

Introduction to Power Electronics

EE 4387/5390

CRN: 125674/27296

The University of Texas at El Paso

Spring 2021

Syllabus



Instructor: David G. Guzman

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Office Location: E328; due to the Pandemic restrictions, instructor will not receive students in person during Spring 2021.

Office Hours: T & TH 5:00 p.m. to 5:45 p.m.

All office hours will be held virtually by appointment via phone, Microsoft Teams, and/or facetime. Instructor and student will coordinate the best medium for interacting during office hours in a case-by-case basis.

In addition, instructor will allocate 5 - 30 minutes after each synchronous class to connect with students if necessary.

Delivery Method for Lectures: All class sessions will be held virtually by using the Collaborate Ultra application within blackboard at the scheduled days and times.

Technology requirements: Students will be expected to acquire access to blackboard and connect to the synchronous classes. This may be achieved by the use of a computer or smart device. Students can find further details by following the link below.

<https://www.utep.edu/extendeduniversity/cid/student-resources/blackboard-orientation.html>

1. Class Location & Time: Tuesday & Thursday: 6:00 p.m. – 7:20 p.m.

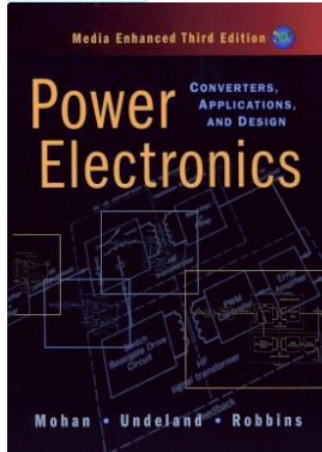
Will meet online via Collaborate Ultra in Blackboard and attendance to online synchronous sessions is mandatory.

2. Course Description:

This course will introduce the architecture and operating principles of electronic power converters; including the modeling, simulation, and design of power converters. Applications in areas such as power engineering, renewable energy, aerospace engineering, and transportation will be discussed.

3. Required Textbook:

Power Electronics, Converters, Applications, and Design. Third Edition. Mohan, Undeland, Robbins.



Students that choose to use an older edition of the book will be responsible to verify material covered, problems, etc. on their own.

4. Grading & Exam Calendar:

Attendance	10%	Will be recorded for each virtual lecture.
Exam 1 [^]	20%	TBD
(Extra Credit 1 Assignment)** [^]		Will be worth 20 points towards grade for Exam 1.
Exam 2 [^]	20%	TBD
(Extra Credit 2 Assignment)** [^]		Will be worth 20 points towards grade for Exam 2.
Assignments/Quizzes [^]	20%	TBD
Final Exam* [^]	30%	TBD

Total	100%	

***Final Exam will be comprehensive**

****Extra credit assignments are not mandatory but students are highly encouraged to submit them as they are assigned during the semester since no last-minute additional points or “rounding-up” requests for final grades will be granted at the end of the semester.**

[^]Students are solely responsible to verify that all submissions for exams, quizzes, and assignments are complete, accurate, and sent to the correct e-mail address: dgguzman@utep.edu.

Final Grade Scale:

A = 90.000% - 100.000%

B = 80.000% - 89.999%

C = 70.000% - 79.999%

D = 60.000% - 69.999%

F = < 60.000%

5. Homework

5.1. Homework will be assigned as material readings and practice problems during class. Homework assignments will not be graded but students are highly encouraged to read the assigned reading material and perform the assigned practice problems in preparation for the exams. All official solutions will be provided and posted in Blackboard for students to verify their work.

6. General Policies

6.1. Punctuality & Attendance:

Attendance will be recorded by the Collaborate Ultra application within blackboard. Students are expected to connect on time and remain connected for at least 1 full hour during each synchronous session.

6.2. Absences:

Students are highly encouraged not to miss any class sessions due to the complex class material to be presented. No make-up work, points, quizzes, or exams will be granted unless official written documentation is presented in a timely manner. No more than three “excused” absences will be allowed. Timely manner means at least one week (7 days) in advance for non-emergency related absences. Emergencies will require proper written documentation.

6.3. Submitting Tests, Quizzes, Class Assignments, and Extra Credit Assignments

Unless otherwise instructed, all submissions are to be made via e-mail to dgguzman@utep.edu. Students will be responsible to verify that the correct e-mail address is being used and that no submission stayed on the “outbox,” drafts, or “not sent” trays. All submissions are to be made in PDF format. Students are responsible to allocate the required time needed to complete each test, quiz, class assignment, and extra credit on time and before the due date/time, no late work will be accepted. Students are also responsible to check all submissions for completeness & accuracy prior sending the e-mail.

For every submission, students are to label all files as follows:

StudentFirstName_StudentLastName_Assignmenttype.pdf

Examples:

David_Guzman_Exam1.pdf

David_Guzman_ExtraCredit1.pdf

David_Guzman_Assignment1.pdf

David_Guzman_Quiz1.pdf

6.4. Course Drop Deadline:

The deadline to drop this course with an automatic W is **April 1st, 2021**.

6.5. Cellphone & Laptops (as applicable for online class):

Electronic devices will be allowed during class, however any student that is using this technology for activities other than those related to the class will be asked to leave the classroom. This includes social media and any other activity that goes against any official school policy.

6.6. Food and Drinks (as applicable for online class):

Any non-alcoholic drink will be allowed in class. No food will be allowed during class.

6.7. General Class Behavior:

I reserve the right to refuse service... this will be based in dishonest, disruptive, illegal, or unethical behavior. Any student in violation of the university's code of conduct or laws will be directed to the appropriate university authorities.

6.8. Academic Dishonesty:

"Any student who commits an act of academic dishonesty is subject to discipline. Academic dishonesty includes, and is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, and any act designed to give unfair advantage to a student or the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the *Handbook of Operating Procedures (HOP)*, and available in the Office of Student Life and on the homepage of the Office of Student Life at www.utep.edu/dos, can result in sanctions ranging from disciplinary probation, to a failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others."

6.9. Accommodations under ADA (as applicable for online class):

If you feel you may have a disability that requires special accommodations please contact the Disabled Student Services Office at (915) 747-5148, go to room 106E Union, or e-mail dss@utep.edu.

