

MTH499 Syllabus

Computational Mathematics Seminar

Spring 2010

Instructor: Alfa Heryudono.
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Class Website: <http://compmath.wordpress.com>
Office Hours: MW 5:15–6:00 PM or by appointment.

Course Description and Objectives: This class is going to be different than regular class in the sense that you choose a topic, learn it as deep as you can, and present your findings or what you have learned to other students. You can think of that you want to be a professional mathematician. You make your own research diary, write a paper/report in \LaTeX , make a poster, write your own codes, learn all tools (mostly open source software) needed to make your job easier, and the most important thing: do research ! Your to-do-list can be summarized below:

- Do some numerical experiments with problem solving environment such as MATLAB, Maxima, Mathematica, Maple, or other open source tools.
- Read references to learn about history, interesting phenomena, and numerical techniques.
- Write your research diary in your blog (wordpress).
- Make research presentation.
- Make report in \LaTeX . (Yes, \LaTeX !).
- Make a poster and participate in poster session at undergraduate conferences.
- Learn to work in teams.
- Develop good analytical and problem-solving skills.
- Learn good communication skills, both written and oral.

Attendance and Class Participation: Attendance is MANDATORY and counts towards your final grade. For the NSF CSUMS funded students, missing classes without notice can result in pay cut. Class participation is also very important. You are required to be active in class discussions. When your classmates are giving talks, you have to pay attention and give suggestions in their research blogs.

Meeting with Your Advisor:

You are responsible to set your weekly meeting with your research advisor. It is easy to get lost while you are doing research. Your advisor can monitor your research progress, give useful suggestions, and keep you stay on track.

Academic Dishonesty:

When you write your report, it is very important to put references. For example, Copy and

Paste a paragraph from the internet or a paper without citing its source can be a serious issue.
Please consult:

<http://www.umassd.edu/studenthandbook/academicregs/ethicalstandards.cfm>

Grading Policy:

Weekly research diary progress:	15%	A	96-100%	C	72-75%
Final report in \LaTeX :	20%	A-	92-95%	C-	68-71%
Poster + conference:	15%	B+	88-91%	D+	64-67%
Class presentations:	20%	B	84-87%	D	60-63%
Attendance + class participation:	15%	B-	80-83%	D-	56-59%
Weekly meeting with advisor:	15%	C+	76-79%	F	0-55%

14 Week Tentative Course Schedule:

Dates	Topic
Week 01 (Jan 25 - Jan 29)	Welcome Session, Choose Advisor + Topic, \LaTeX
Week 02 (Feb 01 - Feb 05)	MATLAB 1, Presentations + Discussions
Week 03 (Feb 08 - Feb 12)	Presentations + Discussions
Week 04 (Feb 15 - Feb 19)	Presentations + Discussions
Week 05 (Feb 22 - Feb 26)	Presentations + Discussions
Week 06 (Mar 01 - Mar 05)	MATLAB 2, Presentations + Discussions
Week 07 (Mar 08 - Mar 12)	Presentations + Discussions
Week 08 (Mar 15 - Mar 19)	No Classes Spring Break
Week 09 (Mar 22 - Mar 26)	Presentations + Discussions
Week 10 (Mar 29 - Apr 02)	Presentations + Discussions
Week 11 (Apr 05 - Apr 09)	Poster Preparations
Week 12 (Apr 12 - Apr 16)	Presentations + Discussions
Week 13 (Apr 19 - Apr 23)	Undergraduate Conference
Week 14 (Apr 26 - Apr 30)	Presentations + Discussions
Week 15 (May 03 - May 07)	Presentations + Discussions
May 10: Last day of class	Presentations + Discussions
May 19: Final report due	