

# RESPONSIBILITIES OF GRADUATE TEACHING ASSISTANTS

Department of  
Electrical Engineering  
and  
Computer Science

South Dakota State University



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## Introduction

Graduate Teaching Assistants (GTAs) play an important role in the education of undergraduate students in the Electrical Engineering Program: They teach most of the instructional laboratories that undergraduate students are exposed to and thus play the key role in teaching the “hands-on” practical aspects of electrical engineering. This part of the B.S. degree education is extremely important and implies that GTAs have important responsibilities to meet. This document details some of the responsibilities that the entire department’s GTAs are expected to meet.

## GTA Eligibility

To be and remain eligible to receive a teaching assistantship under the electrical engineering program, a student must be officially enrolled in the EE program and taking courses in electrical engineering (unless special (written) exemption is granted by the EE department head). The student must have an up to date EE plan of study on file with the EE graduate coordinator and maintain a 3.0 average.

## GTA Reporting

GTAs are employees of the State of South Dakota hired by the Department Head. GTA’s report directly to the EE faculty instructor (supervisor), therefore it is important that the GTA know and understand the faculty supervisor’s expectations for the teaching assignment. The EE Graduate Coordinator is responsible for the GTA assignments and assessment using feedback from the faculty supervisor. This information, along with teaching evaluation surveys completed at the conclusion of each semester, is used by the Department Head to write a semester evaluation. Failure to meet responsibilities and expectations are grounds for termination of a GTA appointment by the Department Head.

Each GTA is assigned a specific duty (i.e., instructional laboratory) and faculty supervisor prior to the beginning of each semester. The GTA has the responsibility for meeting with the faculty supervisor before the start of classes for the purpose of planning for the semester. The GTA has the responsibility for learning the course objectives and faculty supervisor’s expectations—such details as the distribution of written laboratory handouts and grading should be discussed in this meeting. GTAs who are not familiar with the laboratory instrumentation to be used in a course must, on their own time, take the responsibility for learning the proper use of the specific instrumentation for that lab. The faculty supervisor and department’s engineering technician can provide assistance – don’t hesitate to ask for their assistance.

## Instructional Laboratory Time Periods

Each GTA must be punctual and make maximum use of the time period given for a laboratory course (usually 2 or 3 hours). Instructional laboratory courses should not be dismissed early—if students complete the work early, they should go over the assignment again or be encouraged to do their own constructive laboratory work. Students will soon learn that if they won’t be dismissed early they will try to pace themselves to complete the assignments near the end of the assigned time period rather than rush to complete the work so they can leave early. Likewise, students are **not** to be held late in the classes. GTAs must remember that completing the assignments is not the primary objective of the instructional laboratories. The purpose of the laboratories is to provide a practical learning experience that comes only through hands-on time spent in the laboratory. It is the duty of the GTA to seek out and give additional help to those

students who do not understand the material and yet do not ask questions. The GTA also has the responsibility for informing the faculty supervisor as to length of lab assignments—particularly if the assignments appear to be too long or too short. The GTA is responsible for keeping the faculty supervisor informed of student absences, poor performance, student conduct, etc.

If it should be impossible for the GTA to meet class due to an illness or other emergency, the EE&CSc office must be called as soon as possible and the situation must be immediately explained to the faculty supervisor. If unable to notify the faculty supervisor, the GTA must inform the EE Graduate Coordinator, Department Head, or secretary. An attempt to find a substitute will be made and the GTA may be asked to teach for a colleague on another occasion. Failure to properly notify the department of an absence may be grounds for termination of a GTA's contract.

It is absolutely essential that the office know that the classes are being taught and by whom. The faculty supervisor and EE Graduate Coordinator must be notified before allowing a substitute to teach any class. From time to time GTAs will also be called on to administer quizzes or exams for faculty who are unable to meet with a class. This typically occurs only a few times per semester for the entire department so only a few GTAs may be called upon for this help.

Occasionally an instructional laboratory course may be visited by outside guests along with a faculty host. Prospective students and their families enjoy visiting a laboratory class where they can see firsthand the kind of hands-on education that E. E. students receive. These visits are extremely important and may positively (or negatively) affect the visitors' impression of SDSU. GTAs who notice a visiting group should be particularly professional and acknowledge the visitors' presence with a personal greeting. They should also be prepared to explain the purpose of the course and specifically what assignment the students are currently completing.

#### Laboratory Conditions

The equipment inventory for the Electrical Engineering Program is extensive and is worth more than \$1,500,000. Much of the instrumentation has been purchased through alumni donations and research grants and represents much effort by many people. The equipment inventory is so important to the educational program that a full time engineering technician is employed for its maintenance. However, the department's GTAs have the most contact with the equipment inventory and are held responsible for its correct operation by students. GTAs have numerous responsibilities concerning the laboratory rooms and equipment, some of which are summarized below:

- a) No eating, drinking, or smoking in the laboratories.
- b) Any non-functional equipment must be immediately reported to the engineering technician and faculty supervisor, and EE Graduate Coordinator by email. The problem (malfunction) must be clearly explained.
- c) When a laboratory period is over, it is the GTA's responsibility to see that the laboratory is returned to its "ready" state (even if the room was not initially in the "ready" state).

