

**UNITED STATES NAVAL ACADEMY  
ELECTRICAL & COMPUTER ENGINEERING DEPARTMENT  
EE301 COURSE POLICY STATEMENT  
CDR TIM MARKS, MILITARY INSTRUCTOR**

---

**I. Introduction:**

Welcome, Shipmates, to EE301. This course is the first of a two-part series designed to provide you with engineering skills and knowledge that will prepare you for aspects of your Naval Service. The course design is both consistent with traditional engineering education and tailored to specific guidance provided by the Fleet and Fleet Marine Force. This will be “news you can use” whether your first assignment is as Electrical Officer, Communications Officer, Aviator, or as a leader of Marines on the ground. As a bonus, this is also information that will benefit you in the future whether you choose to serve in the military or civilian community.

The course begins with an introduction to basic electrical components and laws, progressing into circuit theory and solution techniques for complicated circuits. Following this we will cover topics relevant to shipboard power systems including three-phase distribution and rotating machinery. We will make use of the YP craft as a model for shipboard power generation and distribution. There will be a chance to learn new things about how your car works, and other information that will help you make informed purchases of high-fidelity stereo equipment and consumer electronics.

The course is designed to give you tools for engineering analysis of problems, although not to make you into engineers. The course content reflects the fact that you are all candidates for the degree of Bachelor of Science, and that this is in fact a graduation requirement for that degree at the Naval Academy. You may find that the ways that we approach this material will be relevant to other problems and challenges you face. In fact, that is the hope of all of your instructors and professors.

For many, EE301 is a challenging course; possibly even one of the most challenging. It probably is your first engineering course, and “culture shock” might occur. Your instructors and professors stand ready to help you through the challenges and to enhance your learning experience in every way possible. I urge you to engage this course from the outset and to maximize the benefit from the time that you will put into it. The more proficient students will find that doing well in this course will be a great springboard to further success in technical areas.

This course is highly cumulative in nature. Getting behind is costly and should be avoided. Whether you are a top student in technical subjects or one who is challenged by them, help is available and will be taken advantage of by the savvy among you.

**II. Course Material:**

**Circuit Analysis: Theory and Practice, 4th Ed;** Allan H. Robbins and Wilhelm C. Miller.

This course is designed to maximize the benefit from the Robbins and Miller textbook. This book has excellent examples and applications and is very readable. We will follow the book and will cover topics in almost the same order and with similar depth. Any exceptions will be pointed out in class. Some topic areas require supplemental material. These supplemental readings will be available on the course website. Time spent completing the reading assignment will pay dividends during the lectures and when it is time to engage the homework. Quizzes on reading assignments should be expected.

**III. Section Leader Duties:**

The Section Leader will be appointed by the instructor and will be responsible for taking attendance for each class. At the start of the class, the Section Leader will call the section to attention and report by name the individuals that are absent. During class the Section Leader will update the attendance book to account for any tardy students or any students that may leave early. The class will be called to attention by the Section Leader for dismissal at the end of the period. In the event that the instructor/professor is late for class in excess of 10 minutes, the Section Leader will contact the ECE Department Office at x3-6150. Pending the arrival of someone to take charge of the class, the Section Leader will supervise the class in a study period, will collect any homework due for that period, and will deliver the homework to the ECE Department Office at the end of the period if no instructor arrives.

#### IV. Calculators and Netbooks:

The use of electronic calculators will be permitted for all labs, homework, quizzes, and scheduled exams. You are required to bring a calculator to class each period. The calculator should, at a minimum, have the capabilities of the TI-68 (complex numbers, simultaneous equations, trigonometric functions, etc.). In the event of a calculator failure, manual calculation will be required. Sharing of calculators will not be permitted except when a PE is designated as a team effort. For the purpose of EE301 examinations you may program equations but not text into your calculator. The use of netbooks is not permitted during lectures, quizzes, or exams.

#### V. Grades:

6-week Exam	20%
11-week Exam	20%
Final Exam	30%
DC Lab Practical Exam	4%
AC Lab Practical Exam	4%
PEs/Quizzes/Homework	22%

Numerical score	≥ 90%	80% – 89%	70% – 79%	60% – 69%	< 59%
Letter grade	A	B	C	D	F

*The instructor/professor reserves the right to adjust your final grade based upon a subjective evaluation of your overall course preparation and participation.*

#### VI. Exams and Quizzes:

Two 50-minute, closed-book exams are scheduled during the academic reserve periods on Monday (X periods), in addition to a comprehensive, 180-minute final exam.

