

## Department of Geological and Environmental Sciences

### Teaching Assistantship Course Information

Full-time teaching assistants are usually assigned to lead one or more laboratory sections of introductory through 5000-level courses. A typical full-time assignment includes serving as the instructor of record for either an upper division (3000- through 5000-level) laboratory section, or multiple lower division (1000- to 3000-level) in person and online sections. A typical half-time assignment includes serving as the instructor of record for a lower division in person or online laboratory section. Additional work may be assigned as laboratory coordinator of a multi-section course, grader, or lecture assistant for large-enrollment lecture courses.

This document describes typical duties associated with each course as well as minimum and preferred qualifications. Course delivery mode is in person, unless otherwise noted.

#### **Teaching Assistant: GEOS 1000 - Dynamic Earth**

Minimum qualifications:

- Firm understanding of earth science (has taken coursework equivalent to GEOS 1300 and GEOS 3010)

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and puts equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Review instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- As GEOS 1000 has multiple sections, teaching assistants must attend regular meetings run by the lab coordinator
- Maintain good communication with both the lab coordinator and the instructor of record

#### **Teaching Assistant: GEOS 1000 - Dynamic Earth (online)**

Minimum qualifications:

- Firm understanding of earth science (has taken coursework equivalent to GEOS 1300 and GEOS 3010)

Typical duties:

- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester

- Reply to student communications within 24 hours
- As GEOS 1000 has multiple sections, teaching assistants must attend regular meetings run by the lab coordinator
- Maintain good communication with both the lab coordinator and the instructor of record

### **Teaching Assistant: GEOS 1020 - Planetary Geology (online)**

Minimum qualifications:

- Firm understanding of earth science (has taken coursework equivalent to GEOS 1300)

Typical duties:

- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with both the lab coordinator and the instructor of record

### **Grader: GEOS 1050 - Dinosaurs (online)**

Minimum qualifications:

- Firm understanding of earth science (has taken coursework equivalent to GEOS 1300)

Typical duties:

- Assist instructor in grading course assignments (e.g., quizzes, essay) within 7 days and maintain grades in Elearning
- Reply to student communications within 24 hours
- Maintain good communication with both the lab coordinator and the instructor of record

### **Teaching Assistant: GEOS 1300 - Physical Geology\***

\*Note: GEOS 1290 – Physical Geology Laboratory is an equivalent course for students who only need a laboratory credit

Minimum qualifications:

- Firm understanding of earth science (has taken coursework equivalent to GEOS 1300 and GEOS 3010)

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and puts equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Review instructions and safety protocols for lab activities

- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- As GEOS 1300 has multiple sections, teaching assistants must attend regular meetings run by the lab coordinator
- Maintain good communication with both the lab coordinator and the instructor of record

### **TA Laboratory Coordinator: GEOS 1000 - Dynamic Earth and/or GEOS 1300 - Physical Geology**

GEOS 1000 and/or GEOS 1300 have multiple lab sections with one teaching assistant assigned to each course as the lab coordinator. Minimum qualifications:

- At least one semester prior experience as a teaching assistant for GEOS 1000 or GEOS 1300

Typical duties:

- Maintain regular communication with the lecture section instructor
- Order materials and supplies including any laboratory course packs
- Set up, maintain, and train other teaching assistants on the course Elearning site
- Lead regular meetings where the next week's lab will be covered in detail, ensuring that all teaching assistants cover the same material and have clear understanding of the samples and techniques used in lab
- Work with other teaching assistants to ensure that grading is uniform across multiple sections

### **Teaching Assistant: GEOS 1900 - Evolution of Life (online)**

Minimum qualifications:

- Firm understanding of historical geology (has taken coursework equivalent to GEOS 4700)

Typical duties:

- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with both the lab coordinator and the instructor of record

### **Teaching Assistant: GEOS 3010 - Introduction to Earth Materials**

Minimum qualifications:

- Firm understanding of earth materials (has taken coursework equivalent to GEOS 1300 and GEOS 3010, or a Mineralogy and a Petrology course)
- Valid US driver's license
- Prior field course or field research experience preferred

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- Attend all lecture meetings and assists with discussions and group activities
- During the course field trip, drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 4300 - Structural Geology**

Minimum qualifications:

- Firm understanding of structural geology (has taken the equivalent of GEOS 1300, GEOS 3010, and GEOS 4300)
- Valid US driver's license

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During the course field trip, drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 4320 - Geomorphology**

Note that this is a baccalaureate writing course.

Minimum qualifications:

- Firm understanding of geomorphology (has taken the equivalent of GEOS 1300 and a geomorphology course)
- Valid US driver's license

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During the course field trip, drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 4350 - Sedimentology and Stratigraphy**

Note that this is a baccalaureate writing course.

