

Applied Analysis I-- MATH 3335

Instructor: Dr. Dogan

Time and Place: Class meeting on Thursday 9-10:20 am LART

Lecture recordings and watching them on Tuesdays 9-10:20 am.

Class-questions can be asked before and after class

Thursdays in person or via zoom on Tuesdays 9-10:20 am.

Zoom link: TBA

Office hours: By Appointment

Prerequisite: MATH 2313 (Calculus III) with a grade \C or better.

E-mail address: Blackboard e-mail.

Communication: via blackboard e-mail and blackboard announcements; check blackboard daily for news and new information.

Textbook: Textbook (Optional): Erwin Kreyszig, Chapters 9,10,13, Advanced Engineering Mathematics, 10th Edition, Wiley 2011

Lecture recordings are provided on blackboard in weekly folders.

Technology: Blackboard for assignments, grade posting, communication. Microsoft Word for typing responses or other tech tools to scan or take pictures of your work as jpeg and a video recording device (zoom, blackboard ultra...your phone), and a online storage site (cloud, dropbox, UTEP onedrive...). All class-works/assignments including exams are to be submitted to blackboard. No paperwork is collected as pdf or a jpeg file. Make sure to have either a laptop or a smart phone to be able to submit your work to blackboard.

Course Content

Vector calculus and complex analysis are the foundations of many engineering, physics, and computer sciences applications. In this class, the students will learn mathematical concepts in these subjects that frequently appear in practical problems. The first part of the course focuses on vector calculus, especially in three dimensional space, with topics covering vector fields, derivatives, the gradient, curl, and divergence, line and surface integrals, the Green's theorem, the divergence theorem by Gauss, and the Stoke's theorem. The second part provides an introduction to complex analysis, particularly on the difference between complex derivatives and the derivatives of a function of two real variables, which eventually leads to the Cauchy-Riemann equations.

Upon successful completion of the course, the students will be able to: perform integration along a path or on a surface, convert domain integral to equal boundary integral, decide whether a

complex-valued function is differentiable or not.

Course Requirements

Outline of Class Activities including some or all listed below (not necessarily in the order listed):

NOTE: COURSE TOOLS AND ASSIGNMENTS ARE ORGANIZED WITHIN WEEKLY FOLDERS ON BLACKBOARD. You will find lecture recordings, assignments, exam folders and other documents in these folders.

Course tools mentioned below can be found on homepage, blackboard.

1. **Recorded Lectures posted on Tuesdays: class time on Tuesdays to be used to watch the lecture recordings and work on the questions embedded in the recordings.**

They are posted on blackboard under each week's folder. *IF IT IS DIFFICULT TO LISTEN DIRECTLY FROM THE HOST SITE, DOWNLOAD THEM TO YOUR COMPUTER AND THEN LISTEN.*

2. **Lecture-work based on recorded lectures: Due Tuesdays by 11:59 pm**

Following each lecture recording, there will be a lecture-work-questions embedded in the recordings to be posted on blackboard within the same week's folder. You are allowed only one missing work in this category (use it wisely; preferably for an emergency) thru the semester. No late submission considered. No Exception!!!

3. **Practice Questions**

Practice Questions in weekly folders-They are not be graded but used to select questions for class presentations and Exams.

4. **Classwork-due Thursdays by 11:59 pm AND //Group work-due by Tuesdays 11:59 pm.**

There will be a couple of tasks/questions assigned to groups to be worked on and submitted by one member of the group (including names of all members at the top of the work) by Wednesdays 11:59 pm. During Tuesday meetings, all/some groups will presents their work and may receive presentation points (extra credit) to be used toward lecture/classwork grades. During class meetings, if time allowed, we will look at practice questions as well. Toward the end of the class meeting, a classwork is assigned for you to submit your work by the end the end of the day, by 11:59 pm to blackboard. You are allowed only one missing work (use it wisely; preferably for an emergency) thru the semester in this category. No late submission considered. No Exception!!!

