INSTRUCTOR: Scott Surgent  
OFFICE: ECA-208

CLASS TIMES & LOCATIONS: College Avenue Commons, Rm 359, T-Th 7:30-8:45 a.m.  
EMAIL: Surgent at asu dot edu  
OFFICE HOURS: T-Th 11-12 and by apt.

Disclaimer: All items on this syllabus are subject to change. Any in-class or online announcement, verbal or written, is considered official addendum to this syllabus.


Prerequisites: MAT 266 or MAT 271 (Calculus II) or its equivalent with a grade C or better.

Catalog Description: Vector-valued functions of several variables, partial derivatives, multivariable integration.


Canvas: There will be a Canvas site for announcements, grade documentation and learning resources.

Homework: All homework for this class will be through the online WebWork system. The WebWork URL is http://webwork.asu.edu. A link will also be provided on the Canvas site. No late homework submissions will be accepted.

Calculators: A graphing calculator is highly recommended for this class. Calculators with CAS capabilities and/or QWERTY keyboards will not be allowed during exams.

Quizzes: Quizzes will be given randomly in class. You must be in attendance to receive credit for the quizzes. No make-ups will be allowed. All quizzes are open book and you'll be allowed to work with a partner and ask me for help if needed. The lowest quiz score will be dropped from your final grade calculation.

Midterms: There will be 3 midterm exams throughout the semester. Make up tests will only be granted in the event of a documented emergency and the instructor must be notified before the test is given.

Final Exam: There will be a comprehensive final exam at the end of the semester.

Final Exam Date: Tuesday, 12/10/19, 7:10-9:00 PM, Location TBA
## TENTATIVE DATES FOR LECTURES AND EXAMS
*(Subject to change)*

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Sections</th>
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<tbody>
<tr>
<td>1</td>
<td>8/22-8/23</td>
<td>No Class</td>
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| 2    | 8/26-8/30   | 10.1: 3D Coordinate Systems  
10.2 Vectors  
10.3 The Dot Product |
| 3    | 9/2-9/6     | Labor Day, no class 9/2  
10.4 The Cross Product  
10.5 Equations of Lines & Planes |
| 4    | 9/9-9/13    | 10.7 Vector Functions & Space Curves  
10.8 Arc Length & Curvature  
10.9 Motion in Space |
| 5    | 9/16-9/20   | 11.1 Functions of Several Variables  
**TEST 1 on 9/19 (Sections 10.1 – 10.9)** |
| 6    | 9/23-9/27   | 11.3 Partial Derivatives  
11.4 Tangent Planes & Linear Approximations  
11.5 The Chain Rule |
| 7    | 9/30-10/4   | 11.6 Directional Derivatives & The Gradient Vector  
11.7 Maximum & Minimum Values |
| 8    | 10/7-10/11  | 12.1 Double Integrals over Rectangles  
12.2 Double Integrals Over General Regions |
| 9    | 10/14-10/18 | Fall Break, no class 10/14-10/15  
12.3 Double Integrals in Polar Coordinates |
| 10   | 10/21-10/25 | 12.5 Triple Integrals  
**TEST 2 on 10/24 (11.1-11.7, 12.1-12.3)** |
| 11   | 10/28-11/1  | 12.6 Triple Integrals in Cylindrical Coordinates  
12.7 Triple Integrals in Spherical Coordinates  
13.1 Vector Fields |
| 12   | 11/4-11/8   | 13.2 Line Integrals  
13.3 The Fundamental Theorem for Line Integrals |
| 13   | 11/11-11/15 | Veteran’s Day, no class 11/11  
13.4 Green’s Theorem  
13.5 Curl & Divergence |
| 14   | 11/18-11/22 | 13.5 Curl & Divergence  
**TEST 3 on 11/21 (12.5-12.7, 13.1 – 13.4)** |
| 15   | 11/25-11/29 | 13.6 Parametric Surfaces & Their Areas  
13.7 Surface Integrals  
**Thanksgiving, no class 11/28-11/29** |
| 16   | 12/2-12/6   | 13.7 Surface Integrals  
Final Exam Review |
| 17   | 12/9-12/13  | **Final Exam (Cumulative and including 13.5-13.7)** |
TESTS/QUIZZES/HOMEWORK

10% **Quizzes:** Quizzes are given randomly to enforce attendance and no make-ups will be allowed. All quizzes will be open-note group activities.

