

## TA Sharing Plan – Call for Nominations

### Award Details

Positions in each unit: 3 or more

Units: Biology, Chemistry, Mathematics, Physics

The Graduate School will coordinate the sharing of AY 2022-2023 TAs across graduate programs using TA lines which have been offered in the past on an *ad hoc* basis to meet increased undergraduate teaching needs and funded either through college resources or through resources provided centrally by the office of Academic Affairs.

The Graduate School will provide tuition and insurance support for these one year TA positions to create an assistantship package comparable to the authorized positions held by the Graduate School for TAs appointed in the teaching unit. TAs selected through this process must commit to the full year of the shared TA appointment and will be obligated to fulfill all duties normally expected of TAs in the teaching unit including participation in any orientation program as well as laboratory preparation/organizational meetings.

### Eligibility

New graduate applicants or continuing graduate students, either in or outside the teaching unit. Nominees must meet minimum specified teaching qualifications (see additional requirements regarding eligibility).

### Nomination Procedure

All nominations must include a Letter of Support, which describes the qualifications of the student, should not exceed one page, and should indicate the specific teaching unit where the student is being nominated to serve as a TA. The nomination letter must also acknowledge that the Graduate Coordinator has contacted the graduate student and has verified the student's willingness to accept a Shared TA if offered a position. Initial nominations will be made by the Graduate Coordinator of the student's home unit to the Graduate School. The Letter of Support will be forwarded to the teaching unit along with copies of transcripts and resumes from the student's file in the Graduate School as they are received. If a student is nominated as a Shared TA in multiple units, each nomination must be accompanied by a separate letter.

### Selection Process

Awards will be distributed competitively based on the selection criteria listed below. The Shared TAs will be selected through a cooperative process between the Graduate Executive Committee, chaired by the Associate Vice President for Graduate Studies and Senior Associate Dean, and including the Assistant Vice President for Research and five elected members from the Graduate Board., and representatives from the teaching units hiring the TAs.

Representatives of the teaching units will review all nominees and then meet as a group with representatives of the Graduate School to rank Shared TA nominees within each teaching unit. Each nominated student will be first considered as a Shared TA in the teaching unit with the highest ranking (based on student qualifications), and then may be considered in other teaching units, if not placed in the first unit. The goal is to avoid units competing with each other for the same graduate student. Once the teaching units have ranked qualified nominees, the Graduate School will request the research qualifications of the intended faculty mentors and capacity of the program to support the student following the one year TA from the units with successful nominations to aid in making final award decisions.

### Selection Criteria

Selection for these awards will be based on the student's academic qualifications (course preparation and GPA) as well as the program's (or advisor's) ability to support the graduate student following the TA appointment year with preference going to doctoral candidates. Where academic qualifications are otherwise equal, preference will be given to those candidates with demonstrated effectiveness in teaching.

### **Nominating Unit Deadline**

All nominations must be submitted by the Unit's Graduate Coordinator to Debbi Clements - debbi.clements@maine.edu with the subject line "Shared TA Nomination." The early nomination deadline for continuing graduate students is **Friday, December 10, 2021 at 4:30PM EST**. The later nomination deadline for continuing graduate students and new applicants is **Friday, February 4, 2022 at 4:30PM EST**. Students or advisors must contact the Graduate Coordinator of their unit for internal nomination deadlines. The early deadline for continuing students is intended to provide the teaching departments with a pool of qualified students from which to make TA assignments, although decisions may be deferred to the second deadline on some candidates.

### **Notification**

Continuing graduate students who are selected as shared TAs after the early deadline will be announced no later than Friday, January 21, 2022, to the student's advisor, graduate program coordinator, and the teaching unit. Students selected as shared TAs after the second deadline will be announced by Friday, March 25, 2022, to the student's advisor, graduate program coordinator, and the teaching unit. Teaching units will send TA appointment letters to the selected students outlining the responsibilities of the TA and terms of appointment. **Students accepting Shared TA appointments may not accept other assistantship offers after June 15. This restriction will be stated in the TA appointment letter which requires the student's formal acceptance of the terms.**

## Department of Biology Teaching Assistant

### BIO 100 – Basic Biology

#### Course Description

An introduction to the following fundamental topics in biology: the structure and function of cells, the molecular basis and mechanisms of genetic inheritance, concepts in evolution, mechanisms of metabolism, and ecology. Open to students in all colleges, but limited to students in programs requiring this course or intending to take additional biology courses.

