**MTH 371: Introduction to Numerical Methods  
Spring 2014  
Meeting Times: MWF 9:55-10:50am in Cowley 111**

Note: All section references and homeworks are from the Numerical Methods text unless indicated as “NA text”. In this case, the Numerical Analysis text is used.

|  |  |  |
| --- | --- | --- |
| **Day** | **Topic** | **Homework** |
| Jan 27 | Introduction to course |  |
| Jan 29 | Scilab tutorial |  |
| Jan 31 | Calculus review (S1.2) |  |
| Feb 3 | Taylor polynomials and series with remainder (S1.2) |  |
| Feb 5 | Error, approximations, and asymptotic order notation (S1.3, S1.4) |  |
| Feb 7 | Bisection method (S2.2) |  |
| Feb 10 | Fixed point iteration (S2.2 NA text) |  |
| Feb 12 | Secant and Newton’s method (S2.3, 2.4) |  |
| Feb 14 | Error analysis for iterative methods (S2.5) |  |
| Feb 17 | Interpolation and the Lagrange polynomial (S3.2) |  |
| Feb 19 | Newton interpolation and divided differences (S3.3) |  |
| Feb 21 | Hermit interpolation (S3.4) |  |
| Feb 24 | Review for Exam 1 |  |
| Feb 26 | Exam 1 |  |
| Feb 28 | Numerical differentiation (S4.9) |  |
| Mar 3 | Quadrature rules (S4.2) |  |
| Mar 5 |  |  |
| Mar 7 |  |  |
| Mar 10 |  |  |
| Mar 12 |  |  |
| Mar 14 |  |  |
| Mar 17 | SPRING |  |
| Mar 19 | BREAK!! |  |
| Mar 21 | WOOHOO!! |  |
| Mar 24 |  |  |
| Mar 26 |  |  |
| Mar 28 |  |  |
| Mar 31 |  |  |
| Apr 2 |  |  |
| Apr 4 |  |  |
| Apr 7 |  |  |
| Apr 9 |  |  |
| Apr 11 |  |  |
| Apr 14 |  |  |
| Apr 16 |  |  |
| Apr 18 |  |  |
| Apr 21 |  |  |
| Apr 23 |  |  |
| Apr 25 |  |  |
| Apr 28 |  |  |
| Apr 30 |  |  |
| May 2 |  |  |
| May 5 |  |  |
| May 7 |  |  |
| May 9 |  |  |