



INTERNSHIP 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 (EL) opportunity before they graduate. The Ministry has outlined six criteria that a student activity must meet to qualify as EL:

- 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 EL during their program. As a first step, CBS conducted a review of its undergraduate curriculum to determine the existing and potential opportunities for EL. The review identified a number of courses that currently incorporate EL within the curriculum, however not every student is required to complete the EL courses, nor are these experiences always in preferred learning environment 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 subject area content to a workplace or simulated workplace environment. CBS also conducted a review of the extracurricular activities our students were undertaking as either paid or volunteer positions, or professional development opportunities outside of the classroom, throughout the year. 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 EL: 1) application of program knowledge, 2) evaluation of workplace performance, and 3) evaluation by the university.

Based on the inventory of EL in and outside the curriculum, CBS identified the need for a mechanism to transform these already-established and meaningful learning opportunities into one recognized EL experience that is available to all students. Not only would this allow students to 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, expand networks, and recognize the application of classroom

knowledge within an authentic, workplace environment. The recognized, dedicated EL experience that was created to meet these goals was the course, 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 (Townsend *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 an alternate learning format for students.

4. What is the CBS Internship?

The Internship in Biological Science course is 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 internal academic or non-academic unit on campus. Associated with the internship

tasks, 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, interns will apply their knowledge and observations gained through their work experience to identify and address a 'problem' or 'gap' that is generated from the work they complete. Ultimately, the goal is to propose a solution and implementation plan to address this 'problem' or 'gap'.

5. CBS Internship Criteria

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

For the 'work' experience to be eligible as an internship for this course, the following criteria must be met:

- a. Contact hours with the organization must include no less than 100 hours within a 3 to 14 weeks period
- 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 Internship in Biological Science BIOL*3660 Application Form
- f. The Workplace Supervisor must sign the Internship in Biological Science BIOL*3660 Application 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 Internship in Biological Science BIOL*3660 Application Form indicating they are committed to performing the outlined activities to the best of their abilities and in a professional manner

6. Exclusions

Opportunities that would not qualify for an internship:

- i) Co-op placements
- ii) Peer Helper placement
- iii) USRA positions
- iv) Work Study Positions recognized on the co-curricular transcript
- v) 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

While an internship is highly recommended for CBS academic programs, it is not required.

It is the responsibility of each individual student to secure a position with an organization for the paid or volunteer experience. CBS is not responsible for arranging organization/industry experiences. The College does not guarantee that all students will be able to locate work positions: 1) that are eligible for the Internship in Biological Science course, and/or for which they can fulfill the requirements of the internship.

Finding an experience/position with an organization does not guarantee course enrolment. Qualification of an experience as an internship is at the discretion of the Course Instructor or Course Coordinator. When reviewing the application form, the Course Instructor or Course Coordinator will ensure that the

criteria listed above are met, and that there is evidence for the learning outcomes to be met during the internship experience.

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 at least 60%. Meeting these minimum admission requirements does not guarantee enrollment in the course. The Course Instructor or Course Coordinator gives consent to register for the course.

To be considered for the course, each student must complete the Internship in Biological Science BIOL*3660 Application Form. This form is to be completed by the applicant and the Work Supervisor. Please note that the Work 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 or Course Coordinator, along with a [University of Guelph Undergraduate Course Waiver Request form](#). An accurate and up-to-date description of the position/experience must be included on the application form to ensure that the position/experience is eligible as an internship position. This could be the job posting, or if that is not available, a statement from the Work 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 Work Supervisor also has a copy of the form.

All students, regardless of whether the work placement is on- or off-campus, must have their Work Supervisor complete the [Pre-Placement Due Diligence Checklist](#). This document should be submitted along with the Internship in Biological Science BIOL*3660 Application Form and Undergraduate Course Waiver Request form.

10. International Internships

Internships can be undertaken anywhere in the world. For International paid positions, proof of meeting the appropriate employment standards for the country being visited must be provided with the Internship in Biological Science BIOL*3660 Application Form and Undergraduate Course Waiver Request form. The Internship in Biological Science BIOL*3660 Application Form will not be approved by the

Course Instructor without this proof. For international positions, the Course Instructor will only consider applications 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](#).

