

COURSE ID:	ELECTR 250C
DEPARTMENT:	Electrical/Electronics
SUBMITTED BY:	Anthony S. Ababat
DATE SUBMITTED:	9/28/20

For additional resources on completing this form, please visit the DE Website: www.valleycollege.edu/onlinefacultyresources

- 1. Please select the distance education method that describe how the course content will be delivered. Check ALL methods that will be used for offering this course, even if previously approved.
  - ⊠ FO Fully Online
  - □ PO Partially Online
  - □ OPA Online with In-Person Proctored Assessments
  - □ FOMA Fully Online with Mutual Agreement
- In what way will this course, being offered in distance education format, meet the needs of the campus? (Ex: Student Access, Campus Strategic Plan, Campus Mission Statement, Online Education Initiative (OEI), Student Equity, Student Needs). Please be specific.

By Offering ELECTR 250C Course through distance education, the Hybrid type format will expand access to this class. Students who enroll in this course do so to enhance their skills in electronic communications, such as the electromagnetic frequency spectrum, frequency bands, analog and digital modulation, digital data, antennas, transmission lines and loads, government services and fiber optics. Exercises include diagramming modern transmitter and receiver components, plotting impedances, and making line and load conversions.

By statistics, telecom technicians and working students enrolling in this course encounter time constraints in coming to School Campus and, in some cases, will have transportation as a barrier. There are numerous wireless and telecom technicians or students that want to join and complete the Telephone and Data course but having schedule problems in coming to campus. To eliminate these barriers, offering this course as Hybrid is a good alternative. By providing online classes, telecom, or wireless tech, working from various companies can enroll in this course and achieve their long-awaited career goals in life.

(Student Access, Student Equity, Student Needs)

3. Will this course require proctored exams?

⊠ No □ Yes - If yes, how?

4. How will the design of this course address student accessibility? Are you including any of the following? ⊠ Captioned Videos



- ⊠ Transcripts for Audio Files
- $\boxtimes$  Alternative Text for Graphics
- ⊠ Formatted Headings
- $\boxtimes$  Other If other, please explain.

Canvas Conference meeting and YouTube converted videos from Zoom Meeting.

5. Provide a specific example of how the instructor will provide synchronous office hours for distance education students? (Ex: Online Conference Tool, Cranium Classroom, Zoom, Pisces, Skype, etc.)

Synchronous office hours can be implemented by the instructor using Online Conference Tool such as Canvas Conference, Microsoft Office Team or Confer Zoom meetings. And achieved by sending students the invitation link schedule deemed appropriate for this specific course to help students understand the course materials and complete the class.

6. Provide a specific example of how this course's design ensures regular and effective instructor-student contact? (Ex: Threaded discussion forums, weekly announcements, instructor prepared materials, posting video and audio files, timely feedback on exams and projects, synchronous online office hours, synchronous online meetings, synchronous online lectures, etc.)

Instructor prepared materials combination of synchronous and asynchronous types, threaded discussion forums, weekly Announcements and Assignments. If needed, conduct online meetings and online lectures. To ensure regular and effective instructor-student contact, the course design include "Expectations for the Student and Instructor". The specific example as provided in this online course is given below:

## **Student Expectations**

To be successful in this course, you are expected to:

- Complete the Student Learning Contract by Friday of the first week.
- Read the entire **Syllabus**.
- Consistently check Announcements, your school email account, and the Canvas Inbox.
- Review the **calendar** for due dates.
- Participate in **Discussions** (post weekly and respond to your classmates).
- Turn in your own work that has been thoughtfully completed. Proofread for errors in spelling and grammar.
- **Communicate** with your instructor of any problems or confusion well in advance of the due date.
- **Complete** all discussions, assignments, online quizzes, and/or exams on time.

## **Instructor Expectations**

As your instructor, I will

• **Communicate** to you via Canvas announcements and Inbox.



- Post recorded videos in every class meeting we had.
- Post weekly course-related announcements.
- **Respond** to your email or phone message within 24-48 hours.
- Monitor all discussions and provide feedback to the entire class where needed at least weekly.
- Provide individual **feedback** on assignments/papers/projects within one week of the due date. (View <u>Finding Grades and Feedback</u>)
- Work with you so you will have a successful learning experience in this course!
- Provide a specific example of how this course will ensure regular and effective student-student contact? (Ex: Threaded discussion forums, assigned group projects, threaded discussions, Note bowl, peer-to-peer feedback, synchronous online meetings, etc.)

The implementation of student-student contact through Threaded discussion forums where each student will reply to each of their peers in a weekly given topic. Assigned group projects for students to collaborate on their plans and ideas to complete the required project for this course. In this combined Online course, students will have the opportunity to use Simulation Software and discuss their work remotely or online using Canvas Multi-user whiteboard in performing the laboratory portion of this class. If needed, they will also be given an option to physically work or collaborate with their project while maintaining and following the Social Distancing Rules.

8. Describe what students in this online version of the course will do in a typical week on this class. Include the process starting after initial log in.

We can achieve student-student contact by implementing the Threaded discussion forums where each student will reply to each of their peers in a weekly given topic. Assigned group projects for students to collaborate on their plans and ideas to complete the course's required project. In this Online Course, students will have the opportunity to utilize various Simulation software in Communications Engineering such as MultiSim that students can use in performing their laboratory activities.

9. Provide a sample statement that could be included in the syllabus for this course that communicates to students the frequency and timeliness of instructor-initiated contact and student feedback.

