SPRING 2017

MATH 446 Numerical Analysis I / Numerical Methods
OR 481

Schedule: **TR** 3:00 - 4:15 pm, Innovation Hall, Rm 132

Instructor: Igor Griva, igriva@gmu.edu, (703) 993-4511

Office hours: TR 4:20 – 4:50 pm, or by appointment, Exploratory Hall, Rm 4114.

Prerequisite: MATH 203 and CS 112

Webpage: http://math.gmu.edu/~igriva/projects/project_01/index.html

Text: *Numerical Analysis, 2nd edition, by T. Sauer, Pearson 2011*

Exams: There is one midterm exam (points 0 - 100):

April 11 (Part I)
April 13 (Part II)

Final Exam: May 11 (points 0 – 100), 1:30 – 4:15 pm

Final score: F = 0.2*(HW) + 0.2*(Projects) + 0.3*(Midterm Exam) + 0.3*(Final Exam)

Final grade:

A-:	90 - 93;	A:	93 – 97;	A+:	97 – 100
B-:	80 - 83;	B:	83 – 87;	B+:	87 – 90
C-:	70 - 73;	C:	73 – 77;	C+:	77 – 80
D:	60 – 70;				
F:	0 – 60;				

Homework: Homework exercises will be assigned after each class and they are representative of the exam questions.

Computer Projects:

The software package Matlab will be used for the projects. It is available on campus in the computer labs. Alternatively, a PC version can be purchased. Matlab tutorials can be found readily on the internet or in the textbook's appendix. There are computer Labs in Innovation Hall, the Johnson Center, and the Field House. For hours of operation of these labs and other locations see Academic Computing Labs Page.

In general: The course covers the following topics: floating point arithmetic, solving nonlinear equations in one variable, solving systems of linear equations,

solving nonlinear systems, interpolation and polynomial approximation, curve-fitting; cubic and Bezier splines, least squares problems.

Academic Integrity:

Mason is an Honor Code university; please see the Office for Academic Integrity for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

Disability Services:

If you are a student with a disability and you need academic accommodations, please see me ad contact the Office of Disability Services (ODS) at 993-2474, http://ods.gmu.edu. All academic accommodations must be arranged through the ODS.

Counseling and Psychological Services (CAPS):

(703) 993 2380, http://caps.gmu.edu

University Policies:

The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty and staff conduct in university academic affair. Other policies are available at http://universitypolicy.gmu.edu.