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## EE 1202 Course Syllabus – University of Texas at Dallas

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**Course: EE 1202 – Introduction to Electrical Engineering, Fall 2014**

**Class Schedule and Meeting Rooms:** Section 001 – M, 11:30-12:45 PM, ECSS 2.415

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**Instructor: Dr. Amir Khoobroo**

**email:** [axk144831@utdallas.edu](mailto:axk144831@utdallas.edu)

**Office: ECSN 4.208**

**Office Hours: TBD**

**Instructors Website: [TBD](#)**

**NOTE: I DO NOT USE eLEARNING. TO GET INFORMATION ABOUT EE 1202 YOU MUST GO TO THE WEBSITE LISTED ABOVE.**

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### Course Pre-requisite:

None (but see below). Technical information required for lab exercises is included in the exercise outline and in the classroom briefings about the lab.

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### Course Description:

EE 1202 explores what it means to be an electrical engineer. It also introduces students to experimental practices in an electrical circuit laboratory. In the classroom, students will learn some of the practical aspects of electrical engineering and important practices and habits for the engineer. They will also study important lifelong considerations of the engineer, including continuing education, contemporary issues, ethics, and the impact on, and due to, technology. The laboratory portion of the class will introduce students to (1) common laboratory instruments (including the power supply, multimeter, oscilloscope, frequency counter, and signal generator), (2) performing a laboratory experiment, and (3) basics of electrical circuit theory. Students will also learn to work with a partner in the labs and in larger teams for some class projects, as well as how to communicate research results by writing a laboratory report.

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### Student Learning Objectives/Outcomes:

By the end of EE 1202, the student should have a firm basic knowledge of:

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| a. EE lab equipment, procedures, and basic circuit parameters | d. Contemporary issues and EE                |
| b. How to write a lab report and work with a lab partner      | e. Communication (personal and professional) |
| c. Ethical considerations in EE                               | f. The importance of lifelong learning       |

EE 1202 includes a 1¼ hour weekly lecture plus eight 2-to-3-hour fundamentals laboratories stressing laboratory practices and equipment familiarization, as described above. EE 1202 may be taken by students outside of engineering in order to learn about the engineering profession. However, note that **a good high school math and science background is assumed.**

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### Required Materials:

1. **Electronics parts kits (2) and 9-volt battery** (kits and battery should be packaged together, available at UTD bookstore).
  2. **(Optional) Concepts in Engineering**, Second Edition, Mark T. Holtzapple and W. Dan Reece, McGraw-Hill Higher Education, 2008, ISBN 978-0-07-319162-1.
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## EE 1202 Class Schedule, Fall, 2014

<u>Class Number</u>	<u>Class Dates</u>	<u>Topic</u>
1	August 25	Introductory meeting – course overview and discussion of syllabus. Briefing on lab procedures and routine. Briefing on Lab #1: Building an Electronic Circuit. Creativity video.
---	September 1	Labor day Holiday - No class!
2	September 8	Briefing on Lab #2: Introduction to resistor circuits. Lecture: Why EE?/Preparing to be an EE.
3	September 15	Briefing on Lab #3: Introduction to digital circuits. Lecture: Investing in the Future
4	September 22	Video on semiconductor mfg. “Lifelong learning.” The IEEE professional society. IEEE student chapter and assignment.
5	September 29	Briefing on Lab #4. Introduction to transients in DC circuits.
6	October 6	Briefing on Lab #5. Introduction to AC circuit analysis. Team formation.
7	October 13	Guest Speaker: Prof. Babak Fahimi on REVT lab activities.
8	October 20	Briefing on Lab. 6. Lecture: Communication, personal and professional.
9	October 27	Briefing on Lab #7. Introduction to amplifiers. Team time.
10	November 3	Briefing on Lab #8. Lecture: Engineering Ethics. Case studies. Quick team meetings for ethics pres.
11	November 10	Lecture: Technology and society. Assignment for issue report.
12	November 17	Ethics presentations.
---	November 24	Fall Break!
13	December 1	Project presentations, technology and society.
14	December 8	Wrap up!

**NOTE:** Some class lectures and guest lecture dates may be subject to change.

### **Lab Routine:**

1. Read the experiment description BEFORE the lab briefing and become familiar with the procedure before the lab starts. Complete the work sheet AFTER the lab briefing.
2. A completed worksheet and data sheet is turned in with the lab report. Worksheets count 20 percent of a report grade, but it is a completion grade (i.e., you get full value if you complete it neatly and carefully, even if every answer is not correct). Note: since lab partners take turns submitting the report, only the data sheet and worksheet of the submitting partner is turned in. Both partners must complete their data sheets and worksheets, however.
3. Reserve a lab station in ECSS 4.622 in advance. You will do the lab on your own, but a TA will be there to supervise and offer help (Not the answer!) when requested.
4. When you are finished, clean up your work area, and you may leave. In general, reports are due on the Monday two weeks after the briefing. For lab #8, turn in only the data sheet, signed by both lab partners.
5. All lab reports will be submitted in class (normally, the TA will come to class to pick them up). See information below in “Homework Submission Procedure.”

