FORMAT 1

Submit original with signatures + 1 copy + electronic copy to UAF Governance.

See http://www.uaf.edu/uafgov/faculty/cd for a complete description of the rules governing curriculum & course...

SUBMITTED BY:

Department	Geology and Geophysics	College/School	CNSM
Prepared by	Jeff Freymueller	Phone	X7286
Email Contact	Jeff.freymueller@gi.alaska.edu	Faculty Contact	

1. ACTION DESIRED
(CHECK ONE):   Trial Course [ ]   New Course [X]

GEOS 636 Beyond the Mouse: Computer Programming and Automation for Geoscientists

Basic concepts of computer programming and effective automation of tasks using a computer, with an emphasis on tools and problems common to the geosciences and other physical sciences. Use of MATLAB, shell scripting and various command line tools for data analysis, making scientific figures, maps and visualizations.

11. **COURSE CLASSIFICATIONS:** (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)

H = Humanities ☐   S = Social Sciences ☐

Will this course be used to fulfill a requirement for the baccalaureate core?   YES ☐   NO ☒

IF YES, check which core requirements it could be used to fulfill.

12. **COURSE REPEATABILITY:**

Is this course repeatable for credit?   YES ☐   NO ☒
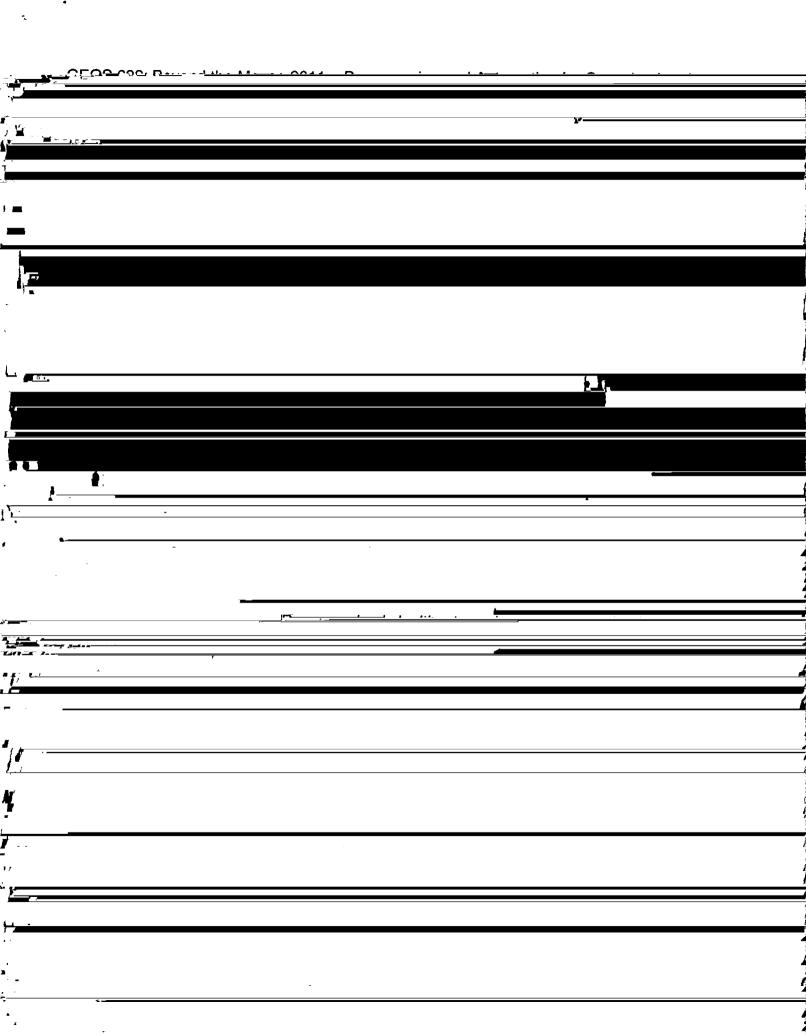
Justification: Indicate why the course can be repeated

No [X] Yes [ ] | **Library resources are not required for the course.**

What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)

APPROVALS:

Sarah Farrell   Date   9/26/11

Date   10/6/11

Signature, Chair, College/School Curriculum Council for

Sample Syllabus for GEOS 436/636

The remainder of this file is the actual syllabus for the current trial version of the cours, which is begin

Grading:

This 3 credit class is pass/fail. Passing is based on mostly making it to class

	Lab 2: Matlab and Variables	
Sep 26,27	Lecture 3: Matlab I: (Advanced) Variables and functions	Jeff Freymueller
	Lab 3: Matlab structs and functions	
Oct 03,04	Lecture 4: Fundamental Programming Principles II: Control Structures	Ronni Grapenthin
	Lab 4: Matlab flow control	
Oct 10,11	Lecture 5: Matlab I/O I	Ronni Grapenthin
	Lab 5: Matlab I/O I (files)	
Oct 17,18	Lecture 6: Matlab I/O II	Ronni Grapenthin
	Lab 6: Matlab I/O II (plotting)	
Oct 24,25	Lecture 7: Unix Tools I	Jeff Freymueller
	Lab 7: Unix Tools	
Oct 31, Nov 01	Lecture 8: Unix Tools II	Jeff Freymueller
	Lab 8: Unix Tools	
Nov 07,08	Lecture 9: Live Shell Scripting	Ronni Grapenthin
	Lab 9: Unix Tools	
Nov 14,15	Lecture 10: Debugging	Ronni Grapenthin
	Lab 10: Debugging	
Nov 21,22	Lecture 11: GMT I	Bernie Coakley
	Lab 11: GMT – Data mapping	
Nov 28,29	Lecture 12: GMT II	Bernie Coakley
	Lab 12: GMT – Data mapping	
Dec 5-12	Independent Study: HTML	Ronni Grapenthin
	Lab 13: Setting up a website for project presentation	

Prior to each lecture you will find handouts, examples, and problem sets here. The problem sets are supposed to get you started poking around on your system and/or change the way you approach problems. The handouts will form some sort of mini-handbook that could be placed next to your computer.

Mailing List:
To discuss issues with labs, projects and general programming issues with your fellow students, we set up the mailing list:
btm2011@gi.alaska.edu
Please sign up at http://dogbert.gi.alaska.edu/mailman/listinfo/btm2011 and use this list first to ask your questions.

Notes:
If you do not have access to a unix-linux-mac environment, we recommend a that you install a similar setup on your own computer, like we'll have in the lab. We will use virtualbox as a virtualization software which allows to run, say, a linux distribution within a running Windows (no rebooting

required). Once virtualbox is installed you need to put a linux distribution of your choice (maybe ubuntu) on top of this. See Ronni (ronni <at> gi <dot> alaska <dot> edu) if you need help with that.