#### Required Academic Background

- Life science undergraduate degree, or enrollment in a life science graduate program
- Familiarity with basic laboratory equipment
- Ability to foster a collaborative learning environment, including providing constructive criticism when needed
- Basic knowledge of statistics and previous teaching experience are preferred, but not necessary

#### Duties and Responsibilities

- Being in charge of three lab sections, each of which is two hours long and hosts 16-18 students
- Responsible for lab-specific instruction and communication with own students
- Grading lab reports, weekly lab presentations, poster presentation, and poster oral exam
- Maintaining regular weekly office hours (60 min)
- Reading the lab manual and preparing their own teaching notes for lab
- Proctoring lecture exams that occur outside of class time, as their schedule permits
- Proctoring one final exam during Finals Week
- Attending weekly meetings for 60 minutes to prepare for upcoming week's labs
- Participating in grading calibration sessions twice during semester
- Completing the annual general safety training web course, as well as the on-site area specific safety training and spill response training
- All TAs are strongly encouraged to attend BIO 100 lectures; beginning TAs are also encouraged to observe more experienced TAs in lab
- TAs are not responsible for lab set up or breakdown but may be asked to fill in for missing colleagues, with sufficient notice

#### Additional Information

Applicants for this position may also be considered for teaching assistantships in 300- and 400-level courses, based on their qualifications and on current teaching needs. No separate application is necessary.

### BIO 200 – Biology of Organisms

#### Course Description

An introduction to functions (physiology) and structures (anatomy, morphology) of animals and plants stressing basic physiological processes and adaptations to the environment. Equal attention is given to plants and animals.

#### Required Academic Background

- Life science undergraduate degree, or enrollment in a life science graduate program
- Familiarity with basic laboratory equipment
- Ability to foster a collaborative learning environment, including providing constructive criticism when needed
- Basic knowledge of statistics and previous teaching experience are preferred, but not necessary

### **Duties and Responsibilities**

- Being in charge of two lab sections, each of which is three hours long and hosts 16-18 students
- Responsible for lab-specific instruction and communication with own students
- Grading lab reports, weekly lab-presentations, and final oral presentation
- Maintaining regular weekly office hours (60 min)
- Reading the lab manual and preparing their own teaching notes for lab
- Proctoring lecture exams that occur during class time.
- Proctoring one final exam during Finals Week
- Attending weekly meetings for 60 min to prepare for upcoming week's labs
- Participating in grading calibration sessions twice during semester
- Completing the annual general safety training web course, as well as the on-site area specific safety training and spill response training
- All TAs are strongly encouraged to attend BIO 200 lectures; beginning TAs are also encouraged to observe more experienced TAs in lab
- TAs are not responsible for lab set up or breakdown but may be asked to fill in for missing colleagues, with sufficient notice

### **Additional Information**

Applicants for this position may also be considered for teaching assistantships in 300- and 400-level courses, based on their qualifications and on current teaching needs. No separate application is necessary.

## **BIO 208 – Anatomy and Physiology**

### **Course Description**

BIO 208 focuses on the structure and function of the human body and is taken by students from a variety of majors, many of whom are interested in health-related careers.

### **Required Academic Background**

- Life science undergraduate degree, or enrollment in a life science graduate program
- Familiarity with basic laboratory equipment
- College-level course work in chemistry (at least one semester) and general biology (at least two semesters)
- Ability to foster a collaborative learning environment, including providing constructive criticism when needed
- Course work in animal anatomy or physiology, especially with an emphasis on humans, is preferred, but not necessary

### **Duties and Responsibilities**

- Being in charge of three lab sections, each of which is two hours long and hosts 20-21 students
- Responsible for lab-specific instruction and communication with own students
- Grading lab reports, quizzes, homework, and lab exams
- Maintaining regular weekly office hours (60 min)
- Proctoring lecture exams
- Attending weekly meetings for 60-120 min to prepare for upcoming week's labs
- Completing the annual general safety training web course, as well as the on-site area specific safety training and spill response training
- Staffing three open lab periods

### **Additional Information**

Applicants for this position may also be considered for teaching assistantships in 300- and 400-level courses, based on their qualifications and on current teaching needs. No separate application is necessary.

## **BIO 223 – Biology: A Living Science Laboratory**

### **Course Description**

BIO 223 is a laboratory course accompanying a non-major biology course (BIO 221 – Biology: A Living Science) and is focused on examination of the processes and principles of science across disciplines. Exercises are presented from topics such as ecology, evolution and cellular biology.

### **Required Academic Background**

- Life science undergraduate degree, or enrollment in a life science graduate program
- Familiarity with basic laboratory equipment
- Basic knowledge of statistics
- Ability to foster a collaborative learning environment, including providing constructive criticism when needed
- Previous teaching experience is preferred, but not necessary

### **Duties and Responsibilities**

- Being in charge of three lab sections, each of which is two hours long and hosts 18 students
- Responsible for lab-specific instruction and communication with own students
- Grading lab reports, quizzes, homework, and lab exams
- Maintaining regular weekly office hours (60 min)
- Meeting with the course coordinator on a weekly basis in order to prepare for weekly labs, and to discuss any issues with content, grading, or aspects of student performance
- Preparing for the content of the lab prior to teaching it
- Reporting to the lab earlier than the start time to make sure that all components are available for student activities on a given lab day
- Providing students with feedback on assignments in a timely fashion, in order to maximize student improvement
- Attending lecture as needed
- Completing the annual general safety training web course, as well as the on-site area specific safety training and spill response training

### **Additional Information**

Applicants for this position may also be considered for teaching assistantships in 300- and 400-level courses, based on their qualifications and on current teaching needs. No separate application is necessary.