International experiences may be eligible for the internship course, as long as all criteria are met. Students are required to complete DepartSmart, an on-line pre-departure orientation, prior to undertaking an international experience. The [Centre for International Programs](#) provides additional information regarding travel insurance, travel advisories, and registration of Canadians abroad, which helps the Government of Canada notify you of any emergencies that may impact you.

11. Liability and Insurance Waivers

Paid or Unpaid (Volunteer) Internships

It is *not* necessary that the organization with which the student works or volunteers operates a formal internship program for students to complete the CBS internship course.

The internship can apply to either paid or volunteer positions. 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 workers' compensation and would submit for worker's compensation through the employer in the case of a workplace injury.

For all students working unpaid positions, and whose employer/organization is off campus (including out of province or international), the [Letter to Placement Employers](#) must be completed to confirm that workplace insurance is in place, and it must be signed by the employer.

For all students working unpaid positions, regardless of whether the placement is on- or off-campus (including out of province or international), they must complete a [Student Declaration of Understanding](#) of insurance coverage for the unpaid position, prior to starting the placement.

For all students, regardless of whether the placement is on- or off-campus, they must also complete the [Pre-Placement Due Diligence](#) health and safety checklist with the organization work supervisor to confirm that all possible risks are documented, and it must be signed by the employer.

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](#) waiving responsibility of the University of Guelph for

and damage, loss, or injury to themselves. 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.

For the following individuals, please note that unpaid positions are not covered by the University's WSIB coverage (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 workplace organization, the deliverables of the position should be set by these partners as well. It will be the organization's responsibility to determine what the student will be responsible for doing 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 Work Supervisor will be expected to provide guidance, mentorship, and supervision to the student on the established goals of the position, and in meeting select course requirements. The Work Supervisor will be responsible for providing feedback on the student's performance during and following the experience. Ideally, the Work Supervisor will also help the student reflect on their personal and professional growth, as they work through the goals of the position.

The Work Supervisor must agree to the following:

- Meet all relevant work experience 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
- Confirm that they, as Work Supervisor of the student, are a professional staff member within the organization
- Follow the provided performance evaluation template to assess the student's overall performance at the end of the experience

- 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 or Course Coordinator if any issues or concerns arise that disrupt the internship

13. Role of the Course Coordinator

The Course Coordinator is a staff member from the ADA Office who will be the main contact for the student and will be available to provide academic and/or administrative guidance to the student regarding the course. They will also be advising on the assessment requirements.

The Course Coordinator is responsible for the following:

- Reviewing Internship Application Forms and authorizing registration in the course
- Providing guidance regarding the work experience expectations
- Providing guidance regarding the various course assignments
- Setting assignment deadlines, scheduling and leading class meetings, managing logistics for the course
- Managing the course website, including releasing grades on CourseLink
- Providing content resources for the online learning modules to support completion of assignments
- Answering student questions about all aspects of the course
- Providing input when academic consideration is requested by the student
- Communicating with the Work Supervisor about the student performance on the job, if necessary
- Leading Overall Presentation sessions
- Calculating final grades
- Providing templates/surveys for performance reviews and evaluations

14. Role of the Course Instructor

The Course Instructor may answer questions posed by students regarding application for the course, academic consideration, course and work requirements, and grades.

The instructor may be responsible for the following:

- Reviewing Internship Application Forms
- Authorizing registration in the course by signing the Undergraduate Course Waiver form
- Granting academic consideration for missed work
- Providing content resources for the online learning modules to support the assignments
- Liaising with the workplace organization to assess progress
- Calculating and submitting final grades
- Mediating between the employer/organization and student, if necessary
- Providing templates for performance reviews

15. Role of the Graduate Teaching Assistant (GTA or TA)

The TA is responsible for most grading, leading Overall Presentation sessions, and some communication with students regarding grading and deadlines.

