

# Syllabus for Math 376/01 Differential Equations - 4605

Fall 2007

CFS 123

9:30 - 10:50 TR

**Instructor:** Dr. Luis Garcia-Puente, Lee Drain Building 417B

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**Office hours:** Wednesday 3:00-4:00, Friday 10:00-2:00 or by appointment.

**Class web page:** <http://www.shsu.edu/~ldg005/data/mth376>

**Text:** *Fundamentals of Differential Equations and Boundary Value Problems, 4th Edition*, by Nagle, Saff and Snider, Addison-Wesley

**Course Content:** This course is an introduction to differential equations. It provides students with theoretical, technical, and graphical tools for studying and solving differential equations. In addition, this course will show how the use of Maple software enables to perform difficult computations.

## Grading Policy:

|                          | Description      | Grade Percentage |
|--------------------------|------------------|------------------|
| Homework Assignments     |                  | 15%              |
| Quizzes                  |                  | 20%              |
| Exam I (October 4)       | Chapters 1, 2, 4 | 20%              |
| Exam II (November 8)     | Chapters 3, 5, 7 | 20%              |
| Final exam (December 11) | Comprehensive    | 25%              |

**Final Exam Schedule:** Tuesday December 11, 08:00 a.m. - 10:00 a.m.

## Grade Distribution:

90-100%            A

|        |   |
|--------|---|
| 80-89% | B |
| 70-79% | C |
| 60-69% | D |
| < 60%  | F |

**Note: Q-drop deadline is October 10**

**Homework:** Homework is set weekly (each Thursday) and collected a week later in class. Homeworks must follow the following guidelines:

- You must hand in a **stapled photocopy** of your homework.
- Your **name** (Last name, First name) must appear in the right top corner in the first page.
- The statement of each problem must precede its solution.
- Final answer must be **enclosed** in a rectangle.

Correct answers to each homework will be posted each Friday at 4:00 pm. You must then grade your own homework (no partial credit).

In a separate sheet, you must explain your mistakes for each incorrect answer and include a complete solution to the problem. These "second chances" sheet must follow the same homework guidelines.

You must return a photocopy of this document each Tuesday of the following week. You will then receive full credit for the homework. If a student is unable to return the homework during class time for university-approved and documented reasons, the homework will be accepted the next day (either Wednesday or Friday) during my office hours.

**Quizzes:** At the start of each Tuesday class we will have a quiz. Each quiz will consist of 2 or 3 questions on the topics covered during the previous week. You will have 10 or 15 minutes to answer the quiz. Only the best 10 quizzes will count towards your final grade.

**Computer Equipment:** The primary focus of this course is on solving differential equations analytically (with pen and paper). However, we will use computers during class when appropriate. All computer demonstrations will be done using Maple 11. The Maple software is recommended but not required for this course. You can get Maple via the Maple Adoption Program, for more information please contact me.

**Make-up policy:** Students are expected to show appropriate cause for missing or delaying major assignments or examinations. Excuses must be presented in writing. Wherever possible, students should inform the instructor before an exam is missed. Students are required to notify the instructor by the end of the next working day after missing an exam. Otherwise, they forfeit their rights to a make-up.

**Scholastic dishonesty:** All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. **Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action at the discretion of the**

**instructor.** The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

**Copyright policy:** All printed materials disseminated in class or on the web are protected by Copyright laws. One xerox copy (or download from the web) is allowed for personal use. Multiple copies or sale of any of these materials is strictly prohibited.

**Disabled Student Policy:** It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request assistance with academically related problems stemming from individual disabilities by contacting the Director of the Counseling Center in the Lee Drain Annex or by calling (936) 294-1720. Please bring all the necessary paperwork to the instructor before the end of the first week of classes in order to proceed with the requested accommodations. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until the student registers with the Counseling Center.

**Classroom Rules of Conduct:** Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

**Visitors in the Classroom:** Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.

**Student Absences on Religious Holy Days Policy:** Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form

notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

**Additional Information:** All information on this syllabus is subject to change. Any changes will be announced in class.

**Tentative Class Schedule:**

| <b>Days</b>     | <b>Sections Covered</b>          |
|-----------------|----------------------------------|
| Aug. 21, 23     | Sections 1.1, 1.2                |
| Aug. 28, 30     | Sections 1.3, 2.2, 2.3           |
| Sept. 4, 6      | Sections 4.2, 4.3, 4.4           |
| Sept. 11, 13    | Sections 4.5, 4.6                |
| Sept. 18, 20    | Sections 4.8, 4.9                |
| Sept. 25, 27    | Sections 3.1, 3.2, 3.4           |
| Oct. 2          | <b>Review</b> Chapters 1, 2, 4   |
| Oct. 4          | <b>Exam I;</b> Chapters 1, 2, 4  |
| Oct. 9, 11      | Sections 7.2, 7.3                |
| Oct. 16, 18     | Sections 7.4, 7.5, 7.6           |
| Oct. 23, 25     | Sections 5.1, 5.2, 5.4           |
| Oct. 30, Nov. 1 | Section 9.1, 9.2                 |
| Nov. 6          | <b>Review</b> Chapters 3, 5, 7   |
| Nov. 8          | <b>Exam II;</b> Chapters 3, 5, 7 |
| Nov. 13, 15     | Sections 9.3, 9.4.               |
| Nov. 20, 22     | Thanksgiving holidays            |
| Nov. 27, 29     | Sections 9.5, 9.6.               |
| Dec. 4, 6       | Comprehensive Review             |

**Homework Assignments:**

| <b>read sections</b> | <b>problems</b>   | <b>date due</b>        |
|----------------------|---|------------------------|
| 1.1,1.2              | p5 (2,3,5,8); p14 (5,7,8,11,12,14,17,20,21,31)                          | Aug. 30 -<br>Sept. 4   |
| 1.3,2.2,2.3          | p22 (5,6,7,8,9,15); p46 (3,5,12,15,23,26);<br>p55 (10,13,14,21,29,30)   | Sept. 6 -<br>Sept. 11  |
| 4.2-4.4              | p167 (1,3,13,15,26,41); p177 (1,3,9,21,29b);<br>p186 (1,2,4,5,13,14,33) | Sept. 13 -<br>Sept. 18 |
| 4.5,4.6              | p192 (1,3,10,17,20,23,27); p197 (3,5,16,17,21,25);                      | Sept. 20 -<br>Sept. 25 |
| 4.8,4.9              | p219 (1,5,9,16); p227 (3,9)   | Sept. 27 -             |

|         |  |                      |
|---------|--|----------------------|
|         |  | Oct. 2               |
| 3.2,3.4 | p98 (1,4,14,15,25); p115 (1,8,9,21)                    | Oct. 11 -<br>Oct. 16 |
| 7.2,7.3 | p359 (7,11,17,19,29ahj); p365 (9,16,21,22)             | Oct. 18 -<br>Oct. 23 |
| 7.4-7.6 | p374 (3,9,11,21); p383 (3,21,23,25); p395 (7,11)       | Oct. 25 -<br>Oct. 30 |
| 5.2,5.4 | p250 (1,5,6,10,18,31); p274 (1,5,8,10)                 | Nov. 1 -<br>Nov. 6   |
| 9.1,9.2 | p508 (3,6,7,8,11); p512 (1,4,9,11)                     | Nov. 15              |
| 9.3,9.4 | p521 (6a,13,16,19,25,29,38,39); p530 (1,6,12,18,22,23) | Nov. 29 -<br>Dec. 4  |
| 9.5,9.6 | p541 (8,10,17,23,24,33,35); p549 (1,7,13,17)           | Dec. 6               |