This means:

1. All equipment must be returned to its proper place.
  2. All components must be accurately filed in their correct location.
  3. All broken leads and cables must set aside for repair (you must, in an email, clearly explain to technician where the leads are) and the good leads returned to the proper rack.
  4. Janitorial services must be performed to the extent that all waste paper, broken wires and other waste materials are removed from the tables and floor. This is for safety as well as appearance.
  5. Turn off all special equipment which has been used for the laboratory such as the curve tracer, oscilloscopes, etc.
  6. All windows must be closed, lights turned off and doors locked (unless another laboratory class immediately follows and the GTA for that class is present). Secure the area-this means not only the laboratory itself but the components room, equipment room and other facilities.
- d) Under no circumstance are you allowed to provide other students access to the laboratory you're instructing in. Should you choose to ignore this policy your GTA position may be terminated by the Department Head.
- e) Laboratory PCs are **not** to be used by TA for anything except that which is related to the course they are instructing. GTAs are not allowed to alter the computer in any fashion, including downloading of software, etc.

If the laboratory room is not in this "ready" state when the GTA arrives for the laboratory, any discrepancies should be reported to the EE Graduate Coordinator and faculty supervisor. However, the GTA is still responsible for returning the laboratory room to its "ready" state upon completion of the lab course. Faculty supervisors and the EE Graduate Coordinator will make routine inspections of the laboratory rooms to insure their professional care by GTAs.

### Safety

One of the greatest responsibilities of GTAs is the safety and welfare of the students in their classes. GTAs have the responsibility to know proper safety procedures and will receive some training during the mandatory department orientation course. Of particular concern is the need for GTAs to know how to respond to such incidents as fire, tornados, electrical shock and other medical emergencies. Every GTA should know the location of the nearest fire alarm and telephone, and should have immediate access to emergency telephone numbers. This is of particular importance for those GTAs who teach laboratories that extend beyond 5:00 pm since faculty and other personal may not be present in the department to offer assistance.

Campus Police: X 5117

Emergency: 111

## Course Syllabi and Grading Policies

The South Dakota Board of Regents and SDSU have a policy concerning course syllabi which is summarized from an SDSU Academic Affairs memo (8-25-93) below:

*It is the obligation of each higher education institution to inform students as the beginning of each course of the objectives, requirements, performance standards, and evaluation procedures for the course. This information should be in writing and incorporated into the current syllabus information for the course. A current syllabus for each course is maintained at the institutional level.*

GTAs, like faculty, are expected to handout for every class they are responsible for a syllabus and grading policy. As a minimum, the information must include the objectives of the course, and a tentative outline, as well as the GTA's office location, office hours, and email address. In addition, the grading policy must be clearly presented (i.e., total number of points per assignment, how final grades will be determined, etc.). The faculty supervisor will provide the general syllabus for the course and will ask that you fill in your office location, office hours, and email address. The final version must be approved by the faculty supervisor. The GTA, upon final approval, will have copies made and will distribute to the students on the first day of class. GTAs will receive assistance in preparing a syllabus and grading policy during the mandatory department orientation training program. It is the responsibility of the GTA to provide a copy of the final lab syllabus to the department secretary for filing purposes.

GTAs must be prepared to stand by a fair and consistent grading policy. One of the most important aspects of laboratory instruction is the requirement for technical writing in the form of laboratory reports. GTAs must emphasize the importance of clear and concise technical writing required in engineering and expect the highest quality from students. As a minimum, the GTA has the responsibility to check and grade the following aspects of student laboratory reports:

1. Neatness in appearance, completeness in technical presentation
2. Correct use of third person past tense technical language.
3. Correct spelling and grammar including proper sentence structure, capitalization, and correct use of symbols (i.e., by IEEE standards).
4. Correct labeling of all figures (with numbered captions beneath), tables (with numbered captions above), and graphs (axes, units, etc.).

It may be desirable to break the student grades into separate parts including technical content and technical writing. Of course this assumes that the GTA him/herself has good technical writing skills, which may not be correct. It is recommended that GTAs review the first 1 or 2 assignments with their faculty supervisors to verify the standards to be applied in grading, especially regarding technical writing. If the student feels his/her background in technical writing is inadequate for grading the course material, special training classes may be arranged by the EE Graduate Coordinator at the request of the GTA. It is far better for the GTA to come forward and immediately seek help in this matter than to wait and respond to poor teacher evaluations from students and the faculty supervisor at the end of a semester.

