APPLICATION FOR TEACHING ASSISTANTSHIPS
IN
CORE BIOLOGY COURSES 2019-2020

By completing this application, you will be considered for a Teaching Assistantship in one of the Core Biology Courses. The courses are conducted in a variety of different formats and consequently each instructor may have different expectations of their teaching assistants. In general, a balanced training in undergraduate biology courses is required for the Investigative Biology Laboratory (BIOG 1500) and Foundations of Biology (BIOG 1140), and applicants who have taken specialized courses will have the advantage of being selected for the other courses. All courses require their TAs to have a good command of spoken and written English, organizational skills, and interpersonal demeanor.

TA applications are due by **28 February 2019 at 8am E.S.T.** Review of applications and subsequent offers will begin immediately thereafter and continue until all positions are filled. We anticipate filling all positions before 15 April 2019. In general, TAships are awarded in the spring for the following academic year. In some special cases, however, TAships will be offered for a single semester, either fall or spring.

After reading this application, if you need additional information please contact Cole Gilbert Director of Undergraduate Biology; email: cg23@cornell.edu
Section I. COURSE FORMAT AND TA RESPONSIBILITIES

A. BIOG 1445: Introduction to Comparative Anatomy and Physiology, Individualized Instruction
   Instructor: Darlene Campbell

   BioG 1445 is an individualized instruction course serving biology majors. Students learn information through readings, demonstrations, small group discussions, and, most importantly, through one-on-one tutoring. An important aspect of this course is that it is based on mastery learning using oral tests as the primary method of evaluation. There is one 50-minute meeting per week, which may be a lecture or small group discussion, and four formal labs per semester. Each TA teaches only one of the four labs each semester.

   Your total time commitment will average 20 hours per week. This includes time for preparation. TAs:
   1. attend orientation and training meetings scheduled for the two days prior to the start of each semester.
   2. work three 3-hour sessions in the Study Center per week during which they tutor and administer oral tests.
   3. attend mandatory preparatory 2-hour staff meetings each week (Monday, 2:30-4:30 pm) and special laboratory preparatory sessions (individually scheduled).
   4. teach a maximum of three laboratory sections during each semester.
   5. prepare to present the materials and concepts of each of the 10 units to students. TAs must write out and submit answers to all unit objectives in the course Survival Manual according to a prescribed schedule.
   6. attend all 50-minute lectures (4/semester) given during the 9:05 am lecture period on Tuesdays.
   7. grade lab reports and quizzes for students in your lab sections.
   8. proctor the final exam each semester and assist in the grading of essay questions.

B. BIOG 1140: Foundations of Biology
   Instructor: Bob Turgeon

   BioG 1140 is a general biology course primarily for non-life science majors, although some students majoring in life sciences, other than biology, take it. The emphasis is on cell biology, biochemistry, genetics and molecular biology. The goal is to provide students with a common, basic background that other courses in their discipline can build on. We do not deal very much with biological systems, for example the nervous system or xylem transport, unless we use those systems as examples to illustrate more fundamental concepts, such as membrane transport. We teach little at the ecological level.

   This is a good course in which to develop teaching skills since you will be introducing fundamental concepts to a varied group. This is a 15-hour per week TA assignment.

   TAs are responsible for the following:
   1. Teach and grade two 50-min Discussion Sessions per week. See the Course and Time Roster online for session times. There are 4 TAs and 8 sessions. The TAs work out the most convenient session times among themselves. Several of the discussion sessions require grading.
2. Attend all lectures (Tuesday, Thursday; 11:40 – 12:55 in Kennedy 116).
3. Attend a TA meeting once per week, usually held on Friday.
4. Hold office hours (1 hr/week)
5. Review quizzes and final exam before they are printed, monitor the quizzes (probably 2, in class), and monitor the final exam (1.5 hrs). You will probably be called upon to grade quizzes as well, since they often consist of part multiple choice and part essays. There is no manual grading of the final exam because it is strictly multiple choice.

C. BIOMG 1350: Principles of Cell and Developmental Biology
Instructors: Tim Huffaker and Maria Garcia-Garcia, fall semester; Tony Bretscher and Kelly Liu, spring semester.

This is one of the core “choice” introductory biology courses for students majoring in biology and a few other life science majors. Students planning to major in biology will be encouraged to take this course within their first three semesters. Students will attend two lectures and one active-learning section per week. TA applicants should have taken basic courses in biochemistry, cell biology and genetics; coursework in developmental biology is helpful, but not required. This is a 15-hour per week TA assignment.

TA duties are as follows:
1. Attend two 50-minute lectures per week
2. Attend a weekly ~2-hour meeting with instructors to plan section activities
3. Teach three active learning sections per week (50-minute duration, maximum 20 students in each)
4. Score homework and in-class assignments
5. Keep records of attendance and homework completion by students in your sections
6. Hold review sessions prior to each of the three prelims and final exam.

