

Ohio University
 Department of Chemical Engineering
 ChE-400 Applied Chemical Engineering Calculations
 Fall Quarter 2007

Tentative Schedule

Week	Date	Subject/Comments	Assignment		Reading
			Assigned	Due	
Week 1	09/05/07	Syllabus. Examples of Applications Tutorial I: Basic Operation with Matlab and Excel (computer lab)	HW-1		H-1 Tutorial I (review Plotting in Matlab and Function files, see notes of ChE-101)
	09/07/07	Problem Solving Methodology			H-2
Week 2	09/10/07	Problem Solving Methodology	HW-2	HW-1	Class Notes
	09/12/07	Problem Solving Methodology Applications of Problem Solving Methodology			Class Notes
	09/14/07	Applications of Problem Solving Methodology Muddiest Point: Problem Solving Methodology	Project		Class Notes
Week 3	09/17/07	Roots of Equations	HW-3	Q-1 HW-2	H-3
	09/19/07	Roots of Equations			Class Notes
	09/21/07	Tutorial II: Using Excel and Matlab to Estimate Roots of Equations (computer lab)			Tutorial II
Week 4	09/24/07	Roots of Equations Muddiest Point: Roots of Equations		Q-2 HW-3	Class Notes
	09/26/07	Exam I: We will meet in the computer lab (problem solving methodology and roots of equations)			H-4
	09/28/07	Linear Algebraic Equations	HW-4		H-4 Class Notes
Week 5	10/01/07	Linear Algebraic Equations Muddiest Point: LAE			H-5
	10/03/07	Non-linear Algebraic Equations			All material
	10/05/07	Tutorial III: Using Excel and Matlab to solve LAE and Non-LAE. We will meet in the computer lab			Tutorial III (review Tutorial IX "fsolve" of ChE-101)
Week 6	10/08/07	Muddiest Point: Non-LAE Numerical Differentiation/Integration	HW-5	Q-3 HW-4	Class Notes H-6
	10/10/07	Tutorial IV: Using Excel and Matlab to Integrate/Differentiate (computer lab)			Tutorial IV
	10/12/07	Numerical Differentiation/Integration			Class Notes
Week 7	10/15/07	Numerical Differentiation/Integration Muddiest Point: Numerical		Q-4 HW-5	Class Notes

		Differentiation/Integration			
	10/17/07	Exam II: We will meet in the computer lab (LAE, non LAE, numerical differentiation/integration, and all material covered in Exam I)			
	10/19/07	Ordinary differential Equations			H-7a
Week 8	10/22/07	ODE: Characteristic Polynomial Method			Class Notes
	10/24/07	ODE: Characteristic Polynomial Method Muddiest Point: Characteristic Polynomial Method			Class Notes
	10/26/07	ODE: Laplace Transforms			H-7b
Week 9	10/29/07	ODE: Laplace Transforms			Class Notes
	10/31/07	ODE-Laplace Transforms Tutorial V: Use of Matlab to Perform Operations with Laplace Transforms			Class Notes Tutorial V
	11/02/07	Muddiest Point: Laplace Transforms ODE: Numerical Solutions			Class Notes H-7c
Week 10	11/05/07	ODE: Numerical Solutions			Class Notes
	11/07/07	Tutorial VI: Numerical Solution of ODE using Excel and Matlab			Tutorial VI
	11/09/07	Muddiest Point: ODE numerical solutions		Project	Class Notes

Final Exam: Friday, November 16, at 10:10 am. Stocker 049 (Computer Lab)

Legend:

H: Hand Out

HW: Homework

Q: Quiz (only 15 minutes)