The TA is responsible for:

- Grading all assignments consistently, and according to rubrics developed and provided by the teaching team
- Communicating with students who have missed deadlines or other assignment expectations
- Leading Overall Presentation sessions

16. Role of the Student

The student will:

- Complete the minimum 100 hours with an employer or organization
- Complete the Internship Application Form, and other required documentation
- Complete the mandatory Professionalism module on CourseLink
- Complete all course requirements – 7 assessments
- Meet all deadlines as outlined on the Course Outline and their Project Timeline
- Respect employer practices and conduct themselves in a professional manner throughout the experience

17. Site Visit

During the work experience, a representative from the Internship Course (Course Instructor or Course Coordinator) may contact the student's supervisor via email, telephone, 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 teaching team to confirm working conditions for the student, build a relationship with the employer and the student, and collect feedback on the course requirements pertaining to the workplace.

18. Structure of the Course Requirements

Within the first week of classes, the first class meeting will take place either on-campus or through a Teams/Zoom meeting. All students will be required to attend this meeting to review the requirements of the course with the Course Coordinator.

Following the initial meeting, students will have approximately one week to submit their Project Proposal and Timeline, outlining the workplace and academic aspects of the experience. As each experience may vary in how the minimum 100 hours will be met, students must present the distribution of their hours across a 3-14 week span on a Timeline. Examples of what could be included in the Project Timeline are 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 workplace experience
- End date of the workplace experience
- Breakdown of the 100 contact hours
- Supervisor's signature on the Project Proposal and Outline – this will be an email confirmation forwarded by the student
- Two scheduled Progress Reports written by the student
- Scheduled performance reviews with the employer (at least 2; provide an email confirmation to the Course Coordinator that these have taken place)
- Due date for the Overall Project Report*
- Due date for the Performance Evaluation**
- Due date for Final Reflection*

** The Overall Project Report and Final Reflection will be assigned deadlines that fall during the exam period*

***Work Supervisors will submit Performance Evaluations on approximately the last day of semester. A link to the PE survey will be emailed directly to the Work Supervisors by the Course Coordinator during the second last week of the semester.*

Any deviations from the deadlines set, either by the teaching team or the student, should be discussed with the Course Coordinator.

Reflection will be a large component of the 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 work experience has ended. The guidelines and learning outcomes for each reflection assignment are summarized on the Course Outline, and are clearly indicated on each set of assignment instructions on CourseLink.

A minimum of two Performance Reviews must be conducted by the student's Work Supervisor. The Work Supervisor will also be responsible for completing an overall Performance Evaluation based on the survey provided by CBS near the end of the semester. 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. Emailed confirmations of Completion of the two performance reviews must be submitted by the student to the Course Coordinator. Details on how this is completed will also be provided on the Course Outline. If no standard performance review practice is currently established within the organization, the Work Supervisor can use the course-provided performance review template.

For the Overall Project Report, interns will apply their knowledge and observations gained through their work experience to identify and address a 'problem' or 'gap' that is generated from the work they complete. Ultimately, the goal is to propose a solution and implementation plan to address this 'problem' or 'gap'. Students will need to identify stakeholders for their work, consider the impact of their ideas, and assess cost/benefit and resource limitations.

For the Overall Presentation, students will be asked to give a comprehensive assessment of their work 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 grow and develop next. These presentations will be scheduled in group sessions taking place during the last two weeks of the semester.

Near the end of the semester, interns enrolled in the course will meet 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 during 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 during the first three (3) weeks of the subsequent semester.

19. Evaluation

The following is a list of assessment in the Internship in Biological Science course. The Course Outline will detail the specific requirements and deadlines. The evaluation for the internship will generally contain:

- Project Outline and Timeline
- Project Management Outline
- Progress Report 1
- Progress Report 2
- Overall Presentation
- Overall Project Report
- Performance Evaluation
- Final Reflection

20. Withdrawal Policy

Students have up to the last class day to withdraw from the course. Requests to late drop the course after the last 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 late drop 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.

21. 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 Coordinator or Course Instructor, as soon as possible, to discuss their options. It is the student's responsibility to contact the teaching team 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 or Course Coordinator, as soon as possible, to discuss their options.

22. 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](#).

23. 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: ABIO, BIOC, BIOC:C, BIOD, BIOM, BIOS, ENVB, HK, MFB, MFB:C, MBG, MBG:C, MICR, MICR:C, NEUR, NANS, PLSC, PLSC:C, WBC, WBC:C, ZOO, BSES:ECOL, BSES:ECOL:C,

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