D. BIOG 1440: Introduction to Comparative Physiology
Instructors: TBD from the pool of Cole Gilbert, Vimal Selveraj, Jim Shapleigh, Nicolas Buchon, Paul Soloway

This course is another of the introductory biology “choice” courses in the core curriculum for students majoring in biology and some other life sciences. Students will be primarily freshmen with interests in medical or veterinary school, or graduate school in the life sciences. The course consists of two lectures and one discussion/mini lab section per week. The possibility also exists of doing a “double TAship” in one semester, thereby earning a full year of support in one semester. This is a 15-hour per week TA assignment.

TA duties are as follows:
1. Attend two 50-minute lectures per week and a 1.5-hour weekly meeting of the course staff to plan section activities.
2. Teach three 50-minute discussion/lab sections each week (maximum 20 students in each), and keep records of attendance and homework completion by students in your sections.
3. Help write and grade two prelims and one final exam.
4. Hold office hours (1 hour/week).
5. Participate in review session before each prelim and final
E. BIOEE 1610: Ecology and the Environment

Instructors: In fall semesters 3 of the following: Anurag Agrawal, Alexander Flecker, Christine Goodale, Alison Powers, and Justin St. Juliana. In spring semesters: Bob Howarth and Justin St. Juliana.

This is the third “choice” introductory biology core course for students majoring in biology and some other life sciences. It is designed to introduce the core concepts of the science of ecology. A fundamental knowledge of the relationship between organisms and their environment is critical for understanding the intricacies of the natural world and for solving many of the environmental problems that confront us today. Our goals are for students to gain an understanding of: 1) major principles underlying the ways organisms interact with their physical and biological environments, 2) how complex ecological systems function, 3) approaches and tools employed in ecological research, 4) application of ecological concepts to solving environmental problems and conserving biodiversity. We aim to engage different learning styles with a combination of readings, lectures, and section activities. Lectures will highlight the major points about each topic, often taking a different approach than the text and providing additional examples. The course lectures heavily involve active learning. This is a 15-hour per week TA assignment.

TA duties are as follows:
1. Attend two 50-minute lectures per week and a 1-hour weekly TA meeting to review instructional plans for section activities.
2. Teach three 50-minute discussion/lab sections each week (maximum 20 students in each), grade section activities and keep grading records of attendance and homework completion by students in your sections.
3. Run pre-exam review sessions and help proctor and grade two or three prelims and one final exam.
4. Hold office hours (1 hour/week).

F. BIOG 1500: Investigative Biology Laboratory

Instructor: Mark Sarvary

This is a two-semester assistantship; however the course content is identical each semester. A single semester assistantship is not offered. Your total time commitment will average 20 hours per week. This includes time for preparation. Teaching assistants gain real teaching experience and can improve their pedagogical skills in this course. At the beginning of the fall semester TAs receive pedagogy training in the form of a 2-3 days long workshop. During the spring semester TAs receive education credit (BioG6500) and discuss best teaching practices as part of the TA training. These training sessions will result in a personalized statement of teaching philosophy and diversity statement. Both of these statements will strengthen the teaching portfolio of the graduate student and help with job applications in academia. Per week, they teach two 18 student lab sections of 3 hours duration each, with the help of at least one undergraduate teaching assistant. Grades are based on two in-lab practical exams, quizzes, paper discussions and writing assignments. Lab topics are organized into three-week-long modules, emphasizing the scientific process in biological investigations. Students design their own experiments, conduct statistical tests using the statistical software R, write a scientific paper and produce a poster. The course staff includes a lecturer, a teaching postdoc, 12 graduate teaching assistants, 12-16 undergraduate teaching assistants, two lab preparators, and one administrative assistant.
As a TA, you will:
1. Participate in a brief Lab Instructor training program during the week preceding the first week of laboratory teaching.
2. Teach two laboratory sections (3 hrs duration, 16-18 students in each).
3. Attend the Monday afternoon preparatory meeting from 1:30 to around 4:30 p.m., and the lecture on Tuesday at 9:05 a.m. each week. It is recommended that new TAs attend a lab section taught by an experienced TA each week before their first section.
4. Hold office hours (2 per week) in Comstock hall during which you can meet with and tutor students.
5. Be adequately prepared to present the materials and concepts of each laboratory sequence to your students.
6. Grade practical exams and writing assignments for students in your lab sections.
7. Hold a review session near the end of each semester to help your students prepare for the practical exam.
8. Keep accurate written records on all grades received by your students.
9. Mentor one or two undergraduate teaching assistants.

G. BIOMG 2801: Laboratory in Genetics and Genomics
Instructor: Kristina Blake, fall and spring semesters

This course is a general introduction to laboratory experimental genetics in eukaryotes and bacteria. Topics include gene transmission, linkage, recombination, structure, mutations, and manipulation. TA applicants need to have taken an introductory genetics course. This is a 15-hour per week TA assignment.

