



Full Syllabus



Course Title

Heat Mass and Charge Transfer

Lecturer

Dr. Brian Rosen

Semester

A

Course requirements

Diffusion in Materials, Differential Equations

Final grade components

75% Final Exam, 25% Homework

Course schedule

Class no. / Date	Subject and Requirements (assignments, reading materials, tasks, etc.)
1	Steady state and the heat diffusion equation
2	Multilayer materials
3	2D Heat Diffusion and Transient Lumped Capacitance Model
4	Full and Approximate Solutions to Transient Heat Flow
5	Boundary Conditions (Constant flux, constant temperature)
6	Boundary Layers
7	Similarity Equations for Heat and Mass Transfer
8	Mass transfer – Diffusion
9	The heat/mass transfer analogy problem
10	Catalytic Reactions and Boundary Problems in Mass Transfer
11	Review

Required course reading

Optional course reading

Incropera, DeWitt, Bergman, Lavine: Fundamentals of Heat and Mass Transfer

Comments