Coordinates

Room 105

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210-4299
Course Web Page
http://www.ae.metu.edu.tr/~ae438
Reference:

AE 438
AIRCRAFT ENGINE DESIGN

Monday, 9:40-11:30, Class: AE-024
Wednesday, 15:40-17:30, Class: AE-024
GRADING:

2 Midterms 15% each
Project work
  Report 30%
  Presentation 10%
Final exam 30%
Chapter 1: The Design Process (2 weeks)
Chapter 2: Aircraft / Engine System Constraint Analysis (1 week)
Chapter 3: Mission Analysis (1 week)
Chapter 4: Engine Selection: On-Design Cycle Analysis (1 week)
Midterm I
Chapter 5: Engine Selection: On-Design Cycle Analysis (2 weeks)
Chapter 6: Sizing the Engine: Installed Performance (2 weeks)
Chapter 7: Engine Component Design, Global and Interface Quantities (0.5 week)
Midterm II
Chapter 8: Engine Component Design: Rotating Turbomachinery (3 weeks)
Chapter 10: Engine Component Design: Inlets and Exhausts Nozzles (1 week)
• Small turbojet test setup development (4 students)
• Radial compressor test setup development (4 students)
• Low speed cascade wind tunnel development (4 students)
• Small piston-prop test setup development (4 students)
• Propeller Design, Production and Test (4 students)
• Optical measurements on a water table cascade (4 students)
• Pressure probe calibration tunnel development (4 students)
• Twin-Rotor test stand development (4 students)
• Build a small ducted fan (4 students)
• Conceptual design of a small expendable turbojet (4 students)
• Turbo-rotary compressor flow field analysis (3 students)
• Project X1 (3 students)