BLG 368 E: Operations Research Fall 2019

- **Instructor:** Y. Görkem Gökmen, yggokmen@medipol.edu.tr
- **Time & Place:** Thursday, 13:30–16:30, EEB-2106

  Course Web Page: There will be no course web page. Instead, we will use *ninova* to share class-related documents.
- **Textbook:**
  - *Operations Research: Algorithms and Applications*, 4th edition, W. L. Winston, Brooks/Cole, 2004.
  - *Introduction to Operations Research*, 7th edition, Hillier, F. S. and G. J. Lieberman, , McGraw-Hill Publishing Company, New York.
- **Prerequisites:** Students are highly recommended to pass a Linear Algebra Course prior to taking this course.
- **Course Objectives:** This is an introductory level undergraduate course on Operations Research (OR). The main objective is to give students an overall perspective of the field of OR and the methodologies identified with it. The emphasis is on modeling common processes in engineering and management systems and interdisciplinary areas. At the end of the semester, the student should be acquainted with the terminology and the approaches employed in various fields of applications where OR has demonstrated its utility. Dedicated students will gain major insight into the methodology of mathematical modeling which would help in their decision making processes as future OR scientists and practitioners. Homework and project assignments will enhance students' modeling and problem solving abilities in practice.
- **Tentative Course Outline:**
  1. Introduction to modeling
  2. Formulation and classification of optimization models
  3. Various linear and integer modeling examples: Production, location, and network models
  4. Geometry of linear programming and convexity
  5. The simplex method
  6. Finding a basic feasible solution
  7. Branch and bound method
  8. GAMS solver
- **Homeworks:** Homeworks will be assigned regularly. However, they will NOT be collected. I strongly recommend that you work on homework problems on your own since they will serve as an excellent educational tool and preparation for exams.
- **Exams:** There will be an in-class midterm and a comprehensive in-class final exam at the end of the semester. All exams will be closed books and closed notes.
- **Attendance:** Attendance will absolutely not be taken and absence will not be penalized. Please come to the course if you are really eager to learn OR related topics.
- **Assessment Methods:**
  - In–class first midterm examination : ?%

- Comprehensive final examination: ?%

- **Important Announcements:**

  1. Please check ninova regularly for updates.
  2. A make-up examination will only be given under extenuating circumstances (such as serious health or family problems) which also requires to be approved by ITU's Student Affairs.
  3. **Cheating will not be tolerated and will be severely penalized. Disciplinary action may also be taken.**
  4. **As a courtesy, please turn off your cell phones during class.**