# MATH 4013 SECTION 1, SUMMER 2010, SYLLABUS

FACULTY: WEIPING LI

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## 1. BASIC COURSE INFORMATION

**Prerequisites:** Math 2163 and Math 3013.

**Textbook and Content:** *Vector Calculus*, fifth edition, by Jerrold E. Marsden and Anthony J. Tromba, Publisher: Freeman, 2003, ISBN 0-7167-4992-0.

The Study Guide by Karen Pao nd Frederick Soon, which contains summaries of the material and detailed solutions to selected problems, is optional.

Differential and integral calculus for several variables, vector analysis, Stokes theorem, Green's theorem and applications.

**Class Time:** MTWTh 9:00am-10:15am. Start on Monday June 7, 2010.

**Class Room:** MSCS 422.

**Office Hours: BY APPOINTMENT.** Highly recommended to take full and consistent advantage on my office hours. Feel free to call/email/fax me at any time. Please do not hesitate to seek any appropriate out-of-class help from me in your efforts to master the subjects.

**SYLLABUS ATTACHMENT:**

http://osu.okstate.edu/acadaffr/aa/syllabusattachment-Summer.htm

## 2. EXAMS, QUIZZES AND GRADE

Your grade will be determined by the scores on the 3 fifty–minute tests, each of which is worth 100pts. Quizzes and Homework is worth 200pts and the final exams is worth 100pts.

**A** as 510-600; **B** as 450-509; **C** as 390-449; **D** as 330-389; **F** as 0-329.

The cutoff might be lower slightly at the end of the term, but this is not guaranteed. If you cannot take an hour test because of medical reason or other emergency, please notify me **IN ADVANCE** or hand in your **written proof** for excuse. Make-up exams will be scheduled ONLY in those cases with **proofs**.

**Quizzes:** Each quiz will be picked from your homework problems. No make-up quizzes will be given. Your two lowest quizs will be dropped. Homework will not be collected, you are responsible to do homework regularly according to the pace of the lectures.

**First Exam:** June 17, 2010;

**Second Exam:** July 1, 2010;

**Third Exam:** July 15, 2010;

**Final Exam: July 29, 2010**

**D2L:** Stay up-to-dat with D2L. Copies of answers for quiz and homework update or modify and other course information will be posted on D2L. It is **YOUR RESPONSIBILITY** to read all materials posted for this course. You can access D2L at https://oc.okstate.edu/

### 2.1. Attendant Policy.
Attendance is not a part of your grade in the course, but it is **VERY HIGHLY RECOMMENDED**. You are responsible for all material covered in class and all assignments. Experience has shown a definite correlation between poor class attendance and low grades.

### 2.2. Main Office.
Main office of Math Department 401 Ms, phone number: 405-744-5688. Fax number: 405-744-8275.

### 2.3. Homework.
Please **DO THE HOMEWORK**. The purpose of homework is to provide a way for you to practice and get feedback on what you are doing. I suggest that you first read each section and try the assigned problems on your own. Then discuss your solutions with others in the class. Finally re-read your solutions and make corrections as needed. *Practice makes perfect.* **Remember to use the tutors to help you learn. Not to do the homework for you.**

### 2.4. General Comments.
To succeed in college, each student must take responsibility for his or her own learning. Thinking of attending college as your job. Just as you arrive at work on time and finish an assigned work on time, so should you attend class every day and finish all your daily homework.

(i) Please be advised that **Doing your homework on time is absolutely essential** for you to get better grade. Quiz and exam problems will be largely chosen from your homework problems.

(ii) On average you should expect to spend two hours studying outside of class for every hour in class. Some student will require more. It is best to do this on a regular basis after *every class* if possible. The learning of mathematics is cumulative, and keeping up with the work is necessary in order to follow our class discussion. Our mind absorbs new ideas best in smaller, regular does.

(iii) Your study time **SHOULD** start with the book and your class notes with pencil in hand to work out the calculations. The homework problems are not identical to the book examples and can require considerable thoughts. Give each problem a serious effort before seeking help.

(iv) Ask for help whenever you feel you need it from your instructor, from your classmates and any other sources.