The frequency and timeliness of instructor-initiated contact and student feedback in this ELECTR 250C class can be implemented by weekly monitoring of student's performance and checking on the student's analytics through Canvas. It will be implemented in DE format as follows:

- The presentation or materials in an online format and other appropriate media (such as audio, video, PPT slides, Word and PDF files will be check for accessibility.
- A good design for weekly assignments and projects that promote collaboration among students.
- Model course netiquette at the beginning of the semester with instructor-guided introductions.
- Pose questions in the discussion boards which encourage various types of interaction and critical thinking skills among all course participants.
- Monitor content activity to ensure that students participate fully, and discussions remain on topic.



- Create a specific forum for questions regarding course assignments. (e.g. "Got a Question?")
- Guided practice through CommSim and Computer Network Simulation and On-Campus assigned laboratory activities.

#### 10. Provide a specific example of how regular and effective student-student interaction may occur in this online course.

ELECTR 250C course designed as Online, students will have the opportunity to meet Virtually using Canvas Conference, Zoom or Microsoft Teams to collaborate the required discussion needed to complete the required work such as assignments or laboratory. The effective student-student interaction may also occur in this online course by providing socially focused exchanges such as a guided instruction, positive and healthy exchange of information. And participation in activities designed to increase a social rapport: example, the collaborations, and discussion among students in performing computer repair labs online and building up the required Communications Hardware to successfully implement the assigned laboratory work. Discuss the appropriate strategy to complete the configurations of Wireless and Wired Communications needed as well as the necessary troubleshooting in situations that Telecom Network will not initially work as expected—furthermore, an implementation through weekly threaded discussions, Synchronous online meetings, and Peer-to-peer feedback.

# 11. Provide a specific example of how regular and effective instructor-student interaction may occur in this online course.

An effective instructor-student interaction implemented in this ELECTR 250C class will be to encourage students to participate in discussions. Providing students with feedback, listing the office hours availability, and consistent communications. As a student, they can expect to interact with their instructor throughout the week, beginning with the weekly announcement posted each Sunday. Students should plan on checking Canvas at least three times during the week – once to post initial assignments, post feedback to other duties, and respond to your peer and instructor's feedback. Instructor-student interaction can include:

- Solving and working Wired and Wireless Communication Design tasks using the knowledge learned in the lecture
- Follow up reminders or previews of upcoming assignments
- Comments on or a summary of a current discussion
- General remarks on how the class did on a test or assignment
- Remediation on a misunderstood or muddy learning point, based on student work
- A link to a relevant video or article
- Perform the necessary laboratory work using their laptop along with the required Lab or a computer network to Simulate laboratory required Communications Circuit.

The instructor will assist and evaluate students' work after submitting student's online laboratory activity. And will provide feedback and demonstration to implement the required computer repair tasks successfully.

Specific Example is provided below:

"Participation during the FIRST week of your online course: (required)



In this online course, participation is mainly determined by your level and frequency of interaction and communication in the discussions, taking quizzes/exams, and submitting assignments or projects on time.

This four-unit course requires approximately 10.8 **hours per week of work.** It is important to check in a few times a week and stay current with your assignments and discussions.

Tasks

- 1. Complete the Student Learning Contract, which outlines your participation and expectations
- 2. Read the entire **Syllabus.**
- 3. Complete the **Student Introductions Discussion**. Post by Thursday evening at 11:59 pm Pacific Time and respond to at least **two** classmates by Sunday evening at 11:59 pm Pacific Time."
- **12.** Does this course include lab hours?  $\Box$  No  $\boxtimes$  Yes If yes, how are you going to accommodate the typical face to face activities in an online environment?

The typical fact to face activities is implemented by providing students Virtual list of required tools and materials which can be applied using CommSim and MultiSim Software's. YouTube Videos recorded step-by-step videos in performing weekly laboratory exercises and CertMaster Labs for A+ from CompTIA. Typical face to face Laboratory Online Hands-on exercises provided every week can also be done through actual Communications hardware installation or provide an optional opportunity for students to build their own Communication Projects.

### 13. How will you accommodate the SLO and Course Objectives in an online environment?

Typically, SLOs and Course Objectives are addressed in lectures and evaluated based on assignments, discussions, and group presentations. These methods are still absolutely viable using an Online format. The laboratory will be implemented by providing students the required Simulation Software's needed to reinforce the face-to-face laboratory work. Students will also be given an option to meet the instructor if necessary, by following the required social distancing guidelines and assigned an approved schedule to perform the necessary and optional face-to face meeting.

In this class, the students will demonstrate their ability to use the theories learned in the lecture, technical data and specialty tools to wire and configure Communications network and perform an operational checkout to determine is the system is working correctly with 100% accuracy. They will define the terms related to bandwidth and signal transmission of modems, DSL, fiber optic cables, and ISDN in the physical layer and OSI by drawing these waveforms of bandwidth and signal transmission for each one and pass a written exam with a minimum score of 70%

Each student will demonstrate their ability to determine the problems encountered and methods of solving single line phone system problems by evaluating the readings taken based on technical data correct the problem and perform an operational checkout to determine if the problem is fixed with 100% accuracy.



Students will also be given an opportunity to configure a wireless system by installing an antenna to extend the wireless signal to a certain required distance and configure the required Network for successful System Communications.

14. Are modifications needed to SLOs or Course Objectives in order to teach this course in the online modality? ⊠ No □ Yes – If yes, please explain the changes needed.

(It is advised that if you are changing course content or objectives that you speak with the Curriculum Co-Chair or Articulation Officer for guidance moving forward.)

### To be completed by a member of the Curriculum Committee Review Team:

CURRICULUM CHAIR REVIEWED:		
DE REVIEW:	M. Worsley	🖾 YES 🛛 NO
CURRICULUM COMMITTEE DIVISION REPRESENTATIVE REVIEWED:		

Note from Maggie: this looks fine. As an aside, this is not the most-recent DE Addendum, so is missing the latest equity piece (#10 of the latest addendum). However the DE team approves this present form as-is.