Math 305-01: Mathematical Computing:  
An Introduction to Programming Using Maple, Fall 2006

Instructor: Dr. Haiyan Tian  
Office: SH 316  
Office Hours: TTh 9:30 – 10:30 a.m., W 1:30 – 3:30 p.m. or by appointment  
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Lecture: TTh 2:25 – 3:40 p.m., SH 303 or the lab SH 318  
Course Objectives:  
1. To learn the elements of programming and construction of algorithms using Maple.  
2. To tackle challenging assignments based on concepts from calculus.  
3. To reinforce the concepts and techniques learned in the calculus sequence.  
4. To be able to solve various applications that involve extensive computations.  
5. To develop writing and technical documentation skills.

Attendance: Attendance at all classes is absolutely essential. You are also responsible for being prepared for each class.

Topics to be covered: You are expected to spend eight to ten hours of work out of the classroom. Keep up to date is especially important in this class.  
1. Introduction, Variables  
2. Expressions, Functions and Equations  
3. Data Sets and Parametric Curves  
4. Differentiation, Integration and Their Applications  
5. Conditional and Logical Structures  
6. Looping Structures  
7. Procedures  
8. Differential Equations  
9. Programming Projects

Homework, Exam and Projects: Homework assignments will be announced in class. There will be one exam and one final take home project. You will have chance to present your project to the rest of the class.
Grades: Your grade will be determined by your average of the following grades:
Homework --- 50 points
Exam --- 50 points
Final Project --- 50 points

Your final grade for the course will be based on the following overall percentages:
A: 90-100%
B: 80-89%
C: 70-79%
D: 60-69%
F: 0-59%

Class Conduct: All students are expected to be attentive in class. Please make every effort to arrive on time. Being late for class or leaving class before dismissal may be construed as an absence. It is the student's responsibility to attend class, pay attention, respond to the teacher, and participate in discussions.

ADA: If a student has a disability that qualifies under the Americans with Disabilities Act (ADA) and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies. Mailing address: 118 College Drive #8586, Hattiesburg, MS 39406-0001; Telephone: (601) 266-6837; Fax: (601) 266-6035.