Course Syllabus

Course Title: Design Project 1 (System-Level Modeling)

Semester: Fall 2025

Instructor: Assoc. Dr. Galip Yılmaz

Reseaarch Assistants: Res. Asst. Fatma Ahsen Aktitiz, Res. Asst. Yaşarata Korkmaz

Meeting Time: Weekly project meetings + scheduled checkpoints

1. Course Description

Design 1 introduces students to system-level modeling of energy-related systems. Students will form groups, select a project topic, and develop a conceptual model of a system. The course emphasizes problem definition, literature review, conceptual modeling, system analysis, and reporting.

2. Learning Outcomes

By the end of this course, students will be able to:

- Formulate and define engineering problems at a system scale.
- Conduct literature surveys and benchmark existing solutions.
- Develop and analyze system-level models using computational/analytical tools.
- Work effectively in groups on engineering design projects.
- Communicate findings in written reports and oral presentations.

3. Course Schedule

- Introduction Phase
  25 September: First lecture – course introduction, syllabus shared, group formation.
  2 October (Thursday): Discussion and assignment of project topics.
  9 October: Final confirmation of project topics (submit by email).

- Checkpoints & Deliverables
  30 October (Thursday): First Report Due + group meetings.
  18 December (Thursday): Second Report Due + group meetings.

- Final Deliverables
  15 January (09:30): Final Presentations
  18 January (23:59): Final Report Submission
  29 January (09:30): Make-up Presentations
  1 February (23:59): Make-up Report Submission

4. Grading

Meeting Notes / Participation: 10% + 10%

Report 1: 20%

Report 2: 20%

Final Report: 10%

Final Presentation: 30%

5. Group Work

Students will work in teams of 3-4. Each group will select or be assigned a project. Collaboration is essential; all members are expected to contribute equally.

6. Reports & Presentation Guidelines

Reports must follow the Design 1 Report Outline provided.

Reports must be typed, well-structured, and referenced.

Presentations should be professional, 10–12 minutes per group, followed by Q&A.

7. Policies

Deadlines: Late submissions are penalized unless prior approval is granted.

Academic Integrity: Plagiarism or fabrication will result in disciplinary action.

Attendance: Participation in scheduled meetings, presentations, and discussions is mandatory.