15% **Homework:** All homework for this class will through the online WebWork system. The WebWork URL is [http://webwork.asu.edu](http://webwork.asu.edu). Each assignment will be open for several days with ample time to complete it. All free-response questions will be given unlimited attempts but multiple choice questions will only allow a limited number of attempts. Homework due dates will be strictly enforced and will not be extended on an individual basis.

50% **Midterm Tests:**
- Test 1: Thu. 9/19/19 (Sections 10.1-10.9)
- Test 2: Thu. 10/24/19 (Sections 11.1-11.7, 12.1-12.3)
- Test 3: Thu. 11/21/19 (Sections 12.5-12.7, 13.1-13.4)

25% **Final Exam:** There will be a comprehensive final exam, worth 25% of your grade on Tuesday, 12/10/19, 7:10-9:00 PM, Location TBA.

- **Course Withdrawal Deadline:** the last day to withdraw from the class is 11/6/2019.
- **Complete Withdrawal Deadline:** the last day to withdraw from all your classes is 12/6/2019.

- To qualify for disability accommodations at ASU, students must qualify for services through the Disability Resource Center (DRC), which is located on the 1st floor of the Matthews Center Building. 480.965.1234 (V), 480.965.9000 (TTY). Please complete this process as soon as possible.

GRADING SCALE

Grades will be based on your overall weighted percentage. The letter grade assignments are shown below.

A: [90,100), B: [80,90), C: [70,80), D: [60,70), E: [0,60)

TUTORING

- The [Math Tutor Center](http://webwork.asu.edu) (free of charge) in WXLR 116 will be open M-Th 8:00 a.m. - 8:00 p.m., Fri. 8:00 a.m. - 3:00 p.m.

- [Engineering Tutoring Center](http://webwork.asu.edu) provides tutoring in ECF 102.

- The [ASU Math Community Center](http://webwork.asu.edu) in WXLR 303 is another place to get help for the class. The MCC is open Monday to Friday, 10am to 7pm. Information for the center is at [https://math.asu.edu/resources/math-community-center](https://math.asu.edu/resources/math-community-center).

- Online tutoring: [https://studentsuccess.asu.edu/onlinetutoring](https://studentsuccess.asu.edu/onlinetutoring).

- Many residence halls and the Memorial Union also offer evening or weekend free tutoring to all ASU students as part of the [Student Success Centers](https://studentsuccess.asu.edu/onlinetutoring).
SoMSS and University Policies

ATTENDANCE

Attendance is mandatory. Your instructor reserves the right to take attendance and to incorporate your attendance as part of your overall grade. For classes that meet two days a week, the maximum number of absences is four. For classes that meet three days a week, the maximum number of absences is six. Your instructor reserves the right to take attendance and to incorporate your attendance as part of your overall grade.

EXAMS

There will be three 50 minute midterm exams and one 110 minute final exam given during the semester. All exams will be taken in the classroom on the dates indicated on the given table. Non CAS graphing calculators are allowed on the exams, but graphing calculators that do symbolic algebra are not allowed on the exams (see below). Your calculator may be viewed during exams and it will be taken away if it is a CAS calculator or have its memory cleared if anything suspicious is written therein. The instructor has the right to regard any suspicious material in your calculator memory as cheating. Any student who accesses a phone or any internet-capable/camera device during an exam for any reason automatically receives a score of zero on the exam. All such devices must be turned off and put away and made inaccessible during the exam.

CLASSROOM BEHAVIOR

Classroom disturbances, including but not limited to: arriving late, talking in class and using cellular devices are not tolerated. Each student is expected to show respect for every student registered in the course. An instructor may withdraw a student from a course when the student's behavior disrupts the educational process under USI 201-10 http://www.asu.edu/aad/manuals/usi/usi201-10.html Students are required to adhere to the ABOR Student Code of Conduct: http://www.asu.edu/studentaffairs/reslife/outreach/abor_code.htm

COURSE POLICIES

Excessive tardiness will be subject to sanctions. Under no circumstances should you allow your cell phone to ring during class. Any disruptive behavior, which includes ringing cell phones, listening to your mp3/iPod player, text messaging, constant talking, eating food noisily, reading a newspaper will not be tolerated. The use of laptops (unless for lecture note taking), cell phones, MP3, IPOD, etc. are strictly prohibited during class. Students who engage in disruptive classroom behavior may be subject to various sanctions. The procedures for initiating a disruptive behavior withdrawal can be found at https://clas.asu.edu/resources/disruptive-behavior.
INSTRUCTOR-INITIATED DROP

At the instructor’s discretion, any student who has not attended class during the first week of classes may be administratively dropped from the course. However, students should be aware that non-attendance would NOT automatically result in being dropped from the course. Thus, a student should not assume they are no longer registered for a course simply because they did not attend class during the first week. It is the student’s responsibility to be aware of their registration status.

