

Ankara Üniversitesi
Kütüphane ve Dokümantasyon Daire Başkanlığı
Açık Ders Malzemeleri

Ders izlence Formu / Syllabus

Dersin Kodu ve İsmi <i>Course Title and Code</i>	CEN 4417 Process Design I
Dersin Sorumlusu <i>Course Coordinator</i>	Assoc. Prof. Dr. H. Emir Şimşek, Assoc. Prof. Dr. Hakan KAYI
Dersin Düzeyi <i>Course Level</i>	Undergraduate
Dersin Kredisi <i>Course Credits</i>	4
Dersin Türü <i>Course Type</i>	Compulsory
Dersin İçeriği <i>Course Content</i>	Introduction to Process Design, Group and Team Work, Design parameters, Design of the Process, report preparation, Flow Diagram and P & I Diagrams, Flow Sheet presentation, Mass and Energy Balances for Units, Computer Aided Flow Diagrams, Simple Mass Balance Programs, Piping and Instrumentation, Evaluation of System Performance, Pipelines and Pump and Compressors Design, Heat Exchanger Design, Heat Exchangers and Classification, Design Parameters and Methods of the Heat Exchanger, Condenser Design, Engineering Ethics, Economic Analysis of the Process
Dersin Amacı <i>Course Goals</i>	Mass and energy balances for a process of creating and solving, determination of the size of the unit of the process, determination of the compositions and other conditions of the flow, determination of investment and operating costs of the units, determination of the profitability of the process.
Dersin Süresi <i>Office Day-Hours</i>	4 hours
Eğitim Dili <i>Language of Instruction</i>	English
Ön Koşul <i>Prerequisites</i>	CEN3306, CEN314
Önerilen Kaynaklar <i>Recommended Sources</i>	1. Sinnott R.K., Towler G.K., 2020. Chemical Engineering Design, 6 th Ed., Butterworth-Heinemann, Oxford. 2. Peters M.S., Timmerhaus K.D., West R.E., 2013. Plant Design and Economics for Chemical Engineers, 5 th Ed., McGraw-Hill, New York 3. Turton R., Shaeiwitz J.A., Bhattacharyya D., Whiting W.B., 2018. Analysis, Synthesis and Design of Chemical Processes, 5 th Ed., Prentice Hall, New Jersey 4. Green D., Southard M.Z., 2018. Perry's Chemical Engineers' Handbook, 9 th Ed., McGraw-Hill, New York.
Dersin Kredisi (AKTS) <i>ECTS</i>	4
Laboratuvar <i>Laboratory</i>	-
Diğer-1 <i>Others</i>	-