

MELTEC 235
NATIONAL ELECTRICAL CODE
COURSE SYLLABUS

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Course scope

Interpretation and application of the California Code of Regulations - Title 24 - Part 3 (California application of the National Electrical Code) which regulates the installation and maintenance of electrical circuits and equipment. National Electrical Code - MELTEC 235 - is a course dedicated to the development of fundamental skills for searching and connecting information in the National Electrical Code for the purposes of application in the field and taking the State certification exam.

Student Learning Outcomes

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At the end of this course the student will be able to

1. Locate specific code information as it would happen if the student were taking the State Journeyman Certification exam.
2. Associate the various requirements and their related modifications for electrical installations performed in different environments.
3. Apply the prescriptions of the California Electrical Code to practical situations.

Bibliography

Required

National Electrical Code 2014 – NFPA 70 2014, produced by NFPA

Recommended

National Electrical Code Handbook, produced by NFPA

Applied Codeology – Navigating the NEC 2014 produced by the NJATC

Other On-line Resources

[NEC Free Online Access - www.nfpa.org](http://www.nfpa.org)

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Class Requirements

Bring your Code every class.

Keep with you a standard calculator (scientific or otherwise) – No graphic or programmable calculators are allowed. Recommended calculator: Texas TI 30X IIS.

Sticky notes or Post-it flags, don't bother buying NEC tabs.

Note-taking basic elements, include a soft pencil (B or 2B) and a good eraser. Highlighter (having several colors may help).

A device with connectivity and Internet access.

Attendance prior and after Census Day

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Attendance will be taken daily. Regular attendance is essential to ensure success in this course.

Students must give notice to the instructor if they are planning to miss a class before the second week (prior to census day) to avoid being dropped from the course.

After the second week, it is students' responsibility to drop this course. If after the second week but before the completion of the 75% of the course a student stops attending but forgets to drop the class, the instructor could, unintentionally, overlook the situation and fail to drop the student from the roster. In such case, the final grade will be likely an "F". On the other hand, a student showing a pattern of several consecutive missed assignments can be interpreted as a permanent absence in which case the instructor may drop the student without giving previous notice. So, it is advisable to keep "visibility" in class, and if an unexpected situation forces to several absences or to severely procrastinate assignments, it is advisable to contact the instructor and plot a course of action.

Class participation

Being on-time, staying on-task, and keeping self-engaged in the subject, although leave a lot of margin for subjectivities from the point of view of the student and the instructor, is going to be considered and awarded. "Class Participation" includes punctuality, readiness, engagement with the subject, cooperation, team spirit. It will be rewarded with 5 points (**5% of the total**)

Homework

Homework based on online quizzes represent **50%** of the final grade. Around three weeks is the time frame that it will be given to students to complete assignments. Repetitions will be allowed. These assignments are not only important elements to achieve good grades, but also important elements to prepare future tests (in and out the classroom). After all, the State certification exam will be taken in a computer with a similar format of the assignments of this class.

Summative Tests

The main purpose of this class is to prepare students to navigate the NEC with proficiency in a relatively short period of time. To that effect, some tests will be taken in class to complete or summarize a theme. For example, after completing the overview of an NEC's chapter, a brief test about general topics of the chapter will be taken. A review, previous these test, will address all the key points. These tests represent **20%** of the final grade

Final: The final exam is VERY IMPORTANT. It is the culmination of this course and will cover the totality of the course. It will be held in the sixteenth week. Not taking the final

exam, or having an F as grade (below 50%), automatically disqualifies the student who will fail the course. Only in very special cases a student that misses the Final will receive an incomplete grade (IF or ID) to give him/her the opportunity to take the exam another day. Fail to do so will grant an automatic F or D.

In summary	Participation	5%
	Homework	50%
	Summative tests	20%
	Final	25%

Grades

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Although some exception might apply, a “C” is required to complete successfully this course. That is the equivalent of the 70% of the total points (gathered between participation, homework, quizzes, and the final exam) with the strict condition of having not less than the 50% of the final exam correct.

The grading scale is as follows:

A	90 to 100%
B	80 to 89%
C	70 to 79%
D	60 to 69%
F	up to 59%

Electrical Trainees – ETs

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Students enrolled in the DAS program (Electrical Trainees – ET – working for a licensed contractor or under the supervision of a journeyman) will log 70 hours of technical education of the 150 required in a year, but must pass with a C or better to be accredited with the hours.

Keys for success

- Before each class, review the material of the latest class.
- Take care of homework as soon as it is assigned. Use the chart in the last page of this syllabus as a calendar for this class.
- Give a general read to the HW which will make your work more effective.
- It is a very good idea to organize some group sessions to review and get ready for tests.
- Formal education, such as this class, is a short-term commitment with long term consequences. Some family matters – little league, Halloween, a fishing trip, etc... - may need to take the back seat for a while. It is up to the instructor to do the upmost to deliver good content, but up to the student to achieve success.

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Class Calendar (template)

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Week	Theme	HW	Summ Test
1	CODE STRUCTURE		
2	PURPOSE AND DEFINITIONS		
3	REVIEW OF PRINCIPLES		
4			
5	THE 2-HUNDREDS		
6	GROUNDING		
7	CHAPTER 9		
8	THE 3-HUNDREDS		
9	THE 4-HUNDREDS		
10	NEC CALCULATIONS		
11	THE 5-HUNDREDS		
12	THE 6-HUNDREDS		
13	THE 7-HUNDREDS		
14	THE 8-HUNDREDS		
15	REVIEW		
16	FINAL		