist with the organization supervisor.

Complete details on the Ministry of Training, Colleges and Universities (MTCU) requirements to apply for workplace insurance claims can be found on the University of Guelph’s Human Resource Services website.

If the experience is unpaid and is undertaken on campus, students will be required to complete the Release and Indemnification Form for Volunteers. Students should take time to review this form, and if necessary, consult with any necessary parties prior to signing this form.

All students who will be working in a lab setting on-campus will be required to complete mandatory safety training through CourseLink, prior to entering the lab.

Please note that unpaid positions are not covered by the University’s WSIB coverage if (details have been taken from Occupational Health and Wellness):

1. International students attending an Ontario publicly assisted post-secondary education institution are not covered should their placement be in their country of primary residence.
2. Students attending an Ontario publicly assisted post-secondary education institution are not covered should their placement be in a province outside of Ontario and their primary residence is outside of Ontario.

Further details can be found on the Occupational Health and Wellness website.

12. Role of the Workplace Organization

As the position will have been established between the student and the organization, the deliverables of the position should be set as well. It will be the organization’s responsibility to determine what the student will be responsible for on a day-to-day basis. The role of the student could be to achieve an overall larger goal or to complete smaller projects or provide continuous support activities.

The external organization supervisor will be expected to provide guidance and supervision to the student on the established goals of the position. They will provide guidance and mentorship to the
student regarding the position and in meeting selective course requirements. The supervisor will also be responsible for providing feedback on the student’s performance during and following the experience. Ideally, the supervisor will help the student reflect on their personal and professional growth, as they work through the goals of the position.

The external organization supervisor must agree to the following:

- Meet all administrative requirements as set out by the course outline
- Provide regular feedback to the student regarding their performance
- Provide an opportunity/experience that meets the 100-hour minimum requirement
- A professional staff member within the organization will supervisor the student
- Follow the provided performance evaluation template to assess the student’s overall performance
- Provide the necessary equipment and training, within reason, for the student to successfully complete the goals of the position
- Ensure the student is aware of any company policies that may impact the student including a code of conduct
- Adhere to all human resource and labour standards practices
- Abide by all criminal and civil laws, the Ontario Human Rights Code and the Canadian Charter of Rights and Freedoms
- Provide feedback to the university during a site visit or telephone interview during the experience
- Notify the Course Instructor if there are any issues or concerns that disrupt the internship

13. Role of the Academic Evaluator

The Academic Evaluator will be a point person for the student and will be available to provide guidance to the student regarding the course requirements and will grade all assessments. Student’s must identify and confirm their Academic Evaluator prior to submitting the application form. The advisor does not need to be an expert in the field or industry that the student is working in as they will be advising on the process and assessment requirements. The Academic Evaluator will normally be a faculty member or a permanent teaching staff member. The student should try to identify an individual with whom they will feel comfortable approaching and sharing information about their goals and work performance. Having some knowledge of the field may be helpful but again not required.

The Academic Evaluator is responsible for the following:

- Providing guidance regarding the experience, when needed
- Providing guidance regarding the various course assignments
- Evaluating many of the course components completed within the course
- Notifying the course instructor or grades for posting on CourseLink
14. Role of the Course Instructor

The Course Instructor will facilitate the logistics of the course. The coordinator will answer general questions posed by the student regarding the course content and requirements. The Course Instructor will work with the Academic Evaluator when there is a need for academic consideration, or when issues arise in completing any of the course requirements.

The instructor is responsible for the following:
- Reviewing the Internship Application Form
- Authorizing registration into the course by signing the Undergraduate Course Waiver form
- In conjunction with the Academic Evaluator, granting academic consideration for missed work
- Providing resources for the modules to support the assignments
- Liaising with the organization, either in person or via the phone to assess progress
- Calculating and submitting final grades
- Mediating between the employer/organization and student, when necessary
- Providing templates for performance reviews

15. Role of the Student

The student will:

- Complete the minimum 100 hours with an employer or organization
- Complete the mandatory professional development module on CourseLink
- Complete the Internship Application Form
- Complete all course requirements
- Meet all deadlines as outlined within the course outline
- Respect employer practices and conduct themselves in a professional manner throughout the experience
16. Site Visit

During the experience, a representative from the Internship Course (Course Instructor or Coordinator) will contact the student’s supervisor via email, telephone, Skype, etc. Depending on the circumstance, the student may or may not participate in the site visit.