## Department of Chemistry Teaching Assistant

### Courses

Graduate students who are not Chemistry graduate students likely will teach general chemistry laboratories (CHY 123, CHY 124 and CHY 133).

### Expected Academic Background

- The quintessential role of a TA in a chemistry laboratory is safety, and this requires an excellent understanding of chemistry.
- A solid understanding of chemistry and how to facilitate lab work safely are essential skills used by the TA to act autonomously, if the need arises, in response to an accident in the laboratory.

### Minimum Requirements to Teach General Chemistry Labs

- Science or engineering undergraduate degree that must include:
  - One year of General Chemistry
  - One year of Organic Chemistry
- Additional laboratory experience in chemistry or a closely related field is preferred.

### Weekly Workload

The workload for Chemistry TAs averages 20 hours per week, based on a 15-week semester. TA duties vary somewhat week to week with some activities occurring periodically and others occurring weekly.

### Duties and Responsibilities

- Teach three laboratory sections per week in fall semester. Teach two laboratory sections per week in spring semester and one laboratory section in the summer session. Depending on projected summer needs, some TAs teach three sections in the spring and do not teach in the summer. Each laboratory section typically has 16-22 students.
- Labs are held in Aubert Hall at 2:10-5:00 PM. There are a few morning labs also.
- To allow TA scheduling, all general chemistry TAs must be available every afternoon, Monday-Friday, 2:00-5:00 PM and Mondays 12:10-1:30 PM.
- Participate in a general chemistry TA "boot camp" (7-10 hours of training). The boot camp may occur in the week before the semester begins or in the first week of the semester.
- Complete the Department of Chemistry safety training program in addition to the University of Maine safety training.
- Take CHY 502 (a 1 credit course for general chemistry TAs; meets Mondays 12:10-1:30 PM). Complete homework assignments for the CHY 502 course (fall semester). Course taken fall semester only.
- Attend a 1.5 hr weekly TA meeting (Monday 12:10-1:30 PM) at which safety and lab techniques and issues related to specific labs will be discussed.
- Prepare for upcoming lab experiments and have laboratory and breakout room prepared in advance for students' arrival.
- Provide pre- and post-lab lectures and work sessions.
- Be responsible for teaching safe chemical practices, maintaining a safe laboratory and be able to respond appropriately to a laboratory accident.
- Be knowledgeable with and able to demonstrate all lab techniques and instrument and software use (e.g. pH meters, UV-Vis spectrometers, IR spectrometers, Inter-Chem-Net).
- Grade pre-lab work, laboratory reports and other assignments. Grading involves use of an online website to download student work, upload graded work, and post grades.
- Proctor and help grade general chemistry exams (midterms and final) for lecture instructors.
- Maintain weekly office hours and be willing to make alternative arrangements to meet with students who have schedule conflicts with the posted office hours.

## Department of Mathematics and Statistics Teaching Assistants

### Expected Academic Background

A teaching assistant in the Department of Mathematics and Statistics has to have the necessary skills in mathematics to explain confidently and clearly the mathematics concepts in the course involved.

### Minimum Requirements

- MAT 108
  - A degree in a STEM field with successful completion of a course at the level of Calculus I.
  - At least a minor in education or current enrollment in an education-related program.
- MAT 122 Precalculus
  - A degree within the STEM fields with mathematics coursework equivalent to a minor in mathematics.
  - Experience tutoring or assisting in a course at the precalculus level.
  - Experience with collaborative learning classrooms is preferred.
- MAT 126 Calculus I
  - A degree within the STEM fields with mathematics coursework equivalent to a minor in mathematics.
  - Experience tutoring or assisting in a course at the calculus I level.
  - A major in mathematics is preferred.

### Duties and Responsibilities

- Average 20 hours per week of preparation, instruction, individual assistance, and grading. Enrollment in the department's TA seminar for those who have not previously taken it.

Specifically:

- MAT 108
  - Assisting a faculty member in the Department of Mathematics & Statistics with teaching one section of the course.
  - Teaching the second section of the course.
- MAT 122 & MAT 126
  - Each week the TAs will teach recitation sections on Tuesdays and/or Thursdays; in MAT 122 these will be 4 recitations of 75 minutes each; in MAT 126 these will be 6 sections of 50 minutes each.
  - Working 3 hours per week in Math Lab.

## Department of Physics Teaching Assistant

### Expected Academic Background

A teaching assistant in the Department of Physics and Astronomy has to have the necessary skills in physics and mathematics to teach confidently and creatively.

### Minimum Requirements

- Regardless of the class, we expect that a teaching assistant's conceptual understanding of the physics will be coupled with the mathematical skills required to build a model of a situation as appropriate for a given class.
- **Mastery of algebra, calculus, and multi-dimensional analysis are required.**

### Duties and Responsibilities

Typically, teaching assistants are part of the introductory courses for engineers, engineering technology, astronomy, or life sciences students. Students will typically teach laboratories and grade lab reports, teach problem solving and grade homework problems, or teach small-group tutorials and grade conceptual homework problems.