Syllabus

Course Title and Code	**CEN332 Mathematical Modelling**
Course Coordinator	Asist. Prof. Dr. A. Ezgi Ünlü Büyüktopcu- Group B Asist. Prof. Dr. Işıl Gürten İnal – Group C
Course Level	Undergraduate
Course Credits	3
Course Type	Compulsory
Course Content	Chemical Engineering Mathematics course teaches mathematical techniques to solve chemical engineering problems. The course covers deriving equations for chemical engineering problems and the numerical methods for solving the equations. The course also includes ordinary differential equations, partial differential equations and methods for solving process dynamics problems.
Course Goals	Defining chemical engineering problems and writing mathematical models by applying the conservation laws of chemical engineering.
Office Day-Hours	E.Ü.Büyüktopcu: Wednesday-14:00-15:30 Işıl İnal: Thusday-13:30-15:00
Language of Instruction	English
Prerequisites	---
Recommended Sources	1. J.Ingham, I.J.Dunn ,E. Heinzle, J.E.Prenosil ,J.B.Snape ,Chemical Engineering Dynamic,Wiley,2007 2. R.G.Rice,D.D.Do, Applied Mathematics and modeling for chemical engineers,John wiley and Sons,1995 3. Tosun, İ. Modelling in Transport Penomena. Second Ed. Elsevier, Amsterdam, 2007. 4. Jensen, V. G., Jeffreys, G., V., Mathematical Methods in Chemical Engineering, Second Edition, Academic Press Inc. Ltd., London, 1977. 5. Mickley, H. S., Sherwood, T. K., Reed, C. E., Applied Mathematics in Chemical Engineering, Second Edition, McGraw-Hill Book Company Inc., New York, 1975. 6. Wylie, C. R., Barrey, L. C., Advanced Engineering Mathematics, Fifth Edition, McGraw-Hill Book Company Inc., New York, 1985. 7. Himmelblau, D. M., Basic Principles and Calculations in Chemical Engineering, Fifth Edition, Prentice-Hall International Inc., 1989. 8. Luyben, W. L., Process Modelling, Simulation and Control for Chemical Engineers, 2nd Ed. McGraw-Hill, New York, 1990.
ECTS	6
Laboratory	-
Others	-