

# Description of Teaching Assistant Roles in the Biology Program

## TA positions offered through the Botany Department

### **BIOL 111 Introduction to Modern Biology [3 credits]**

TAs are required to attend 3 one hour lectures per week and hold 3 office hours in the Biology Learning Centre. Other duties include: Marking midterm exams, final exams and possibly assignments; assisting the instructor during class as needed; monitoring and responding to students' posts on the electronic bulletin board; responding to student emails; preparing classroom and learning centre activities, reviewing exam questions; facilitating review sessions before midterms and finals; and possibly delivering a guest lecture (if mutually agreed upon by TA and instructor). Other activities are possible and subject to discussion between the TA and course instructor.

### **BIOL 121 Genetics, Evolution and Ecology [3 credits]**

TAs are required to attend 3 one hour lectures per week and hold 3 office hours in the Biology Learning Centre (Wesb 200). Other duties include: Marking midterm exams, final exams and possibly assignments; assisting the instructor during class as needed; monitoring and responding to students' posts on the electronic bulletin board; responding to student emails; preparing classroom and learning centre activities, reviewing exam questions; facilitating review sessions before midterms and finals; and possibly delivering a guest lecture (if mutually agreed upon by TA and instructor). Other activities are possible and subject to discussion between the TA and course instructor.

### **BIOL 140 Laboratory Investigations in Life Science [2 credits]**

TAs are required to teach two 3-hour lab sessions each week plus attend a 3- hour prep session Friday afternoons from 1:00 to 4:00 pm. During each lab session the TA will be required to set out materials, give instructions, monitor student activities, facilitate discussions with students, keep track of student progress and clean up. The TA will be responsible for marking student work (assignments, written work, exams) and keep accurate records of student attendance, participation and marks. The TA will be supported by Lab Faculty as needed during lab sessions.

### **BIOL 200 Fundamentals of Cell Biology [3 credits]**

TAs are required to teach 2-3 tutorials and hold one office hour per week, plus attend a 2 hour prep meeting with the Course Coordinator every Friday. They are expected to prepare in advance for the tutorials by ensuring that they fully understand the weekly problems and activities, and by reviewing concepts in cell biology where needed. TAs are required to invigilate the evening midterm exam, and need to be available in the weeks following the midterm and final exams for marking. TAs are also responsible for marking unit post-tests, assignments and

a short essay. Conferences or other conflicts with TA hours must be brought to the Course Coordinator's attention as early as possible so that arrangements with other TAs can be made.

### **BIOL 201 Introduction to Biochemistry [3 credits]**

TAs are required to hold 3 or 4 tutorials per week plus a 1 to 2 hour meeting with the Instructor every Friday morning. The TAs are expected to prepare in advance for the tutorials by working through the weekly problem sets which will be reviewed during the Friday morning meetings. TAs are also required to invigilate the evening (7 to 9 pm) midterm exam (typically the week before Reading Week Break) and be prepared to mark approximately 100 exams (during the break). Conferences or other conflicts with TA hours needs to be brought up to the Instructors notice as early as possible, to facilitate arrangements with other TAs.

### **BIOL 209 Non-Vascular Plants [3 credits]**

TAs are required to teach two 3-hour lab sessions each week plus attend a 2- hour prep session Wednesday mornings from 9:00 to 11:00. They are also required to attend all lectures and supervise open lab times (for student projects). During each lab session the TA will be required to provide an overview of activities, monitor student progress, and facilitate discussions with students. Some TAs assist with making sure the student benches are tidy and the supply trays are complete. The rest of the TAs are responsible for end of week clean up. The allocation of these duties depends on scheduling. The TA will be responsible for marking student work (assignments, lab and lecture exams). The TA will be supported by Lab Faculty during lab sessions.

### **BIOL 210 Vascular Plants [3 credits]**

TAs are required to teach two 3-hour lab sessions each week plus attend a 2- hour prep session Wednesday mornings from 9:00 to 11:00. They are also required to attend all lectures. During each lab session the TA will be required to provide an overview of activities, monitor student progress, and facilitate discussions with students. Some TAs assist with making sure the student benches are tidy and the supply trays are complete. The rest of the TAs are responsible for end of week clean up. The allocation of these duties depends on scheduling. The TA will be responsible for marking student work (assignments, lab and lecture exams). The TA will be supported by Lab Faculty during lab sessions.

