

Job Description



Job Title:	Biology Laboratory Instructor
Department:	Biology
Reports To:	Chair and Associate Chair for Undergraduate Studies
Jobs Reporting:	None
Salary Grade:	USG 9 - 11
Effective Date:	June 2022

Primary Purpose

The Biology Laboratory Instructor is responsible for the operation of assigned undergraduate laboratories within the Biology Department. This includes organizing and instructing laboratory-only courses, teaching courses with lecture and lab components, developing and writing laboratory experiments and manuals, designing examinations and quizzes and keeping the content and resources current. For courses that have lectures directly associated with laboratories, the Biology Laboratory Instructor is responsible for designing experiments that complement the lecture component of the course.

Key Accountabilities

Administration of assigned laboratories, including but not limited to:

- Independently organizes and runs laboratory-only courses;
- Independently organizes and runs combined lecture and laboratory courses;
- Ensures that laboratory experiments reflect the course content directly associated with the laboratory;
- Organizes and creates assignments, laboratory manuals, midterms and final exams for the laboratory courses assigned, including updates to materials as necessary;
- Responsible for collecting and maintaining laboratory reports, midterms and exam grades; calculates and submits final grades to the Registrar's Office;
- Marks assignments, midterms and exams; calculates and submits final grades to the Registrar's Office;
- Prepares protocols of laboratory procedures – individual techniques and/or manuals;
- Oversees enrollment into each laboratory/tutorial section, monitors course limits and signs course override forms;
- Schedules laboratory and tutorial sections and corrects scheduling problems as they may occur, in coordination with the Undergraduate Program Manager;
- Monitors laboratory sessions and identifies and addresses potential safety concerns for students and Teaching Assistants (TAs);
- Orders chemicals needed for laboratory experiments and arranges proper disposal of waste;
- Organizes lab set-up/tear down in coordination with Laboratory Technicians;
- Purchases and maintains laboratory equipment, including fixing minor equipment problems;
- In coordination with Laboratory Technicians and Teaching Assistants, ensures that equipment and chemicals are put away at the conclusion of each experiment;
- Closes each laboratory section upon completion of the laboratory session;
- Is available for answering student and TA questions;
- Advises and provides help to students on an individual basis, as needed, and reassigning students who have missed laboratory sections;

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- Provides students in distress with the first step in emotional support and referrals for counselling ; Interacts with and attends workshops organized by Counselling Services to obtain appropriate guidelines;
- May serve on Biology/Science undergraduate committees and undergraduate curriculum committees;
- Recommends major equipment purchases and negotiates competitive pricing with equipment vendors;
- Reviews, updates and improves existing experiments annually;
- Develops new content annually for laboratory-only courses and specific courses that include laboratories.

Teaches specific courses as assigned by the Associate Chair, Undergraduate:

- Plans, creates and teaches specific courses assigned by the Associate Chair, Undergraduate Studies;
- Independently prepares to deliver course content either in the classroom or online;
- Organizes and creates assignments, quizzes, midterms and final exams, including make-up exams for the lecture courses assigned;
- Marks assignments, midterms and exams; calculates and submits final grades to the Registrar's Office.

Manages laboratory Teaching Assistants and Other Teaching Supports (Co-op students) each term, including but not limited to:

- Helps recruit, interview, and select graduate and undergraduate TAs and Co-op students for their placement in laboratory courses for which the Instructor is responsible;
- Meets regularly with the TAs and other teaching supports to provide them with direction/instruction/explanation regarding laboratory concepts/objectives and marking;
- Trains, manages and supervises weekly TA activities, including organizing and executing the Teaching Assistant Workshop twice yearly;
- Mentors both graduate and undergraduate Teaching Assistants and other teaching supports regarding teaching;
- Trains the TAs on the particular safety aspects of the laboratories;
- Ensures that TAs and other teaching support staff are trained regarding concepts with which they may not be fully familiar and that they fully comprehend the equipment and procedures to be used;
- Designs marking schemes and/or rubrics for the TAs;
- Provides help to undergraduate students on an individual basis as needed, and reassigns students who have missed their laboratory sections;
- Co-ordinates feedback regarding potential problems in the laboratories and tutorials;
- Evaluates performance of Teaching Assistants and other teaching support staff at the end of each term.