6. NOTE THAT ALL LAB MATERIAL – PROJECT DESCRIPTIONS, REPORT FORMAT, DATA SHEETS, AND PRELIMINARY EXERCISES (“WORKSHEETS”) – ARE AVAILABLE ON-LINE AT THE INSTRUCTOR’S WEB SITE.

### **Notes About Homework and Semester Project:**

1. Homework will consist of several special assignments based on topics discussed/lectures in class.
2. The final team assignment will be a major presentation, which teams will do during the last class period.

<b><u>Grading Policy:</u></b>	Lab reports/results:*	-- 50%
	Special assignments:**	-- 30%
	<u>Final presentation and report:**</u>	-- 20%
	Total	-- 100 %

**\* The lab grade (1<sup>st</sup> item above) is apportioned as follows:**

Worksheet (completion grade)	–	20%
Experimental work and answers to questions	–	50%
Neatness and organization of report	–	30%

**\*\* These reports are group activities in most cases.**

**Grade ranges for EE 1202 are: A+: 97-100; A: 93-96; A–: 90-92; B+: 87-89; B: 83-86; B–: 80-82; C+: 77-79; C: 73-76; C–: 70-72; D+: 67-69; D: 63-66; D–: 60-62; F: below 60.**

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### **Course & Instructor Policies:**

Students will work as two-person partnerships in labs. Normally, the homework assignments will involve larger teams of 4-7 students, although some may be individual assignments. Please find a lab partner as soon after class #1 as possible. If you do not have a lab partner, tell the instructor at the beginning of the second class. Teams are assigned by the instructor. This will be done later in the semester.

Most lab exercises will be completed in about 2 hours, although some sessions may take more. Lab reports are due on Monday, two weeks after the briefing. Students will alternate composing reports with partner for Labs 1-7. There is no report for Lab #8; simply submit one of the data sheets to the class TA. Your grade on Lab #8 depends solely on the correctness of the data and your solutions to the two problems. NOTE: PARTNERS WILL BOTH EARN THE SAME LAB GRADE ON EACH LAB REPORT. PLEASE BE SURE TO INCLUDE YOUR PARTNER’S NAME WHEN IT IS YOUR TURN TO SUBMIT THE REPORT. OTHERWISE, YOUR PARTNER WILL **NOT** RECEIVE CREDIT FOR THAT REPORT!

**Exams:** There are **no exams** in EE 1202.

### **Homework:**

Lab reports are due per the “EE 1202 Lab Report Due Dates” schedule. Late lab reports are NOT accepted, except under extraordinary circumstances. Lab grades will be returned one to two weeks after lab reports are turned in.

Due dates of team assignments will be established based on the assignment date.

**Homework submission procedure:**

Lab reports are due in class on the lab report due date. See the “EE 1202 Lab Report Due Dates” chart on the web site. The TA will normally be in class the day each lab is due to accept the report. Team assignments, including PowerPoint slides for presentations and/or team reports, will be turned in to the instructor. Due dates for teams assignments will be established when each team project is assigned.

**Class attendance:**

Class attendance is only occasionally taken. However, points can be deducted for habitual tardiness by your (irritated) instructor.

**Lab citizenship, etc.:**

Proper lab deportment for engineering students is taken for granted. When you enter class, speak quietly if you are carrying on a conversation. **MAKE SURE YOU TURN OFF YOUR CELL PHONE.** Do not listen to mp3 players, IPODs, etc., in class. Do NOT use your computer in class, or you will be criticized, ridiculed, and possibly have points taken off your next report or homework grade!

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**Field Trip Policies and Off-campus Instruction and Course Activities: No off-campus activities in this course.**

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**Student Conduct & Discipline:**

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, *A to Z Guide*, which is provided to all registered students each academic year.

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 *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. 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).

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.

**Academic Integrity:**

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.

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.

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.

**Email Use:**

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.

**Withdrawal from Class:**

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, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

**Student Grievance Procedures:**

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

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.

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.

**Incomplete Grade Policy:**

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.

**Disability Services:**

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:  
The University of Texas at Dallas, SU 22  
PO Box 830688  
Richardson, Texas 75083-0688  
(972) 883-2098 (voice or TTY)

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.

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.

### **Religious Holy Days:**

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

***These descriptions and timelines are subject to change at the discretion of the instructor.***