

COURSE OUTLINE – subject to minor changes :

Part I	Mon 15 Jan	Martin Luther King Day – no classes		<i>First Steps with Maple</i>
	L-1 Wed 17 Jan	Introduction to Computer Algebra		
	L-2 Fri 19 Jan	Getting Started and Getting Help		
	L-3 Mon 22 Jan	Exact and Floating-Point Numbers		
	L-4 Wed 24 Jan	Algebraic and Complex Numbers		
	L-5 Fri 26 Jan	Assignment and Unassignment		
	L-6 Mon 29 Jan	Evaluation and Names of Variables		
	L-7 Wed 31 Jan	Types, Attributes, and Properties		
	L-8 Fri 2 Feb	Input/Output Formats and Files		
L-9 Mon 5 Feb	I/O of Data and Code Generation			
Part II	L-10 Wed 7 Feb	Univariate and Multivariate Polynomials		<i>Polynomials and Rational Expressions</i>
	L-11 Fri 9 Feb	Rational Functions and Conversions		
	L-12 Mon 12 Feb	Representation of Expressions		
	L-13 Wed 14 Feb	Substitution, Expansion, and Factorization		
	Project One due Friday 16 February at 10AM			
L-14 Fri 16 Feb	Normalizing, Collecting, and Sorting			
R-1 Mon 19 Feb	Review of the first 14 lectures			
E-1 Wed 21 Feb	First Midterm covers lectures 1 to 14			
Part III	L-15 Fri 23 Feb	Defining Mathematical Functions		<i>Calculus</i>
	L-16 Mon 26 Feb	Maple Procedures and Recursion		
	L-17 Wed 28 Feb	Working with Functions		
	L-18 Fri 2 Mar	Symbolic and Automatic Differentiation		
	L-19 Mon 5 Mar	Integration and Summation		
	L-20 Wed 7 Mar	Series, Approximations, and Limits		
Part IV	L-21 Fri 9 Mar	Sequence, Set, and List		<i>Advanced Maple</i>
	L-22 Mon 12 Mar	Array, Table, and Conversions		
	L-23 Wed 14 Mar	Assume and Simplification		
	L-24 Fri 16 Mar	Two-dimensional Plots		
	L-25 Mon 19 Mar	Three-dimensional Plots		
	L-26 Wed 21 Mar	Solving Equations		
	L-27 Fri 23 Mar	Differential Equations		
	Project Two due Monday 2 April at 10AM			
L-28 Mon 2 Apr	Linear Algebra			
R-2 Wed 4 Apr	Review of the lectures 15 to 28			
E-2 Fri 6 Apr	Second Midterm covers lectures 15 to 28			
Part V	M-1 Mon 9 Apr	Introduction to MATLAB		<i>Introduction to MATLAB</i>
	M-2 Wed 11 Apr	Plotting with MATLAB		
	M-3 Fri 13 Apr	Polynomials and Fitting		
	M-4 Mon 16 Apr	Programming in MATLAB		
	M-5 Wed 18 Apr	MATLAB as Drawing Tool		
	M-6 Fri 20 Apr	Images and Movies in MATLAB		
	M-7 Mon 23 Apr	Signal Processing in MATLAB		
	M-8 Wed 25 Apr	Special Matrices in MATLAB		
	M-9 Fri 27 Apr	Linear Programming in MATLAB		
R-3 Mon 30 Apr	Review of Maple, material covered in 1st Midterm			
Project Three due Wednesday 30 April at 10AM				
R-4 Wed 2 May	Review of Maple, material covered in 2nd Midterm			
R-5 Fri 4 May	Review of MATLAB			

Mon 7 - Fri 11 May: Final exam: date, time, and room to be announced.