## Record Keeping

GRADING and ATTENDANCE: As instructor for the laboratories, GTAs hold the tremendous responsibility of assigning grades to students. The EE&CSc office, at your and your supervisor's request, can provide a blue grade book to aid in keeping class records. The supervisor may wish for the GTA to maintain accurate grading within an electronic format, such as Excel Spreadsheets. GTAs will be given a tentative class list at the beginning of the semester for the course(s) and additional names of students who add or drop during the first weeks of school. When a student drops a course or withdraws from the university, the date should be noted in the grade book opposite the student's name. Also, notify the faculty supervisor via email. It is recommended that student names not be entered into the grade book until it is time to record grades for the first assignment. This allows time for completion of student drops and adds.

All GTAs are required to consult their faculty supervisor prior to the start of the semester to discuss and agree on a grading policy to be used for the course. Specific guidelines must be established before the start of lab classes and must be presented to students in the form of a grading policy (handed out with the course syllabus). In addition, GTAs are required to notify the registrar of deficient students who are doing D and F work. Such reporting should be done with close consultation with the faculty supervisor. It must be remembered that the grade book is considered an official document of SDSU and must be neatly and adequately documented and turned back in to the department office at the end of the semester. The grade book must be considered highly confidential and should be cared for diligently. Under no circumstances should it be left unattended or turned over to any student. It should be stored in a secure place and it is good practice to occasionally photocopy all entries and store them in a secure place (preferably at home) in case the grade book should become lost.

Student attendance in the laboratory courses must be recorded in the grade book and all absences must be reported via email to the EE faculty supervisor immediately. Students who are behind in their work must also be reported. A student should never be more than one week behind unless illness or some serious circumstance has prevailed and it has been brought to the attention of the faculty supervisor.

At the end of the semester, the grade book will be given to the EE Graduate Coordinator. Periodically throughout the semester the EE Graduate Coordinator will meet with a GTA to review their grade book.

#### Laboratory Notebook

Each GTA is required to maintain a quality engineering notebook for recording all details of a lab exercise. The GTA will bring this notebook to the instructor two weeks prior to a lab in order to: 1) show they are prepared for the lab, 2) discuss details of the lab to insure proper preparedness. The lab notebook will then be used to aid in grading student reports and notebooks.

At the end of the semester, the engineering notebook will be given to the EE Graduate Coordinator. Periodically throughout the semester the EE Graduate Coordinator will meet with the GTA to review their engineering notebook.

#### Administrative Details

GTAs will be assigned a mailbox in the E.E. office and have the responsibility to check it regularly. Students should be instructed not to hand in laboratory notebooks in these personalized mail boxes since the boxes are too small. Instead, student laboratory notebooks can be placed in a plastic box (issued by department) located outside of their office.

Graduate Teaching Assistants should post office hours outside their office and maintain them. It is of great advantage to students if two or more different times are posted if conflicts are to be avoided. GTAs also have a responsibility to make provisions to meet with students outside of their regular office hours if necessary.

Prior to the start of each semester GTAs will be assigned an office that should be used for conducting open office hours. These offices are considered under the full responsibility of the GTA and must be maintained in a professional manner. Offices must be kept neat and well organized and should always be locked if left unattended. This is especially important if grade books are stored in the room. Since GTAs normally share an office with 1 or 2 others, cooperation is expected in maintaining a professional office. Loud music and other distractions should be avoided, especially when students are receiving assistance. GTAs will receive a key for their office as well as a key for the entrance of the building their office is located in. Great care must be taken of these keys to insure the security of the university's facilities and assets. Should a key become lost or stolen it should be reported to the department senior secretary as soon as possible. When entering a locked building by key after hours, GTAs are **not** to permit others to enter the building and/or laboratory unless they have their own key and authorization. The best policy is to unlock and enter the building alone so as to prevent unauthorized entry.

The EE&CSc office provides reasonable typing and duplicating service but GTAs should allow several days for completion of work. Under no circumstances should such work be requested less than one day before required in class. Duplicating laboratory handouts is to be completed by the EE&CSc Department Secretary – not the GTA. All photocopying for laboratory handouts, etc. should be completed in advance as early as possible. GTAs also have the responsibility for picking up their monthly paychecks from the department secretary. The department will not mail or forward paychecks and will not turn a paycheck over to anyone but the proper recipient named on the paycheck.

### Laboratory Instruction

GTAs have the responsibility for teaching and instilling “smart” methods for measurement of electrical parameters. Students should be taught about such aspects of basic measurement theory as precision, accuracy, measurement uncertainty, etc. GTAs should teach students how to obtain proper measurement resolution and how to estimate the accuracy of any measured and/or computed value in the laboratory. This is particularly important for basic measurements of voltage, current and amplifier gain (both magnitude and phase). They should also emphasize such effects as component tolerances and measurement instrument accuracies and should challenge students throughout the semester with thought provoking questions concerning measurement accuracy. Students should be challenged often regarding the number of significant digits they record for measured and computed values. Students simply cannot receive this important practical experience in a lecture course and GTAs have the responsibility for emphasizing it in the laboratory.