The visit will not be graded; instead it will be an opportunity for the Course Instructor or Coordinator to assess how the partnership between the student and employer is progressing. This connection allows the coordinator to confirm working conditions for the student, build a relationship with the employer and the student, and collect feedback on the course.

17. Structure of the Course Requirements

The first class meeting will take place on-campus or through a Google Hangout/Skype meeting within the first week of classes. All students will be required to attend in person or on-line to review the requirements of the course.

Following the initial meeting, students will have approximately one week to submit their Project Proposal and Outline, outlining the experience. As each experience may vary in how the minimum 100 hours will be met, students must present their hours across a maximum of 12 to 14 weeks, and a minimum of 3 weeks.

As part of the Project Proposal and Outline, students will be required to complete a project timeline. An example of what could be included in the project timeline is listed below. **NOTE: The course outline will always list the exact requirements for the offering of the course**

Example of what could be included in the project timeline:

- Start date of the experience
- End date of the experience
- Breakdown of the 100 contact hours
- Two scheduled Progress Reports written by the student
- Scheduled performance reviews with the employer (at least 2)
- Due date for the Final Overall Project*
- Due date for the Performance Evaluation**
- Due date for Final Reflection***
- Supervisor’s signature on the Project Proposal and Outline

* Students will be given up to two (2) weeks following the experience to submit the Final Overall Project

**Supervisors will be given up to two (2) weeks following the completion of the experience to submit their Overall Performance Review

*** Final Reflection will be due following the student’s Overall Project Presentation
If the Project Proposal and Outline are not submitted by the due date, as stated in the course outline, the student will be removed from the course.

Reflection will be a large component of learning during this experience. Students will be required to submit two Progress Reports during their experience and a Final Reflection paper that is due after the experience has ended. The guideline and learning outcomes for each reflection will be clearly stated in the course outline.

A minimum of two Performance Reviews must be conducted by the student’s External Supervisor. The External Supervisor will also be responsible for completing an overall Performance Evaluation based on the provided framework from CBS. The two Performance Reviews conducted during the experience can be laid out according to the organization’s performance review practices or some subset of those practices. Proof of completion must be submitted by the student to the Course Instructor. Details on how this is completed will be outlined in the course outline. If no standard performance review practice is currently established within the organization, the supervisor can use the course-provided performance review template. The student will be responsible for providing the template to the External Supervisor.

The student’s Overall Project will require the student to apply the knowledge they gain about the organization and its goals to propose a subsequent project that the organization could consider undertaking. Students will need to identify stakeholders, consider impact of ideas and assess cost/benefit and resource limitations.

For the Final Presentation, students will be asked to give a comprehensive assessment of their experience to the class. This will include reviewing the tasks completed, the lessons learned while in the experience and where the student feels the organization should look next. These presentations will be scheduled following the submission of the Project Proposal and Outline submitted at the beginning of the semester.

At the end of the course, the registrants will meet face to face to present their projects and debrief on their experiences. Depending on the duration and number of projects, this may occur within the same semester or in the first three weeks of the subsequent semester.

For any experience that will be completed in 10 weeks or less, students will be required to present within that same semester. If the experience is 12 to 14 weeks in duration, students will present within the first three (3) weeks of the subsequent semester. No experience should be longer than 14 weeks.

18. Evaluation

The following is an approximate layout of the evaluation of the Internship in Biological Science. The course outline will detail the specific requirements. The evaluation for the internship will generally contain:
19. **Withdrawal Policy**

Students have up to the 40th class day to withdraw from the course. Requests to drop the course after the 40th class day will require a request for academic consideration and consultation with the Course Instructor and the student’s Program Counsellor. Documentation will be required supporting medical, psychological or compassionate grounds for such a request to be considered, along with a letter from the student outlining why they cannot complete the course requirements. Please note that providing documentation does not guarantee that consideration will be granted.