Safety Administration

- Establishes, administers, and enforces safety standards and regulations including WHMIS requirements and UW Safety policies and procedures to ensure a safe laboratory setting for students and TAs;
- Update posted safety procedures including WHMIS, hazardous waste disposal etc. in the laboratories;
- Ensures that the laboratory is kept clean and maintains a safe laboratory environment;
- Maintains personal certifications as required by the Safety Office.

**All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and*

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safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.

Required Qualifications

Education <ul style="list-style-type: none">• MSc in Biology is required, PhD preferred.
Experience <ul style="list-style-type: none">• Minimum of two years' teaching experience is required in a laboratory and/or classroom setting. Requires a broad knowledge of biology.
Knowledge/Skills/Abilities <ul style="list-style-type: none">• Demonstrated understanding of safe chemical handling as well as Health and Safety and emergency procedures in a laboratory environment is required;• Ability to demonstrate the proper use of a variety of laboratory equipment in normal use in Biology labs, including but not limited to: microscopes, centrifuge, spectrophotometer, balance, heating/stirring block, and pipettors;• Experience troubleshooting and working with scientific equipment is preferred;• Experience with molecular and microbiology techniques;• Excellent written and oral communication skills required;• Knowledge of modern tools for online pedagogy is an asset for the successful tenure of this position;• Organizational, technical, analytical, and multi-tasking skills are essential.

Nature and Scope

- **Contacts:** Collaborates with the Biology Associate Chairs and Graduate Coordinator to aid in the selection of graduate and undergraduate TAs. Consults with faculty members and course instructors to ensure labs reflect lecture content. Advises and counsels undergraduate students on subjects, such as course selection, scholarship information, research opportunities on campus, co-op opportunities, post-undergraduate education, and any personal issues that a student may disclose.
- **Level of Responsibility:** Oversight of Teaching Assistants. Accountable for the inventory and ordering of chemicals needed for their laboratories and will be in charge of choosing appropriate reagents and chemicals for experiments that can be handled safely by students and Teaching Assistants/Co-op students. Able to create a positive and enriched learning environment for students, which will promote and cultivate an air of confidence and self-motivation.
USG 9 - The Laboratory Instructor has two primary responsibilities: 1. Sole responsibility for organizing and running laboratory-only courses; 2. For courses that have lectures directly associated with laboratories, the Laboratory Instructor is responsible for running experiments that reflect the contents of the lecture component of the course.
USG 10 - Addition of a third primary responsibility: 3. The Laboratory Instructor is responsible for designing and creating new laboratory experiments and/or making significant changes to existing experiments annually.
USG 11 – Addition of a fourth primary responsibility: 4. The Laboratory Instructor is responsible for lecturing one or two Biology courses per year.
- **Decision-Making Authority:** Contributes to discussions regarding curriculum and course content. Evaluate student performance through lab reports, quizzes, tests, assignments, and examinations in laboratory and lecture courses and will enforce laboratory rules, protocols and academic regulations, such as those imposed by UW Policy 71. Assigns Teaching and Online Learning Assistants to specific laboratory sections. Provides TA and other teaching support with training and direction of weekly activities, provides performance evaluations both midterm and at the end of each term, and via solicitation of feedback on problems encountered and potential problems that may occur in individual

experiments. Required to make decisions concerning laboratory experiments, chemicals and equipment. All problems are to be handled with minimal supervision and referred to the Associate Chair, Undergraduate Studies when there is a possible danger to students and/or TAs or does not comply with the guidelines defined by the Biology Department.

- **Physical and Sensory Demands:** Requires exertion of physical effort resulting in moderate fatigue, strain due to lifting, carrying and/or handling of objects. Requires sensory effort resulting in slight fatigue due to concentrated and attentive use of one or more senses in writing and creating course content.
- **Working Environment:** Unavoidable exposure to noxious chemicals and biological hazardous. May involve dissecting preserved specimens and/or euthanizing live specimens. Involves exposure to emotionally distressed students. Disruption in lifestyle due to unusual working hours: Due to the hazardous nature of laboratories, the Instructor must be present during all laboratory periods. Space, scheduling and other factors may necessitate that Laboratory Instructors work special schedules, including work in the evenings. The Instructor is expected to accomplish their duties by arranging hours of work in order to be present during scheduled laboratory hours. Instructors are responsible for closing each laboratory session. This may mean that the Laboratory Instructor will have to work more than 7 hours on a given day; should this be necessary, the Laboratory Instructor may reduce the hours worked on another day during the week or may recoup the overtime during a term with a lighter course load.