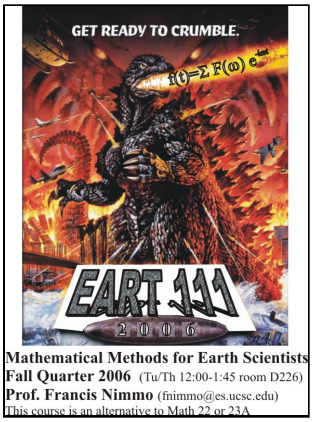
EART111 Mathematics in the Earth Sciences - Fall 2018



Instructor: Prof. Francis Nimmo
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tel. +1-831-459-1783
fnimmo@ucsc.edu

Office hours: 3:05-4:05 pm, Tues/Thurs, A219 (or by appointment)

TA: John O'Brien (jopobrie@ucsc.edu)
Office hours: 4-5 pm Weds and 3:30-5:30 pm Thurs in D231

Class meets Tues Thus, 1:30 to 3:05 in D258

Discussion Sections are 1:45-3:45 pm Weds and 3:30-5:30 Thurs, both in D258

Textbooks are not required for this class. If you want to do additional reading, Stewart "Calculus" (5th ed.) and Kreyszig "Advanced Engineering Mathematics" (9th ed.) are good.

Click here for the **Syllabus** (PDF format)

Click here for further **Details** on the Course, including advice on problem sets, grading scheme etc.

This course assumes a knowledge of basic calculus and trigonometry. If you can't do the problems listed here *easily* then you are unlikely to pass the class.

For **online practice** of calculus problems, here are three good sites to look at: Calculus on the Web (Books I and II); some worked problems from UC Davis; and some worked problems from Lamar University. Another useful resource is www.calculus.org.

You can download problem sets and lecture handouts below. Problem sets are due to FN's mailbox by **6pm each Tuesday**. Late homework will be penalized at 10% per day (see here for more details).

If you qualify for classroom accommodations because of a disability, please get an Accommodation Authorization from the Disability Resource Center (DRC) and submit it to me in person outside of class (e.g. office hour) within the first two weeks of the quarter. Contact DRC at (831) 459-2089.

Date		
Thu Sep 27	Lecture 1	Calculus practice
Tue Oct 2	Lecture 2	Maclaurin practice

Thu Oct 4	Lecture 3	
Tue Oct 9	Lecture 4	
Thu Oct 11	Lecture 5	3D geometry practice
Tue Oct 16	Lecture 6	Partial differential practice
Thu Oct 18	Lecture 7	Gradient & Critical point practice
Tue Oct 23	Lecture 8	
Thu Oct 25	Lecture 9	Divergence and Curl practice
Tue Oct 30	Midterm	
Thu Nov 1	Lecture 11	Matrix practice
Tue Nov 6	Lecture 12	Determinant and Inverse practice
Thu Nov 8	Lecture 13	Eigenvector practice
Tue Nov 13	Lecture 14	
Thu Nov 15	Lecture 15	First order DE practice
Tue Nov 20	Lecture 16	Second order DE practice
Thu Nov 22	Thanksgiving	
Tue Nov 27	Lecture 17	Nonhomogeneous ODE practice
Thu Nov 29	Lecture 18	Separation of Variables practice
Tue Dec 4	Lecture 19	Fourier series practice
Thu Dec 6	Revision lecture	

Formula sheet for the Final is here

The Final is **Thurs 13th Dec 12:00-3:00 pm**.

You can look at a previous year's final and answers

Here's a recent final and answers

And here's one more final

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