20. **Failure to Meet the Minimum Requirements**

If a situation arises due to no fault of the student, whereby they cannot complete the hours required for the course, or any other requirement, the student is encouraged to speak with the Course Instructor as soon as possible to discuss their options. It is the student’s responsibility to contact the coordinator within a reasonable amount of time. Failure to do so could result in very limited options for the student.

If for any reason a student chooses to withdraw from their position/experience with the workplace organization prior to meeting the 100-hour minimum requirement, or any of the other requirements, they may not be eligible to receive credit for the course. It is the student’s responsibility to contact the Course Instructor, as soon as possible, to discuss their options.

21. **Fee Structure**

As this course will be added to your schedule, like any other 0.50 credit course, students will be charged tuition for the course. If this is the only course the student is taking, they will be charged for the 0.50 credit. Full details on tuition costs can be found on the [Student Financial Services website](#).
Frequently Asked Questions

a) Q: I have been working with this organization for a long time, can I use the hours that I’ve already accumulated to complete this course?
   A: No – You may not use your hours that you have previously accumulated. If, however, you can identify a new set of goals/activities that you will begin to work towards when the course starts, this would be considered by the Course Instructor.

b) Q: My experience will last a year or more. Can I use a portion of it as part of the internship course?
   A: Students will need to work with the Workplace Supervisor to develop a plan that will allow them to meet the requirements of the course. Student may need to break down the larger tasks/goals of the position into smaller pieces, so they will be able to complete tasks within the 14-week maximum timeline.

c) Q: I’m looking at working with the organization for 3 weeks, how would that work?
   A: Working with an organization for only a short amount of time would mean that the experience would be quite intense. The progress reports are reflection on what you have learned during the experience. To gain the most out of the experience, we would recommend no less 6 weeks. For a three (3) week experience, you will still be required to complete all components of the experience as outlined in the course outline.

d) Q: Once I meet my 100 hours am I done working with the organization?
   A: No – the 100 hours is the minimum requirement for the experience to be considered acceptable and eligible for this course. You may find that you require more time to meet the goals that were outlined at the beginning of the experience. While part of this experience will be used for the internship course, it is extremely important for the student to remember that they do have an agreement with the employer/organization and this must be upheld. Any requirements that the External Supervisor/organization has for the position should be established at the time of hiring.

e) Q: Can I start working on some of these course components prior to the start of the semester?
   A: Yes (within reason) – Due to the application form requirements, students may start the discussions around some of the course requirements with employers/organizations in advance of the first week of classes. Once you have started these discussions, you can start the project outline and timeline. If students start prior to the first day of classes, they should contact the Course Instructor immediately following registration in the course. Please note that the Course Instructor may provide you with course details, however, they will not give individualized instruction prior to the start of the course. Regardless of when the student starts to work on the course requirements, all students are required to attend the first lecture.

f) Q: I am in the Plant Science major can I take this course?
A: Yes, any student registered within a major offered, or jointly offered by one of the departments within the College of Biological Science is eligible to apply for this course. The majors include: BIOC, BIOC:C, BIOD, BIOM, BIOS, HK, MFB, MFB:C, MBG, MICR, MICR:C, NEUR, NANS, PLSC, WBC, ZOO, BSES:ECOL, BSES:ECOL:C,

g) Q: Can I have an academic evaluator who is not from the College of Biological Science?
A: Yes, as long as you are registered within a major offered by CBS your advisor can be outside of the college. Please note that you are still required to meet all course requirements as set out by the College of Biological Science
References

Brimble, M., Cameron, C., Freudenberg, B., Fraser, C., and MacDonald, K. 2012. Collaborating with Industry to Enhance Financial Planning and Accounting Education Australasian Accounting, Business and Finance Journal 6(4), pp 79 – 93

Educational Advisory Board (EAB) 2017. Integrative Academic and Career Development Report

MAESD’s Guiding Principles for Experiential Learning 2017


University of Guelph Strategic Mandate Agreement 2017-2020
https://www.ontario.ca/page/2017-20-strategic-mandate-agreement-university-guelph