ME 403-002 – Mechanical Systems Design I

Meeting Times & Location:
T 2:30 – 3:50pm ME 221
Th 2:30 – 3:50pm GITC 2305

Course Description:
Lectures and projects covering problem solving methodology in the design, analysis, and synthesis of mechanical and thermal systems.

Prerequisites:
ME 304, ME 305, ME 312, ME 316

Optional Textbooks:

"The Engineering Design Process"
A. Ertas, J. Jones
John Wiley & Sons, 1996, 2nd Edition

"The Mechanical Design Process"
David G. Ullman
McGraw Hill, 2010, 4th Edition

Instructor:
Mr. Anthony Glick
Office hours: T, Th 1:15 – 2:15pm MEC 333CD or via Zoom by appointment
Email: aglick@njit.edu

Course Objectives:
Demonstrate an understanding of the phases of the methodology of design.

Topics:

Weeks 1 – 6/7: Introduction/Engineering Design/Modeling & Simulation/Material Selection/Crack Growth/Structured & Unstructured Problems/Engineering Economics/Design Optimization/Ethics

Week 7/8: Exam

Weeks 8 – 15: Capstone project

Grading:

Final Project (Design Proposal): 35%
1 Examination: 28%
Homework: 27%
Attendance: 10%

Grading Scale:
A: 100.00 – 90.00%
B+: 89.99 – 87.00%
B: 86.99 – 80.00%
C+: 79.99 - 77.00%
C: 76.99 - 70.00%
D: 69.99 – 60.00%
F: 59.99 – 0%

Statement on Academic Integrity:
Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:

http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. ***Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.*** *If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu.*

Statement on Artificial Intelligence:

This course expects students to work without artificial intelligence (AI) assistance unless explicitly permitted by the instructor. Additionally, if and when students use AI in this course, the AI must be properly cited. If you have any questions or concerns about AI technology use in this class, please reach out to your instructor prior to submitting any assignments.

Miscellaneous: No eating in class