### **BIOL 230 Fundamentals of Ecology [3 credits]**

### **BIOL 234 Fundamentals of Genetics [3credits]**

TAs are required to attend all lectures (3 per week) and a weekly prep session. TAs will lead two 2-hour tutorials per week plus provide a 2-hour help session once per week (in the genetics help office, Biosc 2519). Tutorials will cover assigned problem sets where the TA will help facilitate student understanding and develop problem-solving skills. During the help sessions the TA will discuss assigned questions related to the current lecture topic(s) with students on a drop-in basis. The TAs are also required to invigilate during midterm exams, and mark midterm and final exams. Final exam invigilation assignments will be done by each Department.

### **BIOL 260 Fundamentals of Physiology [3 credits]**

TAs are required to attend all lectures during which time their role is to circulate through the lecture hall and to facilitate the active learning exercises (by asking students probing or leading questions). The TA is required to ask students questions that help them to think things through themselves. Group answers to question will on occasion be collected and the TA would be responsible for grading. TAs will be given the opportunity to deliver a mini-lecture. Students will complete homework and sample final exam questions that will be marked by peers. The TA would be responsible for spot checking the peer grading. The TA would also be involved in marking the final exam for the course.

### **BIOL 306 Advanced Ecology [3 CREDITS]**

TAs are encouraged to attend a few lectures to appreciate how students have been introduced to concepts that they will need to review in lab. Three times during the term each TA will lead 2-3 sections (14-21 students) in field work or lab work. Attendance at a prep session prior to these sessions is required. During the weeks of field trips TAs will also be required to hold 2 office hours as students prepare their assignments. Each TA is expected to mark all assignments from their sections, keeping track of grades over the term and submit overall grades at the end of term. TAs may be asked to invigilate exams but will be required to mark midterm exams and portions of the final exam.

### **BIOL 320 Survey of Algae [4 credits]**

### **BIOL 321 Structure and the Evolution of the Bryophyta [3 credits]**

TAs are required to teach two 2-hour lab sessions each week plus attend a 3- hour prep session Monday morning from 9:00 to 12:00 noon. The two lab sessions cover different material. During each lab session the TA is required to present an overview of the lab, give instructions, monitor student activities, facilitate discussions with students, keep track of student progress and clean up. TAs attend some of the fieldtrip (scheduled during lab times) and provide assistance where required. The TA is responsible for marking student work (assignments, lab and lecture exams) and invigilating exams. The TA is supported by Lab

Faculty during lab sessions. TAs are required to assist in some of the material acquisition. TA may be asked to deliver a lecture based on expertise and area of research. Lecture attendance is required for first-time TAs who will then have reduced time demands in other areas.

### **BIOL 323 Structure and Function of Fungi [3 credits]**

### **BIOL 324 Introduction to Seed Plant Taxonomy [3 credits]**

TAs are required to teach two 3-hour lab sessions each week plus attend a 3- hour prep session Tuesday mornings from 9:00 to 1:00 pm. During each lab session the TA is required to present an overview of the lab, give instructions, monitor student activities, facilitate discussion, and clean up. The TA is responsible for marking student work (quizzes, projects, and lecture exams) and invigilating exams. TAs are required to assist in some of the material collection and quiz organization. The TA is supported by Lab Faculty during lab sessions. TA may be asked to deliver a lecture based on expertise and area of research. Lecture attendance is required for first-time TAs who will then have reduced time demands in other areas.

### **BIOL 332 Protistology [3 credits]**

### **BIOL 334 Basic Genetics [3 credits]**

TAs are required to attend all lectures and a weekly prep session. They will lead two 2-hour tutorials per week plus provide a 2-hour help session once per week ( in the genetics help office). Tutorials will cover assigned problem sets where the TA will help facilitate student understanding and develop problem-solving skills. During these sessions the TA will discuss assigned questions related to the current topic(s) with students on a drop-in basis. The TAs are also required to invigilate during midterm exams, and mark midterm and final exams. Final exam invigilation assignments will be done by each Department.

