MELTEC 223

INDUSTRIAL ELECTRICAL COMPONENTS AND CONTROL DEVICES

COURSE SYLLABUS

Instructor: Adrian De Angelis – SIERRA B110 – West Campus – Ph.: 209-575-6088
email: deangelisa@yosemite.edu website: http://deangelisa.faculty.mjc.edu

Office hours: Monday through Thursdays 3:45 to 5:00 in Zoom:

Advice

Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files.

Take this quiz to see if you have the skills to be an Online Student: Student Online Readiness Quiz

Course scope

Industrial Electrical Components and Control Devices - MELTEC 223 - is an introduction to common components and control devices found in the manufacturing and processing industry. Content includes basic terminology, component identification, manufacturer's specifications, and maintenance procedures for the components and devices .

Student Learning Outcomes

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

1. Design, draw and test a functioning ladder diagram for a given type of logic circuit using appropriate control language, labeling, numbering, and symbology.
2. Analyze a ladder diagram and/or instructions, select the corresponding components, and, using appropriate tools, connect a functioning control device.

Bibliography

Required

1.
    1. Rockis, Gary & Mazur, Glen (2013). Electric Motor Controls (5th/e). Homewood, IL AmericanTechnical Publishers, Inc.
    2. All documents or links to free materials (see Module 00)

Recommended

Other Resources (free and available online)

Other recommendations

Calculator

- Texas TI 30 X*II*S (**Not Xa and not XS**) - (**X *II* S = Best for the rest of the program**)

Software

- Adobe Acrobat Reader DC - free software that allows read and write on PDF files.
- ProfiCAD

Communication

- In this course we will use INBOX feature on the left menu banner (the icon is a letter coming out of an envelope). INBOX will allow communication with your classmates and instructor. Please check your messages regularly.
- When communicating with your instructor, put a subject in the subject box that describes the email content with your name, module and message subject.
    - For example: YOURNAME_223_MDLNo_ASSIGNMENT (DeAngelis_223_Module03_Homework, or DeAngelis_223_Module03_Video, or DeAngelis_223_Summative Assessment02)
- Send email only to INBOX. Do not submit your assignments by message.
- Make certain to check your messages frequently.

Discussion Forums

We have two different discussion forums.

- In *Course Q & A Discussion* you can ask your questions and get them answered by peers or the instructor. his space should only be used for questions you want to be public to the entire class. If you have a specific question for your instructor, use INBOX instead.
- In *Student Lounge* is your space to discuss whatever you'd like with your peers in this class. Questions related to this course can go in the Course Q & A Discussion instead.

Attendance prior and after Census Day

- Participation will be verified. Regular participation is essential to ensure success in this course. This course must be certified by Census Day 09/08/2020 . To avoid being dropped from the course make evident your participation. First assignment is due: 09/07 (although it has an extension to 09/14 but it will be marked as “late”). Also, there are two forums, and the resource of communication through INBOX.
- After Census Day is your responsibility to drop this course. If after Census Day and 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"

Exams and Grading Criteria

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. Class Participation represents 5% of the final grade.

Homework

Homework will be delivered through CANVAS; it will mostly consist of questions based on the chapter of our textbook; however, some written assignments (paper based) may be required. These written assignments will be delivered as handouts. There will be plenty time to turn in homework, therefore, HW must be completed by the due day specified during the class agenda. After the due day, homework assignments will be rendered "not done" – 0 points. HW represents 25% of the final grade

Labs

Labs are expected to be completed within the time frame specified when the class agenda is set, but periods of catch up will be available to complete lab assignments (with limitations based on the situation of the particular semester). Basically, labs will be evaluated based on their functionality. But, use of work practices, work ethic, and teamwork are factors that will affect the overall evaluation of the lab. There are some less subjective matters on the evaluation of the development of labs such as:

1. Methodicalness – proved through the development of notes, schematics, or charts to keep record of circuits details, variants, or measurements.
2. Clear wiring.
3. Prompt functionality.
4. Accurate diagnostic of faults (when apply).

To help the understanding of the expectations for labs, a rubric will be delivered in each exercise. Labs represent 25% of the final grade.

Exams

Several small exams will be taken throughout the semester and a comprehensive final exam at the end of the semester. Review or Summative Exams will be delivered as conclusion of subjects. They will be short exams paper-based or electronic (in CANVAS). They will represent 20% of the final grade.

The Final Exam is VERY IMPORTANT. It is the culmination of this course, and it will cover the totality of the course. The final exam will be held in the sixteenth week. The final exam represents 25% of the final grade and it must be correct in a 50% or more. Not taking the final exam, or having an F as grade, automatically disqualifies a student who will then not pass the course. Only in very special cases a student that misses the Final will receive an incomplete grade (IF or ID) in order 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	25%
Labs	25%
Review or Summative Exams	20%
Final Exam (at least 50% must be correct)	25%

Grades

A "C" is required to complete successfully this course. That is the equivalent of the 70% of the total points (gathered between homework, assessments, and the final exam) with the strict condition of having not less than the 50% of the final exam correct. Scoring less than 50% in the final exam disqualifies for a passing grade.

As for the grading scale, it has a generous set up.

The grading scale is as follows:

A = 90 to 100%

B = 80 to 89%

C = 70 to 79%

D = 50 to 69%

F = up to 49%

Electrical Apprentices

Students enrolled in the DAS program (apprentices electricians working for a licensed contractor under the supervision of a journeyman) must pass this class in order to be accredited with the course's hours.

Keys for success

- Use the videos as learning materials. They were conceived as means to pass information and make clear points. They are not entertaining. Make sure closed captions are ON. Take notes as watching the video; the information covered exceed the graphics of the presentations.
- Take care of the homework as soon as it was posted, and you are ready. Repeat homework assignments; not only cannot hurt your grade but it can help to fix concepts. HW assignments are made from questions banks, and the variety of questions will enrich your comprehension.
- Keep a log with your notes from videos and readings.
- Keep track of what HW you turned in and the grades you are obtaining. These elements will give you a good idea of your progress and will show the areas that you need to work out.

- Commit time for this class. Online classes are somehow more time consuming than face-to-face classes. What it is saved in commuting – time, gas, parking – has to be invested in setting time and space to be p r o d u c t I v e. There is no peer pressure, group effervesce, or group cheerfulness studying alone. To be self-driven, self-discipline, are key to endure – and pass – an online class.
- Proactively engage in the forums opened to your convenience. That gal or guy shinning as the smartest person of the group (maybe you) is not around to compare notes or study together. So if you don't ask questions or go to the forums seeking collaboration, it is likely that googling queries will be a lot harder – and lonely – than cooperating with the rest of the class and your instructor through the communication tools.