COURSE DETAIL

HEAT, MASS AND MOMENTUM TRANSFER 3
Country United Kingdom - Scotland
Host Institution University of Edinburgh
Program(s) University of Edinburgh
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Chemical Engineering
UCEAP Course Number 100
UCEAP Course Suffix
UCEAP Official Title HEAT, MASS AND MOMENTUM TRANSFER 3
UCEAP Transcript Title HEAT MASS&MOMENTUM
UCEAP Quarter Units 8.00
UCEAP Semester Units 5.30

Course Description
This course covers the following topics: Heat, Mass and Momentum Transfer. The fundamentals of heat, mass and momentum transfer are presented, including analogies between the transfer mechanisms for convective transfer and treatment of radiative heat transfer. On completion of this course, the student will be able to: - Identify and describe transport mechanisms for heat, mass and momentum, developing & solving models, appropriately simplified, which address transport phenomena and conservation laws, of physical transport problems (including with 1-D fluid flow) - Solve problems in turbulent transport using empirical approaches and the Chilton-Colburn analogy - Understand the phenomena of phase change and how this affects transport problems - Perform a preliminary heat exchanger design using Kern's method - Extend simple cases of heat transfer to include radiation and for fluid flow to use 2-parameter non-Newtonian models to obtain velocity profiles.

Language(s) of Instruction
English

Host Institution Course Number
CHEE09013

Host Institution Course Title
HEAT, MASS AND MOMENTUM TRANSFER 3

Host Institution Course Details

Host Institution Campus
University of Edinburgh

Host Institution Faculty

Host Institution Degree

Host Institution Department
College of Science and Engineering

Course Last Reviewed

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