

Applied Analysis
MATH 3335

Syllabus
MW 9:00am to 10:20am

Spring 2018
LART 102

Instructor: Julio César Urenda Castañeda

Office: Library 504

Hours: MTWR 11:25am - 11:55am or by appointment

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Prerequisites: Calculus III (MATH 2313 or MATH 2326).

Course Objectives: Upon successful completion of the course, you will understand line and surface integrals as well as notions of orientability and vector fields. You will be able to identify and use appropriate change of variables in multiple integrals. You will be able identify and apply the main theorems of vector analysis: Green's theorem, Gauss' divergence theorem, and Stokes' theorem. In addition, you will cover an introduction to complex variables involving topics such as the Cauchy-Riemann equations, the Cauchy integral formula and the residue theorem.

Textbook: **Advanced Engineering Mathematics, 10th ed., Kreyszig**, Chapters 9, 10, 13-16. We will skip some sections, as announced in class. The textbook is required at all class meetings.

Required Reading: Read each section that we cover in class, both before and after class. Skim the section before class, even if you do not understand it fully, to have some idea of what we'll be doing in class. Read it more carefully after class to clarify and fill in details you missed in class.

Warning: Sometimes, we will not cover all the material from a section in class, but instead focus on a particular aspect of the section. In such cases, I will point out in class which other parts of the section I expect you to read on your own.

Grading

Quizzes and Homework (20%) Suggested homework problems will be assigned most class days and will generally be discussed at the next class. There will be approximately 12 quizzes, with problems taken from the homework. Quizzes are closed-book, closed-notes. Missed quizzes **cannot** be made up, but your two lowest quiz scores will be dropped. It is very important that you do your homework before it is discussed in class. You will only learn the material by doing it yourself, not by watching others do it for you. Mathematics is not an spectator's game.

Midterm Exams (20%) There will be three in-class exams, exact dates will be announced in class. Makeup exams can be given only in extraordinary and unavoidable circumstances, and with advance notice.

Final (20%) The final comprehensive exam will be on

Wednesday, May 9 th from 10:00am to 12:45pm

Policies

Academic dishonesty: It is UTEP's policy, and mine, for all suspected cases or acts of alleged scholastic dishonesty to be referred to the Office of Student Conduct and Conflict Resolution for investigation and appropriate disposition. See Section II.1.2.2 of the Handbook of Operating Procedures.

Attendance: I strongly encourage you to attend every class, though there is no particular grade penalty for absences. You are responsible to find out any assignment that must be made up if you are absent. My goal is for class meetings and activities to complement, rather than echo, the textbook, and thus for every class to be worth attending.

Drop date: The deadline for student-initiated drops with a W is **Thursday, March 29th**. After this date, you can only drop with the Deans approval, which is granted only under extenuating circumstances. I hope everyone will complete the course successfully, but if you are having doubts about your progress, I will be happy to discuss your standing in the course to help you decide whether or not to drop. You are only allowed three enrollments in this course, and students enrolled after Fall 2007 are only allowed six withdrawals in their entire academic career, so please exercise the drop option judiciously.

Courtesy: We all have to show courtesy to each other, and the class as a whole, during class time. Please arrive to class on time (or let me know when you have to be late, and why); do not engage in side conversations when one person (me, or another student) is talking to the whole class; turn off your cell phone (or, for emergencies, at least set it to not ring out loud), and do not engage in phone, email, or text conversations during class.

Disabilities: If you have, or suspect you have, a disability and need an accommodation, you should contact the Center for Accommodations and Support Services (CASS) at 747-5148, cass@utep.edu, or Union East room 106. You are responsible for presenting to me any CASS accommodation letters and instructions.

Exceptional circumstances: If you anticipate the possibility of missing large portions of class time, due to exceptional circumstances such as military service and/or training, or childbirth, please let me know as soon as possible.