



**Erik Jonsson School of Engineering and Computer Science**  
**EE/CE 3111 Electronic Circuits Laboratory**

<b>Instructor</b>	Professor Yun Chiu (E-Mail: <a href="mailto:chiu.yun@utdallas.edu">chiu.yun @ utdallas.edu</a> )	
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	Office hours: Wed., 2-4 pm or by appointment	
<b>TA(s)</b>	TBA on course web	
<b>Course Webpage</b>	<a href="http://www.utdallas.edu/~chiu.yun/courses/3111Lab/">www.utdallas.edu/~chiu.yun/courses/3111Lab/</a>	
<b>Pre/Co-requisite</b>	EE/CE 3311	
<b>Lab Manual</b>	Available on the course web. For details of lab procedures and safety rules, refer to lab manuals.	
<b>CAD Tools</b>	PSpice 9.1 student version available at <a href="http://www.electronics-lab.com/downloads/schematic/013/">www.electronics-lab.com/downloads/schematic/013/</a>	
<b>Grading</b>	Lab reports (no attendance, no credit)	50%
	Pre-lab reports	20%
	Final exam	30%
	Extra credit (workstation cleanliness, etc.)	5%
<b>Class Rules and Regulations</b>	<ol style="list-style-type: none"> <li>1. No eating, drinking, or smoking in the labs.</li> <li>2. A group of maximum two people will make a team. Lab reports must be prepared <b>individually</b>.</li> <li>3. There is no credit for any missing lab sessions.</li> <li>4. You have to clean up the workstation after you finish your lab session. All equipment should be placed just as before your use. All parts should be in as original shape as possible and placed in the right place (Make sure you straighten up all the wires and legs of parts using pliers so that next group of students won't have problem with parts).</li> </ol>	
<b>Course Objective and Outcomes</b>	<p>This course is designed to provide students with professional skills for lab experiences. Design, assembly and testing of electronic circuits that use diodes, transistors and operational amplifiers in configurations typically encountered in practical applications. Use computers to control electrical equipment and acquire data using <b>Labview</b>. Students will at the end of the course demonstrate</p> <ul style="list-style-type: none"> <li>• understanding of electrical circuits in practical applications</li> <li>• ability to perform experiments and to analyze data</li> <li>• ability to use lab equipment safely and properly</li> </ul> <p>In addition, students will simulate their circuits with <b>PSpice</b>.</p>	
<b>Topics</b>	<p>Lab 1 Introduction to PSpice          Lab 2 Rectifiers          Lab 3 BJT Switch          Lab 4 BJT Amplifiers I          Lab 5 BJT Amplifiers II          Lab 6 MOS Amplifiers          Lab 7 Operational amplifiers I          Lab 8 Operational amplifiers II</p>	

<b>Lab Preparation</b>	<ol style="list-style-type: none"> <li>1. Download lab manual and bring the printout to lab sessions.</li> <li>2. Students must read the manual carefully and complete the prelab procedures before every lab and turn in the prelab report to TAs (turn in the original copy and keep a photocopy).</li> <li>3. Prepare for the experimental procedure with your understanding of the relevant theory.</li> </ol>
<b>Lab Procedural Routine</b>	<ol style="list-style-type: none"> <li>1. Arrive on time. Turn in your lab reports when you walk in the laboratory.</li> <li>2. Ask for the component kit box (labeled with a number on the cover), then start the experiment. Use the same box for every experiment.</li> <li>3. TA will assist students to complete the experiment. Ask for help when students are in trouble with circuits or equipment.</li> <li>4. Show the data sheet to TA and get TA's initial on it when experiment is completed.</li> <li>5. Clean the workstation and put all wires back into dangling. Turn off power of all equipment before leaving laboratory.</li> </ol> <p>Note: Students will work on experiments in two-person teams. Please have your teammate arranged asap. If you cannot find one, ask your TA for a partner assignment. Team members are to switch the role of commitment for every experiment. TA will judge your ability of handling equipment and troubleshooting experiments, which will be reflected on your final grade.</p>
<b>Pre-Lab Report</b>	P Spice simulation of all circuits. Two copies for prelab reports are required (original copy for TA and photocopy for students).
<b>Lab Report</b>	<ol style="list-style-type: none"> <li>1. Read the lab report instruction from the web page. Then, follow the designated instructions.</li> <li>2. Lab report must be completed <b>individually and independently</b>. You can share only the collected data sets with your partner. Copying any part of the report from others is strictly prohibited and is against the school's scholastic integrity policy.</li> <li>3. Lab reports are always due the next session after the lab is completed.</li> <li>4. Late lab report is allowed for one day grace period with 10% deduction from full credit.</li> <li>5. Students are asked to generate lab reports in a professional manner. Lab reports should be typed-in version (generated by a word processor).</li> <li>6. Reports must be turned in at the beginning of the lab sessions.</li> </ol>
<b>Final Exam</b>	<b>Individual</b> final exam will be conducted in class one week after Lab 8.
<b>Safety Rules</b>	Read safety rule that is presented in the preface of lab manual and follow the rules for your safety. Cut off power source first (turn off power supply or main power switch at the workstation) IN CASE OF EMERGENCY.
<b>Student Conduct and Discipline</b>	<p>The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, <i>A to Z Guide</i>, which is provided to all registered students each academic year.</p> <p>The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the <i>Rules and Regulations, Board of Regents, The University of</i></p>

	<p><i>Texas System, Part I, Chapter VI, Section 3</i>, and in Title V, Rules on Student Services and Activities of the university's <i>Handbook of Operating Procedures</i>. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).</p> <p>A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.</p>
<b>Academic Integrity</b>	<p>The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.</p> <p>Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.</p> <p>Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.</p>
<b>Email Use</b>	<p>The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.</p>
<b>Withdrawal from Class</b>	<p>The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, an instructor cannot drop or withdraw any student. A student must do the proper paperwork to ensure that he or she will not receive a final grade of "F" once enrolled in a class or lab but not attending it.</p>
<b>Student Grievance Procedures</b>	<p>Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's <i>Handbook of Operating Procedures</i>.</p>

	<p>In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called “the respondent”). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent’s School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean’s decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.</p> <p>Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.</p>
<b>Incomplete Grades</b>	<p>As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester’s end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of “F”.</p>
<b>Disability Services</b>	<p>The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m. The contact information for the Office of Disability Services is:</p> <p style="text-align: center;">The University of Texas at Dallas, SU 22 PO Box 830688 Richardson, Texas 75083-0688 (972) 883-2098 (voice or TTY)</p> <p>Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.</p> <p>It is the student’s responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.</p>