

**University of Connecticut
Department of Mechanical Engineering**

ME 5507: Engineering Analysis I

Fall 2014

ME5507 is a first-year graduate course covering topics in mathematics that are central for solving practical engineering problems. Topics include but are not limited to: differential equations, matrix and linear algebra, vector calculus, and selective topics such as introduction to optimization and probability. It is a prerequisite to other advanced graduate courses in the UCONN ME department.

- Instructor:** Prof. Xu Chen, xchen@engr.uconn.edu
Office: Rm. 382 United Technologies Engineering Building
Tentative Office Hour: Tu 2:15 pm – 3:30 pm, Th 4:45 pm – 5:45 pm
- Lectures:** Tu, Th 3:30 pm – 4:45 pm in Rm. 150 United Tech. Eng. Bldg
- Course website:** http://www.engr.uconn.edu/~xchen/uconn_me5507_fa14.html (general information) and www.huskyct.uconn.edu (announcements and homework)
- Textbook:** Erwin Kreyszig: Advanced Engineering Mathematics, 10th edition.
- Pre-requisites:** Undergraduate courses in linear algebra and calculus
- References:** Calculus Early Transcendentals, Single Variable by James Stewart (Textbook for UCONN MATH1131)
- Grading:**
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| One Midterm Exam (open one-page summary sheet) | 20 % |
| Final Examination (open book + three-page summary sheet) | 60 % |
| Bi-weekly Homework | 20 % |
- Homework policy:** Homeworks are due in class, before the lecture starts. Late homeworks will not be considered in your final grade. If your homework contains group work, each group member must specify his/her contributions.
- Tentative Topics:** Ordinary Differential Equations
(Subject to change) Matrix and Linear Algebra
Partial Differential Equations
Selective Topics
- Important Dates:** 10/23/2014 (Th): In-class **Midterm**
12/12/2014 (Fri), 1 pm – 3 pm UTEB150: **Final Examination**
11/25/2014, 11/27/2014: No Class (Thanksgiving Recess)
12/04/2014: Last Lecture
- Software:** If you don't have MATLAB on your computer, you can use UCONN's virtual computer lab Skybox (<http://skybox.uconn.edu/>) or the PCs in the ME computer lab (Engineering Bldg II 202).

Please notify the instructor in writing by the second week of the semester, if you have any potential conflict(s) about the class schedule, or if you need special accommodations such as: disability-related accommodations, emergency medical information you wish to discuss with the instructor, or special arrangements in case the building must be evacuated.