

END2732 Material Handling Systems

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| Instructor | Prof. Mehmet Güray Güler mgguler@yildiz.edu.tr http://yabis.yildiz.edu.tr/mgguler |
| Office | E1 – 20 |
| Office Hours | Take an appointment |
| Class | Monday, 10:00-12:00 @B502 |
| Type | Elective |
| Prerequisite | None |
| Semester | 2022 Fall |

Course Outcomes:

The course offers the basic concepts of material handling, its principles, introduction of material handling tools, analysis of vehicle based systems and storage systems, and some related preliminary linear models and queueing models

Suggested Textbook(s):

F.E. Meyers, M.P. Stephens, *Manufacturing Facilities Design and Material Handling*, Fourth Edition, Prentice Hall, 2010 (or Third Edition).

Sunderesh S. Heragu, *Facilities Design*, Third Edition, CRC Press, 2008 (or later) .

Grading:

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| Mid-term Exam | 30% |
| Assignments (1 or 2) | 10% |
| Term Project | 20% |
| Final | 40% |
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| | 100% |

Notes: Attendance is required. Please don't miss the exams. The make-ups will be harder. For the make-up you are responsible for the whole semester, i.e., prepare like you are taking the final exam

| Week | Topic |
|-------|--|
| 1 | Course Introduction, MH Concept, Definition, Principles of MH |
| 2,3 | MH Equipment: Conveyors and Their Analysis |
| 4,5 | MH Equipment: Cranes, Industrial Trucks, Vehicle Based System Analysis |
| 6 | MH Equipment: Positioning Equipment, Unit Load Formation Equipment |
| 7 | MH Equipment: Storage Equipment, Identification and Control Equipment |
| 8 | Midterm 1 |
| 9 | Storage System Analysis |
| 10 | Storage System Analysis |
| 11,12 | MH Design: Linear Programming Applications |
| 13 | MH Design: Group Technology Algorithms |
| 14 | MH Design: Queueing Theory Applications |