



Course **ENGR 3300, Advanced Engineering Mathematics**

Professor Dr. KJ Cho
Term Fall Semester 2017

Meetings **Tuesday and Thursday 4:00- 5:15pm, CB3 1.312**
 SI lab: Tuesday 7:00 – 7:50pm, CB3 1.306

Professor's Contact Information

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Office Hours **Tuesday 1 – 3 PM**

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General Course Information

Pre-requisites, Co-requisites, & other restrictions Prerequisites: MATH 2415 (Calculus of Several Variables) or MATH 2419 (Calculus II).

Course Description **EE 3300 Advanced Engineering Mathematics** (*3 semester hours*)
Survey of advanced mathematics topics needed in the study of engineering. Topics include vector differential calculus, vector integral calculus, integral theorems, complex variables, complex integration, series, residues and numerical methods. Examples are provided from microelectronics and communications.

Learning Outcomes Students will understand the basic concepts and be able to solve problems in the areas of vector differential and integral calculus, analytic functions of a complex variable, and complex series and residues.
Students are expected to be able to:
1. Solve problems in multivariable calculus;
2. Compute surface integrals and line integrals;
3. Understand gradient, divergence and curl;
4. Use Green's, divergence, and Stokes' Theorem
5. Work with complex numbers and variables

Required Texts & Materials **Advanced Engineering Mathematics**, 10th Ed., Wiley, by Erwin Kreyszig in collaboration with Herbert Kreyszig and Edward Normington
ISBN 978-0-470-45836-5

Suggested Texts, Readings, & Materials **Posted on eLearning website**

**Supplemental
Instruction**

Support for Computer Aided Software, CAS. Labs for this course is available. For information about the days, times and locations for SI sessions refer to : www.utdallas.edu/studentsuccess/leaders/si.html

Grading Criteria	<p>Examinations are designed to assess fundamental comprehension and understanding rather than short term retention. The accumulated weighted points from homework and tests establish a rank ordering of students within the section to which grades are assigned.</p> <p>Grades are distributed by the historical average for ENGR 3300 of publicly available grade data which can be found at myEdu by a rank ordering of students (omitting withdrawals). Pluses/Minuses are taken at the 1/3 division points within grade brackets for A/B and pluses only at the midpoint with the C bracket. In the case of candidates for D and F, all are individually evaluated in rank order against CLOs and will be adjusted if raw point weighted averages on tests exceed 50% (for D) and 60% (for C).</p> <p>Grade weight: class attendance (5%), SI attendance (5%), SI assignment (5%), HW (10%), Exam I (20%), Exam II (20%), Final exam (35%).</p>
Make-up Exams	<p>Any excusal from a regularly scheduled test or assignment must comply with the policies of the University for excused absences. In particular the student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. Except in the case that the student seeks an excusal for religious holy days (below), if the absence is foreseeable, this evidence will be provided and acknowledged by the instructor ahead of the excused absence. In the case of an emergency absence, the student will provide satisfactory evidence to the instructor within three days for the absence to be excused.</p>
Late Work	<p>Not graded except in cases of university excused absences.</p>
Class Attendance	<p>Mandatory</p>
Classroom Citizenship	<p>Please be respectful to your classmates by minimizing disturbances. Class time is prescheduled and should be considered to be analogous to a business meeting.</p>
Comet Creed	<p>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</p> <p>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</p>
UT Dallas Syllabus Policies and Procedures	<p>The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.</p> <p>Please go to http://go.utdallas.edu/syllabus-policies for these policies.</p>