ENGR 115 Introduction to Engineering Computation

Spring 2019 Tentative Schedule 29 classes

Tue Thurs

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| 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 24  Ch 3: complex numbers  Ch 4: intro to matrices, matrix operations |
| Jan 29  Intro to input and output  Ch 4: matrices, indexing | Jan 31  Ch 4: matrices, meshgrid |
| Feb 5  Intro to selection statements  Ch 5: 2D plots | Feb 7  Intro to loops (FOR loops)  Ch 5: histograms |
| Feb 12  Intro to loops (WHILE loops)  Ch 5: 3D plots | Feb 14  Ch 6: user-defined functions |
| Feb 19  Ch 6: user-defined functions | Feb 21  Ch 7: input and output |
| Feb 26  Discussion on final projects for Academic Conference  Ch 7: input and output | Feb 28  Ch 8: relational and logical operators, the find function |
| Mar 5  Spring Break  no class | Mar 7  Spring Break  no class |
| Mar 12  Ch 8: logic, flowcharts and IF statements, review | Mar 14  Midterm Exam |
| Mar 19  Ch 8: more on selection structures | Mar 21  Ch 9: FOR loops, series |
| Mar 26  Ch 9: WHILE loops, series | Mar 28  Ch 9: nested loops and breaks, work on final project |
| Apr 2  Ch 14: advanced graphics | Apr 4  Ch 14: animation |
| Apr 9  Ch 10: matrix algebra, dot and cross products, determinants, inverses | Apr 11  Ch 10: matrix algebra, solving systems of linear equations |
| Apr 16  Ch 10: solving systems of linear equations in common engineering problems | Apr 18  Easter Break  no class |
| Apr 23  Ch 13: interpolation and curve-fitting  Note: Each student will present a project at the Academic Conference on Wed, April 24. | Apr 25  Ch 13: numerical differentiation |
| Apr 30  Ch 13: numerical integration | May 2  Ch 13: numerical methods, review |

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