ENGR 115 Introduction to Engineering Computation

 Spring 2019 Tentative Schedule 29 classes

 Tue Thurs

|  |  |
| --- | --- |
| Jan 15 assign hw 1: background info, introductions, syllabus, grading, Ch 1: using MATLAB: windows, variables, math | Jan 17 Ch 2: Using MATLAB, matrices, files, comments, cells |
| Jan 22 Ch 3: Built-in functions, random numbers | Jan 24Ch 3: complex numbersCh 4: intro to matrices, matrix operations |
| Jan 29Intro to input and outputCh 4: matrices, indexing | Jan 31Ch 4: matrices, meshgrid |
| Feb 5Intro to selection statementsCh 5: 2D plots | Feb 7Intro to loops (FOR loops)Ch 5: histograms |
| Feb 12Intro to loops (WHILE loops)Ch 5: 3D plots | Feb 14Ch 6: user-defined functions |
| Feb 19Ch 6: user-defined functions | Feb 21 Ch 7: input and output |
| Feb 26Discussion on final projects for Academic ConferenceCh 7: input and output | Feb 28Ch 8: relational and logical operators, the find function |
| Mar 5Spring Breakno class | Mar 7Spring Breakno class |
| Mar 12Ch 8: logic, flowcharts and IF statements, review | Mar 14Midterm Exam |
| Mar 19Ch 8: more on selection structures | Mar 21 Ch 9: FOR loops, series |
| Mar 26Ch 9: WHILE loops, series | Mar 28Ch 9: nested loops and breaks, work on final project |
| Apr 2Ch 14: advanced graphics | Apr 4 Ch 14: animation |
| Apr 9 Ch 10: matrix algebra, dot and cross products, determinants, inverses | Apr 11Ch 10: matrix algebra, solving systems of linear equations |
| Apr 16Ch 10: solving systems of linear equations in common engineering problems | Apr 18Easter Breakno class |
| Apr 23Ch 13: interpolation and curve-fittingNote: Each student will present a project at the Academic Conference on Wed, April 24. | Apr 25Ch 13: numerical differentiation |
| Apr 30 Ch 13: numerical integration | May 2Ch 13: numerical methods, review  |

Cumulative Final Exam: Tue, May 7, 8:30 am - 10:30 am Last revised: 01/12/2019