# GEO 325M/GEO398M Numerical Modeling for Geoscientists

(26380/26645)

## How many students?

Graduate undergraduate sections:

```
GEO 325M: 2 + GEO 398M: 3 = Total: 5
```

Background:

Geophysics ?

Geology ?

Hydrogeology ?

Non-JSG ?

## Logistics 1

• Class time: T/Th 9:30-11:00 am

Class room: JGB 2.312

Course websites:

Canvas: <a href="https://utexas.instructure.com/courses/1245168">https://utexas.instructure.com/courses/1245168</a>

Piazza: <a href="https://piazza.com/class/jr52szvkgc431r">https://piazza.com/class/jr52szvkgc431r</a>

Pre-requisites: Mathematics 427J/427L

Differential equations with linear algebra

(Mathematics 408D: Multivariable calculus)

### Logistics 2:

• Instructor: Marc Hesse email: <a href="mailto:mhesse@jsg.utexas.edu">mhesse@jsg.utexas.edu</a> office hours: <a href="mailto:go to piazza poll">go to piazza poll</a> office: JGB 4.216G

 Teaching assistant: email: office hours: office:

# Grading

- Regular homeworks.
- No exams.
- No extra credit shenanigans.

Total grade = 90% HW + 10% Participation



# Grading scheme

		77% - 80%	C+
94% - 100%	Α	74% - 77%	C
90% - 94%	A-	70% - 74%	C-
87% - 90%	B+	67% - 70%	D+
84% - 87%	В	64% - 67%	D
80% - 84%	B-	60% - 64%	D-

0% – 60% F

### Student feedback I

#### Comments

In many ways your written comments can be the most important part of your evaluation of the course and instructor. In the space provided, please indicate what aspects of the course content and instruction were best, how the instructor could improve his or her teaching, and how the content of the course might be improved. The instructor will receive this form after the semester is over.

I strongly distilhed that you would change the du dates for the HW assignments at the LAST minute. I don't think its fair for those who tern it in on time.

You may continue comments on the other side.

### Student feedback II

#### Comments

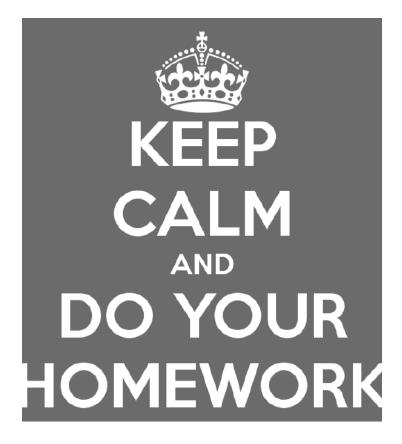
In many ways your written comments can be the most important part of your evaluation of the course and instructor. In the space provided, please indicate what aspects of the course content and instruction were best, how the instructor could improve his or her teaching, and how the content of the course might be improved. The instructor will receive this form after the semester is over.

Lectures were taught very well-liked that everything was written out instead of just standing at the front talking. My only complaint is in regards to homework-due dates were pushed back if to many students complained - he gave extra 'free'days while the students who did it on time had alread submitted it, not giving them a change to have/spend extra it, not giving them a change to have/spend extra it.

### Student feedback III

While you of course have no obligation to do so, I really do think the way you evaluated this class was very unfair. You constantly extended homework's at the last minute, giving those who would not have turned it in on time a second chance. You only took off 10% for late assignments and dropped the lowest homework grade. This just rewards those who did not complete their assignments on time while not rewarding those of us who did.

### No gratuitous homework extensions



- Due Thursday 9:30am
- Submitted on Canvas
  - single pdf
  - zip-file for Matlab files
- Late penalty is 20%

You can discuss the homework, but you have to write up the answers by yourself. Do not copy and paste code from other people.

