

Week No.	Monday	Wednesday
1		22-Jan Syllabus Overview + 1.1 (Modelling via Differential Equations)
2	27-Jan 1.2-1.3 (Separation of Variable, Slope Field) + Using DFIELD	29-Jan Intro to Octave - Basic Plotting + Euler's Method
3	3-Feb 1.5 (Existence and Uniqueness Theorem)	5-Feb Quiz 1 + ODE45
4	10-Feb 1.6 (Equilibria and Phase Line)	12-Feb 1.9 (Integrating Factor)
5	17-Feb 1.7 (Bifurcation)	19-Feb Project 1 (The Spruce Budworm - Hysteresis and Cusp Catastrophe)
6	24-Feb Bifurcation contd., Change of Variable techniques	26-Feb Quiz 2 + Review
	Midterm 1	
7	2-Mar 2.1 (Predator-Prey Model) + 3.1 (Linear System)	4-Mar 3.1 (Linear Systems contd.) + 3.2 (Straight line solutions) + using PPLANE
	Spring Break + Bonus Project (Recipe for an All-nighter - Flow-kick systems)	
8	23-Mar 3.3 (Phase Portraits)	25-Mar 3.4 (Complex Eigenvalues)
9	30-Mar 3.5 (Equal and Zero Eigenvalues)	1-Apr Trace-Determinant Plane, Defective and Degenerate cases, Bifurcation
10	6-Apr Project 2 (An Application from Economics: Modelling Profit)	8-Apr Quiz 3 + Review
	Midterm 2	
11	13-Apr Second Order Linear ODEs, Simple Harmonic Oscillators	15-Apr Forced Harmonic Oscillation, Method of Undetermined Coefficients
12	20-Apr Undamped Forcing, Resonance + Quiz 4	22-Apr 5.1-5.2 (Equilibrium Point Analysis, Jacobian)
13	27-Apr Almost Linear Systems, Consequences of Poincaré-Bendixson theorem	29-Apr Project 3 (Glycolytic Oscillations - Hopf Bifurcation)
14	4-May Lorenz Equations	6-May Quiz 5 + Review