5. *-Exams and Final exam*

There will be a **comprehensive short exam per month** in class. Exam work will be written on papers and a picture or pdf version of the exam **work will be posted on blackboard by the end of the class-time**. TA will not collect your work. For this reason, you are required **to have a laptop or a smart phone available for you to take a picture of your exam and submit** to blackboard.

Each exam is comprehensive and grades for missing exams, only for documented emergencies, will come from applying an appropriate percent of final exam score. No make-up, retake, extensions or additional work as replacement will be considered. **NO EXCEPTION!** Exams will include everything covered/presented in class, on classwork, and homework. Dates of the monthly exams will be announced in class. There will not be any class-works but Group-work assigned the week before will be due.

There will be a **comprehensive final exam** during the time the final exam is scheduled for this course (check myutep.edu for the time and day of the final exam).

6. *Announcements:*

Announcements option of blackboard may be used to post class announcements. They will also be emailed as reminders. Check daily.

7. *Blackboard Calendar*

Blackboard calendar can be checked regularly for upcoming assignments, meetings, and other course related activities.

NOTE: No make-up, retake, extensions or additional work, replacement work are considered. **NO EXCEPTION!!!**

Attendance and Participation: As with every college course, attendance is essential for success. There will be class activities that are important for your learning. Try not to be absent unless absolutely necessary.

Grading Policy It is your responsibility to maintain the grade average required by a scholarship, other financial supports or any other requirements.

Course grade will be assigned strictly based on class average obtained using the grade calculation formula given below using only the grades posted on blackboard. Your scholarship, financial support requirements or any other personal requirements will not be under consideration when assigning final grades.

Grade Distribution:

Exams and Final: 50%

Homework and Classwork-lectures: 50%

Class Average will be calculated strictly based on the formula:

$$\frac{((\text{hmw and classwork-lectures})/(\text{maximum one can obtain from, quiz and classwork-lectures})*50 + ((\text{exams and final exam total})/(\text{maximum from exams and final})*50$$

*Each cluster is max 50 points. In case of percent over 50 will be rounded back to 50.

Example:

Hypothetical scenario: It does not reflect the number of assessments/any extra credits this course will provide..

exam1=20 Max= 30,

exam 2=25 Max= 30

exam 3=27 Max= 40.

Final exam =86 Max= 100

Exam and Final exam total: $20+25+27+86=158$

Maximum from exams and Final exam: 200

classwork-lecture works-group work=124

Maximum of classwork-lecture works-group work =130.

Exampercent= $((20+25+27+86)/(30+30+40+100))*50=(158/200)*50=40$

Classwork-lecture work-group work= $(124/130)*50=48$

Class Average= $40+48=88$, which is a B according to UTEP grade distribution (see below).

NOTE: Total column values given in blackboard is NOT considered in class-average calculation.

UTEP Letter Grade Distribution

90-100 A

80-89 B

70-79 C

60- 69 D

<60 F

Drop Deadline: The last day to drop the course without a “W” is **TBA**. It is the policy of the University and the College of Science that **after the drop date, there is absolutely no drop with a “W”. Instructor will automatically assign an “F” for course drops.**

Addressing Concerns

All course related concerns must be addressed before the end of the semester that this course is offered. In addressing concerns, follow the steps below

1. First, refer to the syllabus regarding your concerns about course related tasks. If syllabus does not address your concerns then send an email request for an in person/online meeting.
2. Concerns about the exams (about the final exam, within a week after the release of the final exam score) and other graded assignments must be **addressed within a week of** receiving the grades. They must be addressed during an in person/online meeting or via email (through blackboard email). They can only be addressed, if actual graded work is presented. That is, to consider your concerns, you will need to present the original copy of your assignment/exams.

