

**SOUTHEASTERN LOUISIANA UNIVERSITY**  
**DEPARTMENT OF COMPUTER SCIENCE & INDUSTRIAL**  
**TECHNOLOGY**  
**CMPS 391: Numerical Methods**  
**SYLLABUS**

- CLASS TIME:** 9:30 – 10:45am T Th
- LOCATION:** 126 Fayard Hall
- INSTRUCTOR:** Dr. Wendy Zhang, Associate Professor of Computer Science
- OFFICE:** 329D Fayard Hall
- SEMESTER:** Fall 2006
- OFFICE HOURS:** Tuesday & Thursday 8:30 – 9:30am, 10:45 – 12:30pm, 1:45 – 4:00 pm  
All other times by appointments only
- TELEPHONES:** 985-549-3769  
985-549-2189 (Ms. Susan Koppenol – Department secretary)
- E-MAIL:** [Wendy.Zhang@selu.edu](mailto:Wendy.Zhang@selu.edu)
- MAILING ADDRESS:** Southeastern Louisiana University  
Department of Computer Science  
SLU 10506  
Hammond, LA 70402
- TEXTBOOKS:** Curtis Gerald and Patrick Wheatley, “**Applied Numerical Analysis**”, 7<sup>th</sup> Edition, Addison Wesley, 2005. ISBN: 0321133048. [www.aw.com](http://www.aw.com)
- PREREQUISITE:** Computer Science 270 or 280 and Mathematics 201 or equivalent.
- DESCRIPTION:** This course explores the computer-oriented numerical methods for scientific problems. Topics include error analysis, Taylor series, solutions of equations, linear simultaneous equations, and interpolation.
- CREDITS:** 3 semester hours

**OBJECTIVES:**

- Students will understand the basics of numerical computing and analysis
- Students will learn about the various types of errors and problems associated with computation, and be able to compare methods based on error and efficiency criteria
- Some topics/methods covered are:
  - Nonlinear equations
  - Set of equations
  - Interpolation and curve fitting
  - Numerical differentiation and integration
  - Boundary-value problems
- Students will implement and analyze algorithms on computer

**EVALUATION:**

Final course grades will be computed as follows:

Test 1	15%
Test 2	15%
Test 3	15%
Programs/Assignments	20% (May include class presentations)
Quizzes/Homework/Class Activities	10% (No make-ups or late assignments)
Final Exam	25%

**WARNING:**

Students must submit all assignments, a completed project, and take all tests in order to receive a passing grade.

**GRADING SCALE:**

A ten-point grading scale will be used for determining final grades, no curving. A perfect attendance record can be helpful for students within one percentage point from the next higher grade.

90 % and up	- A
80 % to 89.9 %	- B
70 % to 79.9 %	- C
60% to 69.9%	- D
60 % and below	- F

**TENTATIVE  
COURSE  
SCHEDULE**

- Chapter 0 and 1
  - *Test 1*
  - Chapter 2
  - *Test 2*
  - Chapter 3 and 5
  - *Test 3*
  - Chapter 6 and 7 (selected topics as time permits)
  - Comprehensive *Final Exam*
- \* Schedule may be modified to adapt to the needs of the class

**WORK  
STRUCTURE:**

All assignments and results must be computer generated. Be sure that all required elements are included in your submission. All assignments should be done **independently**; students **share the score of any duplicated assignments**.

**MISSED TEST:**

All test dates will be announced in class and on Blackboard at least one week ahead of time. **All dates are firm.** Prior arrangements must be made with the instructor, whenever possible.

**LATE WORK:**

All assignments are due at the beginning of class on due date. Ealy submission is encouraged. The following rules will apply to late submissions:

Within 24 hours .....	80 %
Within 48 hours .....	60 %
After 48 hours .....	0

**ATTENDANCE:**

Students are expected to attend all lectures. Absences will have an adverse effect on your grade in the following ways: missed quiz points, missed announcements concerning assignments and due dates, non-exposure to material not directly covered in text. Students arriving late or leaving early will be recorded as tardy. Every two tardy records will count as an absence. Students are responsible to sign the attendance sheet for every class.

**ACADEMIC  
DISHONESTY:**

University policy will be followed for cases involving alleged academic dishonesty. Copying part of another student's program or exam is **CHEATING**. Allowing another student to copy is also **CHEATING**. For more information refer to the "Academic Dishonesty" policy in the University Undergraduate Catalog:  
<http://www2.selu.edu/StudentAffaires/Handbook/>

**CLASSROOM  
DECORUM:**

The following activities are considered unacceptable in the classroom:

- Eating, drinking, use of tobacco
- Use of electronic equipment, use of beepers or phones
- Profanity, sleeping, acting in an unsafe manner
- Repeatedly talking without recognized
- Habitual tardiness

**AMERICANS  
WITH  
identify  
DISABILITIES  
ACT:**

If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-

identify with the Office of Disability Services, Room 203, Student Union. More information can be obtain at this web address,  
<http://www2.selu.edu/StudentAffairs/DisabilityServices/>

**OPEN DOOR  
POLICY:**

The instructor welcomes input to help make your learning of the material in this course better and easier. Please feel free to come by the office and voice your suggestions and ideas.

**USE OF  
BLACKBOARD:**

Blackboard will be used as a supplemental to this course. The lecture notes and assignments will be posted on the Blackboard. You may also submit your assignment on Blackboard.

**NOTES:**

- Last day to drop: Friday, October 20, 2006
- Check Blackboard often for important announcements
- Final Exam: Monday , December 4 at 12:30 (verify this with official schedule bulletin
- Holidays: September 4, November 23-24.
- Students are responsible for all assigned reading material covered in text, whether covered in class or not. Students are responsible for all material covered in class or on the handouts, whether covered in textbook or not.
- ***This course will NOT be offered by SLU in any form in the Spring semester. Plan to work hard and do well THIS semester***