TA duties are as follows:
1. Attend weekly organizational meeting (1.5-2 hr)
2. Lead one lab section and assist with another
3. Grade lab reports
4. Grade lab exams
5. Hold weekly office hours
Section II. SUMMARY OF STIPEND AND APPOINTMENT PERIODS

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>BIOG 1445 and BIOG 1500</th>
<th>BIOG 1140, 1440, BIOEE 1610, BIOMG 1350, 2800/2801</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of hours required/wk during teaching weeks</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Two-semester stipend</td>
<td>$36,291</td>
<td>$27,218</td>
</tr>
</tbody>
</table>
| Appointment period* | Fall appointment: August 16 – December 31  
Spring appointment: January 1 – May 15 | |

* As per University Policy 1.3: “TA assignments follow the academic year calendar. Because the academic calendar does not always correspond with the appointment periods, TAs should be informed that, when a semester either begins or ends outside that period, they may be required to fulfill teaching responsibilities outside of the appointment period”

**Double TAships:** There are restrictions to serving a double TAship during a single semester. Please refer to Section V.C.6 on p.21 of the Graduate code of legislation for details.  

**Employment and Registration Units:** The time devoted to part-time work affects the opportunities for accumulation of registration units, as follows:

- Up to 20 hours of combined assistantship, hourly student appointments, and/or outside employment per week. A student may register in full-time status. (A student who holds a University-funded fellowship, external fellowship, or graduate research assistantship may accept additional assistantships, hourly student appointments, and/or outside employment of no more than eight hours per week, provided that the terms established by the funding entity allow for such arrangements.) For certification to outside agencies consenting to this interpretation, students on a single graduate assistantship are regarded as full-time students.

- 21 to 40 hours of combined assistantship, hourly student appointments, and/or outside employment per week. A student may register in half-time status. Master's students may complete the equivalent of one semester of registration in this way. Ph.D. students may earn a maximum of two registered semesters this way. Students who wish to register in a half-time status must obtain the prior approval of their special committee chair, Director of Graduate Studies, and the Graduate Dean. The General Petition is available at [https://gradschool.cornell.edu/wp-content/uploads/2018/07/General-Petition-10_23_15_1.pdf](https://gradschool.cornell.edu/wp-content/uploads/2018/07/General-Petition-10_23_15_1.pdf)

- International students are subject to 22 immigration regulations relating to full-time student status and employment and should consult with International Services in the Office of Global Learning [https://isso.cornell.edu/](https://isso.cornell.edu/) before accepting any combination of assistantships, hourly student appointments, and/or outside employment that exceed 20 hours per week.
Section III. APPLICATION, SELECTION AND NOTIFICATION PROCEDURES

A. Application

There is a separate MS-Word file which has been sent to many people, likely including your department Chair or DGS. It is also available at the OUB website [https://biology.cornell.edu/advising/forms]. Follow the link on the front page. Download the form, fill it in electronically, save it as a PDF and email it to Mr. Jim Sheehan, jfs295@cornell.edu

B. Selection Process

Your application will be reviewed initially by a member of the course indicated as your top choice. An interview may be arranged if your application file is favorable and, following a successful interview, the instructor may indicate his or her intent to offer you a TAship. This is not binding – the actual offers and contracts will come from the Office of Undergraduate Biology (OUB) as described below. Your file may also be reviewed by staff members of courses not listed as your top choice, and if your application is favorable, the instructor again may call you for an interview and may indicate his or her intention to offer a TAship in a course that is your second or third choice. The staff of each course will meet or correspond regularly among themselves and even with instructors of other courses to select TAs. As best as we can, we will try to match your preference and application to the course of your choice.

C. Notification Procedures

If your funding situation changes before you are offered a TA contract, e.g., your NSF GFRP proposal is awarded, please let us know immediately so that we can remove your application to make room for others. You may contact Cole Gilbert (cg23@cornell.edu), the Director of Undergraduate Biology, regarding the status of your application. If initially a position is not available, we will retain your application. Quite often slots become available even late in the spring and summer, and we will continue to make offers until all positions are filled.

To reiterate, only the Office of Undergraduate Biology can make you an offer and supply a contract. All conversations with course instructors or other members of the Cornell community are purely a preliminary review and those entities cannot make an offer. Moreover, TAship offers can only be made to students in a research track paying contract college rates of tuition. If you are in a professional graduate program, e.g., MEng, you will be excluded from consideration.

If you are offered a TAship, you must accept it or reject it by the deadline specified in the contract letter. Your failure to accept an offer by the specified deadline may preclude your being offered the same TAship again. Once you have signed a contract letter, you are bound to adhere to the contract. If your situation changes, e.g., your Advisor’s NIH grant is awarded in July, please contact Cole Gilbert (cg23@cornell.edu) immediately. We, in conjunction with your department chair, DGS, and Advisor, will strive to find an alternative person to fulfill your obligation, and release you from the contract. However, the fulfillment of the contract is ultimately the student’s responsibility.