Math 8441
Numerical Analysis and Scientific Computing

Fall 2016

Week I
Lecture: We 9/7, Fr 9/9
Topics: Introduction
Approximating a fractal set

Week II
Lecture: Mo 9/12, We 9/14, Fr 9/16
Topics: Error and error propagation
Interpolation theory
Homework: Homework I due on Friday, 9/16

Week III
Lecture: Mo 9/19, We 9/21, Fr 9/23
Topics: Interpolation theory

Week IV
Lecture: Mo 9/26, We 9/28, Fr 9/30
Topics: Interpolation theory
Homework: Homework II due on Friday, 9/30

Week V
Lecture: Mo 10/3, We 10/5, Fr 10/7
Topics: Interpolation theory
Week VI
Lecture: Mo 10/10, We 10/12, Fr 10/14
Topics: Numerical integration
Homework: Homework II due on Friday, 10/14

Week VII
Lecture: Mo 10/17, We 10/19, Fr 10/21
Topics: Numerical integration

Week VIII
Lecture: Mo 10/24, We 10/26, Fr 10/28
Topics: Numerical integration
Homework: Homework III due on Friday, 10/28

Week IX
Lecture: Mo 10/31, We 11/2, Fr 11/4
Topics: Nonlinear systems
Midterm: on Friday, Nov. 4 (in class)

Week X
Lecture: Mo 11/7, We 11/9, Fr 11/11
Topics: Nonlinear systems
Homework: Homework IV due on Friday, 11/11

Week XI
Lecture: Mo 11/14, We 11/16, Fr 11/18
Topics: Nonlinear systems
Optimization and descent methods

Week XII
Lecture: Mo 11/21, We 11/23
Topics: Optimization and descent methods
Homework: Homework V due on Friday, 11/23
Week XIII
Lecture: Mo 11/28, We 11/30, Fr 12/2
Topics: Optimization and descent methods
        Numerical methods for ordinary differential equations

Week XIV
Lecture: Mo 12/5, We 12/7, Fr 12/9
Topics: Numerical methods for ordinary differential equations
Homework: Homework VI due on Friday, 12/9
Final: hand-out, Wednesday, Nov. 7 (in class)

Week XV
Lecture: Mo 12/12, We 12/14
Topics: Numerical methods for ordinary differential equations
Final: due on Wednesday, Nov. 14 (in class)