ME 4753 Syllabus

Topics in Engineering Practice ME 4753, Section QPW, 3 credit hours **(81479)**

Fall 2026 Semester

Instructor Information

Instructor: Dr. Fedorov

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General Course Information

Description

World-class engineering is a core tenant to the success of GE Gas Power and its customers. This course is offered as a two-semester course for employees to gain a broad understanding of engineering topics across GE Gas Power. Students will gain both credit for the Mechanical Engineering course of study and fulfill the A-Course requirement for the GE Gas Power ACE program.

Course Learning Outcomes

1. Expose students to a variety of engineering topics and develop a deeper understanding through project-based learning
2. Apply academic concepts to real-world applications through the GE Gas Power lens
3. Bring ME-level academic rigor to a variety of topics over the course of the year, preparing students for a successful academic and professional career.

Student Learning Objectives

1. Students will be able to demonstrate a greater knowledge and understanding of topics such as thermodynamics, materials, power electronics, fluid dynamics, heat transfer, controls, and combustion.
2. Students will demonstrate a fundamental grasp on how the topics in (1) are applied in GE Gas Power engineering.
3. Students will be able to analyze and solve business-relevant problems for engineering in a turbomachinery manufacturing business.

Required Course Materials

Lecture and Homework

Course materials for A-Course are created internally and are proprietary to GE Gas Power. Weekly lecture presentations and homework assignments are available in the course library on the company intranet.

There are no textbooks required for this course, but students are free to utilize any texts or other outside resources they wish, unless specifically directed otherwise by instructor or course staff.

Grading Policy:

Students will receive a grade for each topic. This is determined with an individual grade for a pre-lecture knowledge assessment in addition to either a group grade for a post-lecture project or an individual grade for a post-lecture assessment. The grades for each topic will be averaged to determine the final grade for the course.

Description of Graded Components

Typical Homework Report Rubric Weighting:

Abstract	10%
Assumptions	5%
Results	25%
Analysis	30%
Discussion	20%
Report Quality	10%

Grading Scale

Students will be graded (on a 0-100% scale) on all homework assignments and presentations. For team assignments, all students on the team will be awarded the same grade. All grades are weighted equally, and **students must achieve a minimum average of 80% to pass the course.** Students' final A-course grades will be assigned as a letter grade according to the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Course Policies

Attendance and/or Participation

In-person class attendance is required by all A-course students. Exceptions may be made for critical business reasons or other valid personal issues and students must alert the A-course supervisor to these issues as soon as possible. Virtual/remote participation options may be made available on occasion at the discretion of the course supervisor. All lectures are recorded and made available to students following class.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.