2.5. **Academic Dishonesty/Misconduct.** OSU has explicit rules governing academic dishonesty and academic misconduct. The policies are detailed in the document *Students Rights and Responsibilities Governing Student Behavior.*

## 3. COURSE TENTATIVE SCHEDULE (SUBJECT TO SLIGHT CHANGE) FOR MATH 2233

Week 1: 2.1-2.2; 2.3-2.4; 2.5-2.6; Week 2: 3.1-3.2; 3.3-4.1, Exam 1; Week 3: 4.2-4.3; 4.4-5.1; Week 4: 5.2-5.3; 5.4-5.5, Exam 2; Week 5: 6.1, 6.2-7.1; 7.2-7.4; Week 6: 7.5-7.6, Exam 3; Week7: 8.1-8.4; Week 8: 8.5-8.6 Final. (There are slightly shift due to the exams).

## 4. HOMEWORK

Section 2.1: 1 / 2 / 4, 5, 6, 7, 9 / 11, 12, 13 / 14, 15, 16 / 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 / 32

Section 2.2: 1, 2, 3, 4 / 5, 6, 7 / 8, 9, 10 / 11, 12 / 13/ 17 / 18, 19, 27

Section 2.3: 1, 2, 3 / 5, 6, 14, 15 / 7, 8 / 13, 16, 17, 18

Section 2.4: 1, 3 / 5, 7 / 9, 11 / 13, 14 / 15, 16 / 17, 19

Sectiion 2.5: 2, 16 / 3 / 5 / 7, 17 / 8 / 9, 10 / 11 / 12, 13 / 15

Section 2.6: 1, 2 / 3, 14 / 4, 5 / 6, 15 / 7 / 8, 9 / 13 / 16, 20, 21, 22, 23, 25 / 24

Sectiion 3.1: 1, 2, 3, 4, 5, 6, 7, 8, 15 / 9, 13 / 10, 12 / 16, 17 / 19, 20 / 21, 22, 23 / 24

Section 3.2: 1, 2, 3, 4, 5, 6

Section 3.3: 1, 3, 5, 7, 9, 10, 11, 14, 15 / 21 / 27 / 29, 35 / 23, 24, 25, 42 / 33, 34 / A, B, C

Section 3.4: 1, 2, 3, 5 / 4 / 10, 11 / 12, 13 / 15, 16 / 28, 30, 31

Section 4.1: 1, 3 / 5, 6, 7, 8 / 9, 10 / 11, 12 / 13, 14, 18 / 15, 16 / 19

Section 4.2: 1, 2, 3 4, 5, 6 / 7 / 8, 9 / 10

Section 4.3: 1, 2, 3, 4, 5, 6, 7, 8 / 9, 10/ 11, 12 / 13, 14, 15, 16 / 18

Section 4.4: 1, 3 / 5, 6 / 7, 8 / 9, 11 / 13, 15 / 17, 19 / 21, 23 / 25, 26 / 29 / 30 / 31

Section 5.1: 1, 2 / 3, 4 / 5 / 6 / 7, 9 / 11

Section 5.2: 1, 2, 3 / 4, 6, 7

Section 5.3: 1, 2 / 3, 4 / 5 / 6, 7 / 8 / 9, 13 / 11

Section 5.4: 1 / 2 / 3, 4, 5, 6 / 7, 8, 9, 10, 11

Section 5.5: 2, 3, 13 / 14, 18, 21 / 5, 6, 7, 8 / 9, 10, 11 / 15, 16, 17, 19 / 23, 24

Section 6.1: 1, 2, 3, 5 / 4, 6 / 7

Section 6.2: 1, 9, 14 / 2, 3, 4, 8 / 6, 7 / 11, 15 / 17, 27, 28 / 31, 32 / 22, 24 / 13, 16, 19, 26 / 21, 23, 25, 30 / 29

Section 7.1: 2, 3, 4 / 6 / 5 / 9, 11 / 12

Section 7.2: 1, 9 / 2, 3 / 12, 14, 15, 16

Section 7.3: 1, 2, 3 / 4 / 5, 6, 7 / 12, 10, 11, 12 / 13 / 15

Section 7.4: 1, 3, 5, 6, 8, 15 / 9 / 11 / 12, 21 / 22

Section 7.5: 3, 4, 10 / 1, 2 / 7, 8 / 11

Section 7.6: 1, 4, 10 / 2, 3, 7, 9, 15 / 5 / 6 / 8 / 16 / 18

Section 8.1: 1, 13 / 3, 7, 9 / 2, 5, 15, 19 / 11

Section 8.2: 1, 5, 9, 11 / 3, 6 / 23

Section 8.3: 3, 7, 9 / 12, 13, 15

Section 8.4: 1 / 2, 5, 8, 10 / 3, 9

Section 8.5: 1, 2, 5, 7, 9, 10

Section 8.6: 1, 3, 4, 8, 9, 12.

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