**A standardized equation sheet will be provided at the beginning of the course** for use during quizzes (when allowed by individual instructors) and on all midterm and final exams. A calculator may be used during the exams. No other materials may be used on the course examinations. I encourage you to reference this while you work on homework; this will ensure that you are very familiar with the equation sheet layout by the time take your first exam.

All midshipmen are required to take the exams at the time prescribed by the Academic Dean. The allowance of make-up exams will be reviewed on an individual basis by the course coordinator and the ECE Dept Chair and will be in accordance with the Commandant's Priorities. Arrive on time for exams. Students arriving late will not be granted additional time to finish. **Students missing an exam without prior arrangement or an appropriate excuse may be assigned a grade of 0%.** Quizzes are administered at the discretion of instructors and professors.

#### VII. Homework (HW):

Mandatory HW will be assigned for each lesson as per the course syllabus unless otherwise directed. It is suggested that students wishing to maximize their performance work the homework problems as a "quiz" after reviewing the reading assignments and course notes. The homework solutions for the previous week will be posted online every week on Monday. Individual homework policies vary by instructor/professor and will be promulgated. It is expected that all students in the course, regardless of background, can work at C or better level when a reasonable effort is applied to the homework. Failure to complete all homework assignments to the satisfaction of your instructor/professor is grounds for course failure.

#### VIII. Practical (Laboratory) Exercises (PE) and Exam:

PE's are scheduled per the syllabus and will be worked individually or as a team depending upon the availability of equipment. It is imperative that all students print and bring a copy of the appropriate PE to each class. All exercises will be completed during class periods. Missed or failed PE's can be made up by arrangement with laboratory technicians and your instructor. The PEs are extremely valuable in that they allow the student to confirm independently the circuit laws and solution techniques presented in lectures. During the PEs, students learn to operate standard test equipment used on ships and in the field. One of the most essential course goals is that all students be proficient in the operation and understanding of this equipment. Most students also find the "hands-on" segments to be enjoyable.

Two Lab Practical exams will comprise 8% of your final grade, and lab-related questions will be included in every examination. These practical exams will be absolutely individual work and the problems largely "pass-fail". The object will be to ascertain that each student has gained the required proficiency on the equipment and on connecting basic components. A good effort on the daily PE and satisfactory completion of all PE work will ensure that the lab practical exams are not difficult. You will derive the most benefit from the laboratory exercises by carefully understanding and

executing every step of the exercise, even when working as part of a team. If you don't understand a step or a section, you must seek help, in class or during EI. Sample practical exams are available via hyperlinks from the course syllabus.

#### **IX. Extra-Instruction (EI):**

Individual Extra-Instruction with your instructor/professor or other course instructors/professors is available by appointment and on a "drop-in" basis. To maximize the benefit of EI, come prepared. Always bring your notes, homework problems, and *specific* questions/problems with you to help identify trouble areas. Don't wait to schedule EI. Get your problems resolved quickly to avoid falling behind in the course.

Group EI will be provided almost every Wednesday night from 1900-2100, as listed in the schedule available from the course website. Again, preparation for group EI will maximize the benefits. Come with questions; this is an opportunity for you to ask for help in specific areas. Do not expect the instructor to work the homework assignment for you.

The Academic Center offers XS301 (Extra Help Electrical Engineering), a non-credit course to provide additional help to students who are struggling with this course or whose academic background puts them at risk of failing this course. Enrollment is very limited in this course; consult with your instructor if you are interested in this course.

#### **X. Honor**

Some previous EE301 students have been found in violation of the honor concept for cheating on examinations and quizzes. It is my goal that we have no such issues in the coming semester. I urge you to avoid any situations that cause you to consider compromising your integrity. The best way to do this is to keep up with the course and avoid desperate situations. Even when collaborative work is allowed, such as on homework assignments, do not simply copy homework without contributing to it.

#### **XI. Communication:**

Check your email daily for course updates. The instructors will use e-mail, Blackboard and the EE web page extensively to communicate all EE301 course related information to you. The EE301 web page is:

<http://www.usna.edu/EE/ee301/>

CDR T. S. Marks, USN  
EE301 Course Coordinator