FINAL EXAM MAKE UP POLICIES

The final exam schedule listed in the Schedule of Classes will be strictly followed. Except to resolve those situations described below, no changes may be made in this schedule without prior approval of the Dean of the college in which the course is offered. Under this schedule, if a conflict occurs, or a student has more than three exams on one day, the instructors may be consulted about an individual schedule adjustment. If necessary, the matter may be pursued further with the appropriate dean(s). This procedure applies to conflicts among any combination of Downtown Phoenix campus, Tempe campus, Polytechnic campus, West campus, and/or off campus class.

Make-up exams will NOT be given for reasons of a non-refundable airline tickets, vacation plans, work schedules, weddings, family reunions, and other such activities. Students should consult the final exam schedule before making end-of-semester travel plans.

Exceptions to the schedule and requests for make-up examimations can be granted only by the Department Chair, Associate Department Chair or the Director of First Year Mathematics, and for one of the following reasons:

1. Religious conflict (e.g., the student celebrates the Sabbath on Saturday)
2. The student has more than three exams scheduled on the same day as the math final
3. There is a time conflict between the math final and another final exam.

INCOMPLETE

If there is a last-minute personal or medical emergency, the student may receive a grade of Incomplete and make up the final within one calendar year. The student must provide written documentation and be passing the class at the time to receive an Incomplete. Make-up exams will NOT be given for reasons of a non-refundable airline tickets, vacation plans, work schedules, weddings, family reunions, and other such activities. Students should consult the final exam schedule before making end-of-semester travel plans.

The Dean of the student’s college must approve any exceptions to these rules.

ACADEMIC INTEGRITY

Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see http://provost.asu.edu/academicintegrity.
DISABILITY ACCOMMODATIONS

Disability Accommodations: Qualified students with disabilities who will require disability accommodations in this class are encouraged to make their requests to me at the beginning of the semester either during office hours or by appointment. Note: Prior to receiving disability accommodations, verification of eligibility from the Disability Resource Center (DRC) is required. Disability information is confidential.

Establishing Eligibility for Disability Accommodations: Students who feel they will need disability accommodations in this class but have not registered with the Disability Resource Center (DRC) should contact DRC immediately. Their office is located on the first floor of the Matthews Center Building. DRC staff can also be reached at: 480-965-1234 (V), 480-965-9000 (TTY). For additional information, visit: www.asu.edu/studentaffairs/ed/drc. Their hours are 8:00 AM to 5:00 PM, Monday through Friday.

POLICY ON THREATENING BEHAVIOR

All incidents and allegations of violent or threatening conduct by an ASU student (whether on-or off campus) must be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students. If either office determines that the behavior poses or has posed a serious threat to personal safety or to the welfare of the campus, the student will not be permitted to return to campus or reside in any ASU residence hall until an appropriate threat assessment has been completed and, if necessary, conditions for return are imposed. ASU PD, the Office of the Dean of Students, and other appropriate offices will coordinate the assessment in light of the relevant circumstances.

Absences related to religious observances/practices: If you will be absent from class due to a religious observance or practice, it is your responsibility to inform the instructor during the first week of class. Your instructor will work with you on alternative and reasonable arrangements for any time missed.

Absences related to university sanctioned events and activities: If you will be absent from class due to participation in a university sanctioned event/activity, it is your responsibility to inform the instructor during the first week of class. Your instructor will work with you on alternative and reasonable arrangements for any time missed.

INCLUSION

The School of Mathematical and Statistical Sciences encourages faculty to address and refer to students by their preferred name and gender pronoun. If your preferred name is different than what appears on the class roster, or you would like to be addressed using a specific pronoun, please let your instructor know.

TITLE IX

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at https://sexualviolenceprevention.asu.edu/faqs.
As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, https://eoss.asu.edu/counseling, is available if you wish discuss any concerns confidentially and privately.

DISCLAIMER

This syllabus is tentative and should not be considered definitive. The instructor reserves the right to modify it (including the dates of the tests) to meet the needs of the class. It is the student responsibility to attend class regularly and to make note of any change.