### PROGRAMING LANGUAGE IS MATLAB



Please download the newest version of Matlab here:

Click here for Matlab

Computer rooms accessible to you: JGB 3.326, JGB 4.202, EPS 2.103

What is your Matlab background?

Confident:

Occasional:

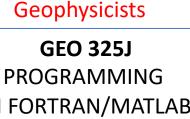
Never used it:

# Changes in the Geo-Computing sequence!

In the past

Geologists

**GEO 325G**COMP APPLS IN GEO



IN FORTRAN/MATLAB **GEO 391** INTRO

GEOSCIENCE COMPUTATION

GEO 325K
COMPUTATIONAL METHODS
GEO 383D
NUM METH I: COMP
METH GEOL SCI

### From now on

### Everybody

**GEO 325G**COMP APPLS IN GEO

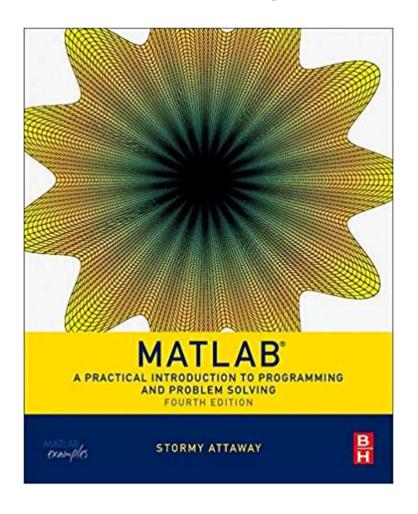
**GEO 325M/398M** "Numerical modeling"

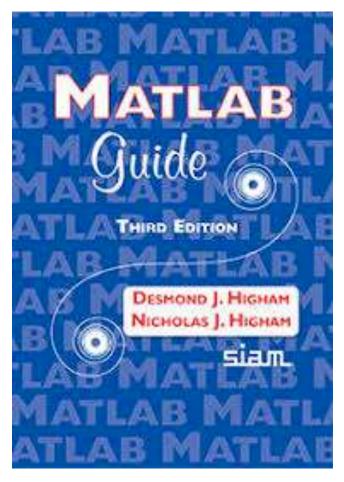
**GEO 325K/GEO 383D** 

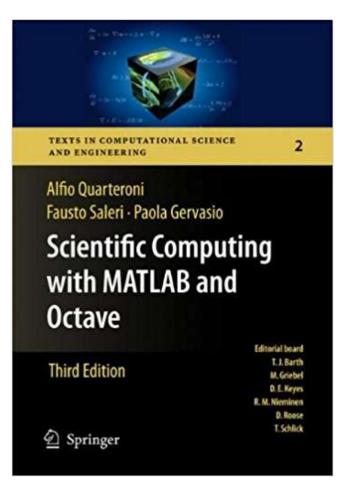
"Signal processing"

### Textbooks

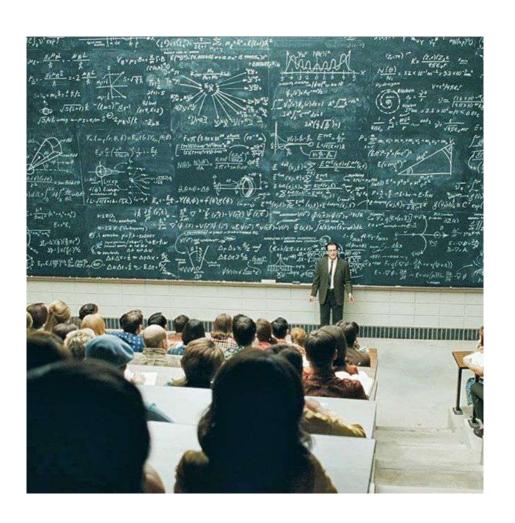
I am not following a textbook, but the following my be useful







# Vintage lecturing style



For physics and math parts I will teach on the board, so it will be useful to have paper, pencil and eraser!

For Matlab we will use the new Live Script format. This is why you need the newest version.