CS 270 Introduction to Numerical Computation

Spring 2018 28 classes Tentative Schedule

Mon Fri

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| Jan 15  Syllabus,  Ch 1, intro to Linux, simple computer architecture | Jan 19  Try out Linux,  Ch 2, integers, floating point, character data |
| Jan 22  More on Linux, build90, vi and nano editors, alpine,  Ch 2, limits of number representations | Jan 26  Ch 2, assignment statements, conversion, intrinsic functions, limits of computer arithmetic |
| Jan 29  Ch 2, Ch 3,  input, output, trebuchet example | Feb 2  Ch 3, selection constructs, print script,  solving quadratic equations |
| Feb 5  solving quadratic equations continued,  Ch 4, do loop | Feb 9  Ch 4, while loop, for loop |
| Feb 12  manipulating character data,  power series, review | Feb 16  Exam 1 on chapters 1 - 4 and other topics covered in this time period |
| Feb 19  power series | Feb 23  Taylor's series |
| Feb 26  Taylor's series, Fourier series (briefly),  Ch 5, formatting, files | Mar 2  Ch 5, files  small group presentations on series |
| Mar 5  Spring Break  no class | Mar 9 Spring Break no class |
| Mar 12  Ch 5, Files; Ch 6, arrays | Mar 16  Ch 7, subroutines |
| Mar 19  Ch 7, functions,  review | Mar 23  Pi Day small group presentations |
| Mar 26  Exam 2 especially on Ch 5, 6, and series | Mar 29  Easter Break  no class |
| Apr 2  Easter Break  no class | Apr 6  Systems of linear equations,  more on arrays |
| Apr 9  Systems of linear equations,  LU decomposition | Apr 13  Numerical integration techniques |
| Apr 16  Library of numerical subroutines, approximating the value of a derivative, solving ordinary differential equations | Apr 20  Small group presentations on solving systems of linear equations |
| Apr 23  Introduction to eigenvalues and eigenvectors | Apr 27  Introduction to eigenvalues and eigenvectors |
| Apr 30  Ordinary differential equations, roots of non-linear equations (zeros of functions) using Newton's method and bisection | May 4  Small group presentations on integration,  review |

Final Exam: Tues, May 8, 4:00 pm - 6:00 pm Last revised: 04/07/18