

This is a template syllabus. This file contains course specific information, such as catalog description, goals and objectives, which does not change. The parts highlighted in yellow are to be determined by the individual instructors. The official syllabus for each section will be provided by the instructor in the beginning of the semester.

SYLLABUS Fall/Spring 20xx

The University of Iowa
The College of Liberal Arts and Sciences
Department of Mathematics

Calculus III MATH:2850:0xxx

Time and place to be announced

Prerequisites: Calculus II MATH 1860 (or equivalent or MATH:1560) with a minimum grade of C-

Some of the policies relating to this course (such as the drop deadline) are governed by its administrative home, the College of Liberal Arts and Sciences, 120 Schaeffer Hall.

Instructor: To be announced

Office location and hours:

Phone:

E-mail:

Website address:

TA: There is no TA for this course.

Supervisor: For this course, see the DEO.

DEO/Chair Contact Information: Professor Maggy Tomova, 14 MLH, 319-335-0714, e-mail: maggy-tomova@uiowa.edu

Catalog Description of Course: Multivariable calculus; vector functions, line integrals, total differentials, gradient, implicit functions, coordinate systems, Taylor's expansion, extrema, multiple integrals, vector fields, line integrals, surface integrals, Green's, Stokes' and divergence theorems.

Objectives and Goals of the Course: Learn multivariable differential and integral calculus of real and vector valued functions, curves, surfaces and 3D geometry. Specifically learn graphing, continuity, partial derivatives, gradient, total derivative, chain rule, implicit and inverse function theorems, extrema, Taylor polynomials, maximization, Lagrange multipliers, double and triple integrals, change of variables, cylindrical and spherical coordinates, vector fields, line integrals, surface integrals, Green's, Stokes' and divergence (Gauss) theorems.

Required text: (Check the current textbook from Department Webpage)

<https://math.uiowa.edu/undergraduate-program/course-information/book-list>

For 2018-2019: Vector Calculus by SJ Colley, fourth edition, ISBN 978-0-321-78065-2

Also available as loose leaf 3-hole punched: ISBN 978-0-321-78064-5

These are available at both the University Bookstore in the Iowa Memorial Union (IMU) and Iowa Book & Supply.

Grading System: The grades are determined by 2-3 midterms and the final exam, and there may be additional graded items such as in the following. The instructor will choose the percentages for each category and may add other requirements. The dates and places of the exams and quizzes are to be announced.

2 (or 3) midterms

Final exam

Quizzes

Homework

Attendance and class participation

ALL EXAMS ARE COMPREHENSIVE, unless specified otherwise.

A Word about the Date and Time of the Final Exam: The date and time of every final examination is announced by the Registrar generally by the fifth week of the classes. **No exams of any kind are allowed during the last week of classes.** All students should plan on being at the UI through the final examination period. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar's web site and will be shared with instructors and students. It is the student's responsibility to know the date, time, and place of the final exam.

GRADING: For each course, the instructor chooses a grading strategy appropriate to departmental and college guidelines, and the related discipline. Some of the recommended options include (but not limited to) the following:

With **criterion-reference grading**, students receive grades based on the quality of their work in relation to the criteria defined by the instructor and by the rubrics or models specifying the qualities of each grade. Some instructors may choose to adjust the scale (criteria) if a need arises.

Norm-based grading is in part based on how others in the class perform. This method is generally used in large lecture courses or coordinated multi-section courses. The distribution of grades may be based on CLAS recommendations, but some Instructors and/or departments may set their own comparable percentages.

Course Policies:

Students are expected to attend all lectures, and do all of the homework regularly. Students are responsible for everything covered in the lectures, textbook and the prerequisites. Important announcements about changes (if necessary) to the syllabus, homework, exams, etc. will be done in the lectures or they will be e-mailed to your UI e-mail address.