Minimum qualifications:

- Firm understanding of sedimentology and stratigraphy (has taken the equivalent of GEOS 1300, GEOS 3010, and a course in sedimentology and stratigraphy)
- Valid US driver's license

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During the course field trip, drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 4700 - Earth History**

Note that this is a baccalaureate writing course.

Minimum qualifications:

- Firm understanding of sedimentology and paleontology (has taken the equivalent of GEOS 1300 and GEOS 3010)
- Valid US driver's license

- Prior coursework in sedimentology, stratigraphy, and paleontology preferred

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During the course field trip, drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 5100 - Advanced Earth Materials**

Minimum qualifications:

- Firm understanding of earth materials (has taken equivalent of GEOS 1300 and GEOS 3010, or coursework in Mineralogy and Petrology or an Earth Materials I and II sequence)
- Prior experience with commonly used analytical tools in the earth sciences (e.g., XRD, XRF, SEM, or petrographic microscopes)
- Valid US driver's license

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During the course field trip, drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Grader: GEOS 5120 – Hydrogeology (online and in person)**

Minimum qualifications:

- Firm understanding of hydrogeology (has taken coursework equivalent to GEOS 5120)

Typical duties:

- Assist instructor in grading course assignments (e.g., quizzes, homework, essay) within 7 days and maintain grades in Elearning
- Reply to student communications within 24 hours
- Maintain good communication with both the lab coordinator and the instructor of record

### **Teaching Assistant: GEOS 5170 – Research Project**

Minimum qualifications:

- Firm understanding of earth sciences (has taken the equivalent of GEOS 1300, GEOS 3010, and upper division courses)
- Strong background in research equivalent to having completed an undergraduate thesis or MS degree
- Strong written and oral communication skills

Typical duties:

- Review key concepts, vocabulary, and principles with students
- Assist students with all aspects of developing a research project, including selecting a topic, preparing a literature review, developing relevant methods, carrying out the research, and preparing oral and written communication
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings

### **Teaching Assistant: GEOS 5210 - Geological and Environmental Remote Sensing**

Minimum qualifications:

- Firm understanding of earth sciences and remote sensing (has taken the equivalent of GEOS 1300, GEOS 3010, and prior course(s) in Remote Sensing and GIS)
- Strong background in software and computer hardware used in the course preferred

Typical duties:

- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings

### **Teaching Assistant: GEOS 5230, 5240, 5250, 5260, 5270, and 5280 Modules – Hydrogeology Field Camp (summer only)**

Note that these courses require extensive outdoor fieldwork, overnight travel, and extended hours.

Minimum qualifications:

- Firm understanding of hydrogeology (has taken the equivalent of GEOS 1300, GEOS 3010, and the hydrogeology field camp)
- Valid US driver's license

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During field work: drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 5350 – GIS Applications in Geological and Environmental Sciences**

Minimum qualifications:

- Firm understanding of earth sciences and remote sensing (has taken the equivalent of GEOS 1300, GEOS 3010, and prior course(s) in Remote Sensing and GIS)
- Strong background in software and computer hardware used in the course preferred

Typical duties:

- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings

### **Teaching Assistant: GEOS 5600 – Introduction to Geophysics**

Minimum qualifications:

- Firm understanding of geophysics (has taken the equivalent of GEOS 1300, GEOS 3010, and GEOS 5600)



- Valid US driver's license

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During field work: drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 5650, 5660, and 5670 Modules – Mapping Field Camp (summer only)**

Note that these courses require extensive outdoor fieldwork, overnight travel, and extended hours.

Minimum qualifications:

- Firm understanding of geology and geological mapping (has taken the equivalent of GEOS 1300, GEOS 3010, and a mapping field camp)
- Valid US driver's license

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During field work: drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **Teaching Assistant: GEOS 5730 – UAV's: Geological and Environmental Applications**

Minimum qualifications:

- Firm understanding of earth sciences and remote sensing (has taken the equivalent of GEOS 1300, GEOS 3010, and prior course(s) in Remote Sensing and GIS)
- Valid US driver's license

- Valid drone pilot's license preferred

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During field work: drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work

### **GEOS 5740 – UAV's: Geophysical Applications**

Minimum qualifications:

- Firm understanding of geophysics (has taken the equivalent of GEOS 1300, GEOS 3010, and GEOS 5600)
- Valid US driver's license
- Valid drone pilot's license preferred

Typical duties:

- Set up lab equipment and/or samples prior to start of lab and put equipment away after lab (some labs may require brief clean-up of equipment)
- Review key concepts, vocabulary, and principles with students
- Reviews instructions and safety protocols for lab activities
- Grade laboratory assignments (e.g., lab write-ups, pre-lab assignments, lab midterm/final) within 7 days and maintain grades in Elearning
- Maintain office hours throughout the semester
- Reply to student communications within within 24 hours
- Maintain good communication with the instructor of record which may require regular meetings
- During field work: drive university vehicles, prepare and use field equipment, maintain a safe environment for students, assist the course instructor, and assist students with field work