### **BIOL 335 Molecular Genetics [3 credits]**

TAs are required to attend all lectures (3 per week) and a weekly prep session. TAs will lead two 2-hour tutorials per week plus provide a 2-hour help session once per week (in the genetics help office). Tutorials will cover assigned problem sets where the TA will help facilitate student understanding and develop problem-solving skills. During the help sessions the TA will discuss assigned questions related to the current lecture topic(s) with students on a drop-in basis. The TAs are also required to invigilate during midterm exams, and mark midterm and final exams. Final exam invigilation assignments will be done by each Department.

### **BIOL 336 Fundamentals of Evolutionary Biology [3 credits]**

TAs are required to attend a weekly prep session and prepare assignments for their tutorials. TAs will lead three 1-hour back-to-back tutorials one day a week. Tutorials consist of activities, case studies, paper discussions, quizzes and problem sets, all usually in small group or problem based learning settings. Each week TAs will be required to create or modify a writing assignment or quiz (or assign an already created problem set) to assign pre-tutorial and to mark them afterwards. In addition, there will be two Short Opinion Papers 2-3 pages long that TAs will mark for their own sections. TAs are also required to invigilate during midterm exams, and mark midterm and final exams. Final exam invigilation assignments will be done by each Department.

### **BIOL 337 Introductory Genetics Lab [3 credits]**

TAs are required to teach, together with the lab instructor, two 3-hour lab sessions each week. During each lab session the TA will begin the class by giving the students a short quiz that they will mark and return to students during the next class. Together with the instructor they will explain various procedures or concepts that the students are working on in lab or in assignments. Most time will be spent assisting students with their experiments either using dissecting microscopes or molecular biology techniques. TAs are required to grade student lab reports and bioinformatics assignments and keep accurate records of student grades. There are no formal prep sessions but TAs are expected to be familiar with basic Mendelian genetics, molecular biology procedures and experimental design. If needed, TAs will receive instruction on how to work with *Caenorhabditis elegans* and *Arabidopsis thaliana*.

### **BIOL 340 Introductory Cell Biology Laboratory [2 credits]**

In this course students learn concepts and practice techniques relevant to the study of living cells including microscopy and imaging, protein extraction and assay, protein separation (electrophoresis) and tagging (immunological techniques primarily), sterile technique, cell culture and growth, and basic lab skills such as pipetting and media/reagent preparation. Students also design and implement independent experiments. Teaching assistants (TAs) are required to assist the instructor in teaching the course and are expected to either be familiar with the field and its practices, or willing and able to review or learn new material. Responsibilities include mandatory attendance at all lab lectures for one hour each week and three hours of laboratory work each week. During the lecture and in the lab TAs, with the support of the lab instructor, are expected to facilitate student learning and generally serve as professional role models and mentors to the students. In addition, TAs are required to attend a 1-1.5 hour/week prep meeting, as well as to arrive 0.5h prior to the start of the lab session and to remain for 0.5h after each session. TAs will be responsible, with instructor guidance and oversight, for marking student work. TAs are required to keep student records and to regularly update the instructor with copies of the marks. Additional time will be required to assist the students outside of normal lab session hours when the students are performing their independent experiments. This amount of time will vary but will not exceed the maximum overall amount of time expected of the TAs for the semester.

### **BIOL 341 Introductory Molecular Biology [2 credits]**

TAs are required to teach a 3 hour lab session plus attend a 2h prep session each week. TAs may also be required to assist during the weekly one-hour lecture, and hold office hours and/or open lab times for students. During each lab session, the TA will check that students are prepared for lab, review the lab activities, promote safe and professional lab practices, monitor student activities and behaviour, and facilitate learning—all with the support of the course instructor. The TA is expected to be familiar with common molecular biology procedures and experimental design, and must be willing to review or learn material where necessary. The TA is responsible for marking student work (lab notebooks, assignments, drafts, oral presentations, professional behaviour, and final reports). Conferences or other short-term conflicts with TA duties must be brought to the instructor's attention as early as possible so that arrangements with other TAs can be made.

### **BIOL 343 Plants and People [3 credits] – Summer session**

TAs are required to teach eight 3-hour lab session each week plus attend a 3- hour prep session mornings that labs are being held. During each lab session the TA is required to present an overview of the lab, give instructions, monitor student activities, facilitate discussion, clean up, and assist with set-up for next lab. The TA is responsible for marking student work (quizzes, projects, and lab exams) and invigilating exams. TAs are required to assist in some of the material collection, quiz organization, demonstrations, and fieldtrips. The TA is supported by Lab Faculty during lab sessions. Lecture attendance is required for first-time TAs who will then have reduced time demands in other areas.