As stated in CLAS webpage: <https://clas.uiowa.edu/faculty/student-attendance-and-absences>: [University policy](#) requires that students be permitted to make up examinations missed because of illness, [mandatory religious obligations](#), authorized UI activities, or unavoidable circumstances. An unavoidable circumstance is defined as an event beyond the student's control and often involves a serious and unexpected hospitalization, a family tragedy, or a related incident. Such circumstances **do not include** attendance at a wedding, a family vacation, obligations related to work or other such matters. The instructor of a student participating in an authorized UI activity is sent a statement generally by email from the UI official in charge of the event before the absence occurs; this statement will include the specific date and time that the student will miss class. Activities related to employment, fraternities or sororities, or volunteer activities are not UI authorized activities.

You are strongly encouraged to go to your lecturer's office hours. Make an appointment, if you have a conflict with the listed office hours.

Other course resources: There is **no TA** for this course and help is not available through the Math Tutorial Lab. You are **strongly encouraged** to go to your lecturer's office hours for additional help as needed. If you have conflicts with the listed office hours, make an appointment for additional office hours.

Student Collaboration: Beginning with Fall 2013:

No collaboration is allowed in any of the exams.

The instructor will specify if collaboration is allowed (and to what extent) on the assignments and, if so, will specify the expectations for a student's individual performance.

Calendar of Course Assignments and Exams:

This is a tentative calendar.

The starting dates and the time spent on each topic are subject to change. We will cover Chapters 1-7 of the textbook, and discuss parts of Chapter 8 if time permits.

<u>Weeks</u>	<u># of lectures</u>	<u>Chapters (sections)</u>	<u>Subject</u>
1-2	7	1 (1-6)	Vectors
3-5	12	2	Differentiation in several variables
6	2	3 (1, 2)	Vector valued functions
MIDTERM 1, week 6, date			
7-8	8	4	Taylor's formula, Max-Min, Lagrange multipliers
9-11	12	5, and 1.7	Multiple integration
MIDTERM 2, week 12, date			
12-14	8	3 (3,4); 6(1-3)	Vector fields, line integrals, path independence, Green's Theorem
14-15	7	7	Parametric surfaces, area, surface integrals, Gauss' and Stokes' Theorems

Resources for Students:

Students will find the Writing Center and the Speaking Center very useful for this course:

Writing Center: <http://www.uiowa.edu/~writingc/>

Speaking Center: <http://clas.uiowa.edu/rhetoric/for-students/speaking-center>

Notes to the Students:

1. All students in the College have specific rights and responsibilities. You have the right to adjudication of any complaints you have about classroom activities or instructor actions. Information on these procedures and your responsibilities is available in the Schedule of Courses and on-line in the College's Student Academic Handbook, (<https://clas.uiowa.edu/students/handbook>) In summary, first see the person you wish to complain about, and then see his/her immediate supervisor. The chain is: graduate or undergraduate assistants, then Prof. XX, then the DEO/Chair of the Department of Mathematics Prof. YY, and then an appropriate Dean. The Department of Mathematics has offices in 14 MLH (MacLean Hall). To make an appointment to talk to the DEO/Chair of the department call 335-0714 or contact the departmental secretary in 14 MLH.

2. We would like to hear from anyone who has a disability which may require some modification of seating, testing, or other class requirements so that appropriate arrangements may be made. Please contact your lecturer during his office hours, in the beginning of the semester and far in advance of the exams. You should notify the Office of Student Disability Services, SDS and obtain the form(s) needed. The necessary modifications will be made available to you after the SDS processes and approves your request.

3. We are planning to use ICON for posting grades and other course material. Also, some announcements may be e-mailed through ICON to your UI e-mail. Check ICON and your UI e-mail regularly, and make sure that UI has your correct e-mail address.

4. This course plan may be modified during the semester. All changes will be announced in class in advance. It is solely the student's responsibility to be informed of such announced changes.

CLAS Teaching Policies & Resources — Syllabus Insert

<https://clas.uiowa.edu/faculty/teaching-policies-resources-syllabus-insert>