FREQUENTLY ASKED Q &A and SUGGESTIONS

1. **SUBMIT WORK AT LEAST 30 MINUTES BEFORE THE DUE TIME TO HAVE ENOUGH TIME TO ADDRESS TECHNOLOGY RELATED ISSUES.**
2. **IN CASE OF DIFFICULTIES SUBMITTING, TRY USING A DIFFERENT WEBSERVER; A DIFFERENT COMPUTER, OR A PHONE.**
3. **WORK STAMPED AS LATE BY THE SYSTEM WILL BE COUNTED LATE AND YOUR WORK WILL RECEIVE ZERO POINT.**As long as, submission time is marked late, it is considered late. **NO EXCEPTION!**

4. SUBMIT WORK USING WORD, JPEG OR PDF. IF YOU SUBMIT A DIFFERENT FILE FORMAT AND WE CANNOT OPEN, YOU WILL RECIEVE ZERO FOR THE ASSIGNMENT! NO EXCEPTION!

5. **AFTER SUBMITTING CHECK BACK THAT YOUR FILE IS NOT CURRUPTED AND YOU ARE ABLE TO OPEN. IF YOU ARE NOT, WE WONT BE ABLE TO EITHER. IF WE CANNOT OPEN YOUR FILE THEN YOU WILL RECIEVE ZERO FOR THE ASSIGNMENT! NO EXCEPTION!**

6. YOU CAN USE THE FORMULA INCLUDED IN THE SYLLABUS TO CALULATE AVERAGE ANYTIME DURING THE SEMESTER. YOU DO NOT NEED MY HELP IN CALCULATIONS.

7. ANY ISSUE THAT HAS NOT BEEN ADDRESSED BEFORE THE END OF THE SEMESTER (BY THE FINAL EXAM DAY) WILL NOT BE CONSIDERED.

NO LATE SUBMISSIONS ACCEPTED! NO EXCEPTION!!!!

ADDITIONAL CLASS RULES

1. DO NOT ASK FOR FAVORS! It is illegal and doing so may result in a disciplinary action.
2. All grades are posted on blackboard, and can be accessed until about two to three days after the final exam day.
3. **ALL CHANGES, CORRECTIONS, SUBMISSIONS, AND CONCERNS SHOULD BE FINALIZED BY THE FINAL EXAM DATE SET BY UTEP FOR THIS CLASS. NO CONCERNS WILL BE CONSIDERED AFTER THIS DATE (Check myutep.edu site for the final exam date).** There will not be any change on the grades after this date

Disability Accommodation: *If you have a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions.*

If accommodations include lecture notes and longer time on assessments, due to the online structure of the course, lecture recordings are provided online and longer time for assignments given for everyone.

NOTE: For the online classes, there is no need for the accommodation of note taker, extra time, and taking exams at the center. Online classes provide lecture recordings, give plenty time for exam for everyone enrolled, and exams are taken online.

The Career Center can offer a wide-array of presentations to meet career development goals, which can be incorporated into the classroom. The workshops we offer include: Crafting an Effective Résumé, Mastering the Interview, Securing an Internship, Working for the Federal Government , Applying to Graduate School, and much more. A complete list is available here: <https://www.utep.edu/student-affairs/careers/events/career-education-workshops.html>

In addition to our presentations, we provide one-on-one assistance to students with résumé reviews, letters of intent, CV review, grad school preparation, etc. If you would like to have your students submit their résumé for review prior to the fall CAREER EXPO, we will be partnering with the El Paso Society for Human Resource Management (EPSHRM) and UTEP Alumni to host a résumé clinics for Tuesday, September 17 through Thursday, September 19 at the Career Center.

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

Additionally, any actions/behaviors/comments that cause disturbance in class/affect class performance adversely are against the UTEP rules and regulations, and may result in complete drop (by the Instructor/university officials) with either a grade of F from the class. You are responsible with the course material covered/presented in class, on quizzes, hmws and on homework and course related tasks.

COVID-19 PRECAUTION STATEMENT

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is

widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.

DO NOT WAIT TILL THE LAST WEEK OF CLASSES TO DISCUSS YOUR OVERALL seek help IN THE COURSE. If you come early in the semester, you may get guidance and help both from the instructor and the Teaching Assistant. This will not be the case if you come towards the end of the semester.

This syllabus is subject to changes when necessary.