### **BIOL 344 Human Heredity and Evolution [3 credits]**

The TA for this course will lead three 2-hour tutorials per week. Attendance at lecture is not mandatory (arrangements to be made with the Instructor). Tutorials will cover assigned problem sets where the TA will help facilitate student understanding and develop problem-solving skills. The TA is also required to invigilate during the midterm exam, as well as mark the midterm and final exams. Final exam invigilation assignments will be done by each Department.

### **BIOL 351 Plant Physiology I [4 credits]**

TAs are required to teach, together with the lab instructor, several lab sessions each week. TAs will attend all lab meetings, information sessions and experimental demonstration sessions. During the labs they will explain various experimental protocols and concepts to students, facilitate discussion and answer students' questions. They will assist students in setting up their lab unit experiments and research project experiments on photosynthesis, respiration, water relations, protein/enzyme analysis, and stress physiology. TAs will also be required to grade student lab reports, research project reports and research presentations.

### **BIOL 352 Plant Physiology II: Plant Development [3 credits]**

TAs are required to teach, together with the lab instructor, several lab sessions each week. TAs will attend all lab meetings, information sessions and experimental demonstration sessions. During the labs they will explain various experimental protocols and concepts to students, facilitate discussion and answer students' questions. They will assist students in setting up their lab unit experiments and research project experiments on plant hormones, tissue culture, protein analysis, and plant growth and development. TAs will also be required to grade student lab reports, research project reports and research presentations.

### **BIOL 406 Plant Ecology I [4 credits]**

### **BIOL 407 Plant Ecology II [4 credits]**

## **TA positions offered through the Zoology Department**

### **BIOL 204 Vertebrate Structure and Function [4 credits]**

TA's are required to teach two 3-hour lab sessions each week and attend a 2-hour prep session on Monday morning (10-12). During each lab session the TA will be required to give an introduction, monitor the student's activities, answer questions and clean up afterwards. TA's will view the student's completion of weekly quiz questions and stamp completed books to be tallied in the last lab. Answers are posted the following week. TA's are expected to be available outside their teaching times, up to 1/2 hour per week to answer questions (usually by e-mail). TA's are expected to attend the lectures the first time they teach and in subsequent years refresh themselves on any difficult areas before they teach. The TA is responsible for setting up, taking down, and marking 2/5 of the lab exam for the labs they teach. In addition the TA's each mark a portion of the lecture mid-term and final exam. The TA is supported by Lab Faculty during the lab sessions and assisted in setting up and marking the lab exams. They will assist in a half-day clean up session at the end of the term.

### **BIOL 205 Comparative Invertebrate Zoology [4 credits]**

TA's are required to teach two 3-hour lab sessions each week and attend a 2-hour prep session on Monday morning (10-12). During each lab session the TA will be required to give an introduction, monitor the student's activities, answer questions and clean up afterwards. TA's will view the student's completion of weekly quiz questions and stamp completed books to be tallied in the last lab. Answers are posted the following week. TA's are expected to be available outside their teaching times, up to 1/2 hour per week to answer questions (usually by e-mail). TA's are expected to attend the lectures the first time they teach and in subsequent years refresh themselves on any difficult areas before they teach. The TA is responsible for setting up, taking down, and marking 2/5 of the lab exam for the labs they teach. In addition the TA's each mark a portion of the lecture mid-term and final exam. The TA is supported by Lab Faculty during the lab sessions and assisted in setting up and marking the lab exams. They will assist in a half-day clean up session at the end of the term.

### **BIOL 363 Laboratory in Animal Physiology [2 credits]**

TAs are required to teach, together with the lab instructor, one 3-hour lab sessions each week. Most time will be spent assisting students with their experiments. TAs are required to help with the grading of student lab reports, quizzes, lab exam and keep accurate records of student grades. There are weekly formal prep sessions to familiarize TAs with equipment and procedures (Computerized data acquisition software, spectrophotometry, calibration of transducers, dissections, etc.). TAs are expected to be familiar with basic concepts in animal physiology and experimental design.