Note: The 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’s responsibility to attend class regularly and to make note of any change. The instructor also reserves the right to change class policies.

Instructor: Terri Miller Office: WXLR A724  
email: terri@asu.edu  Phone: 480-965-5446 (email is better)  
instructor url: http://math.la.asu.edu/~terri/  
course moodle: https://mathcms.asu.edu/moodlebg/course/view.php?id=31  
Office Hours: 11:00-12:00 T, 8:30-9:30 W, 15:30-16:30 Th, and by appointment

Course Materials: You must have a textbook.  
  (Note, there are several buying options; please speak with me or someone in the ASU bookstore before buying. However, if you already purchased Webassign for MAT 270, you have nothing to purchase!)  
- Access to the web; a large amount of homework is online.

Course description: Methods of integration; applications of calculus, elements of analytic geometry, improper integrals, sequences, and series.

Prerequisites: MAT 270-Calculus with Analytic Geometry I with grade C or better or equivalent.

Do not expect prerequisite materials to be covered in the class. If you are having a problem with the prerequisites, you may either see me in my office during my office hours, or go to a tutor center on campus for help. You are particularly expected to be fluent with intermediate algebra, trigonometry, limits, standard derivatives and integrals.

Audit: If you have opted to audit the course, you must meet with me to get permission and to find out my requirements for audit credit.

Class Expectations  
- Read the course objectives and recitation FAQs.  
- Come to class on time daily with notes, paper, writing implement, and a calculator.  
- Ask questions or come to office hours if you’d like further explanation or examples.  
- Review your notes daily to prepare for quizzes and upcoming tests.  
- Read the text in advance to prepare for the next day’s new material.  
- Leave cell phones or other electronics off and put away while in the classroom.
### Tentative Schedule:

<table>
<thead>
<tr>
<th>Week of</th>
<th>Sections Covered</th>
<th>Holidays/Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/13-1/17</td>
<td>Introduction, 5.5, 6.1</td>
<td></td>
</tr>
<tr>
<td>1/20-1/24</td>
<td>6.2–6.3</td>
<td>MLK Day Holiday Mon. 1/20</td>
</tr>
<tr>
<td>1/27-1/31</td>
<td>6.4–6.5</td>
<td></td>
</tr>
<tr>
<td>2/3-2/5</td>
<td>7.1–7.3</td>
<td></td>
</tr>
<tr>
<td>2/10-2/14</td>
<td>7.4</td>
<td>Test 1: 5.5, 6.1–6.5, 7.1-7.2</td>
</tr>
<tr>
<td>2/17-2/21</td>
<td>7.4–7.6</td>
<td></td>
</tr>
<tr>
<td>2/24-2/28</td>
<td>7.7–7.8, 8.1, 8.3</td>
<td></td>
</tr>
<tr>
<td>3/2-3/6</td>
<td>8.3, 11.1</td>
<td></td>
</tr>
<tr>
<td>3/16-3/20</td>
<td>11.2–11.4</td>
<td></td>
</tr>
<tr>
<td>3/23-3/27</td>
<td>11.5–11.6</td>
<td>Test 2: 7.3–7.8, 8.1, 8.3, 11.1</td>
</tr>
<tr>
<td>3/30-4/3</td>
<td>11.7–11.8</td>
<td></td>
</tr>
<tr>
<td>4/6-4/10</td>
<td>11.9–11.11</td>
<td></td>
</tr>
<tr>
<td>4/13-4/17</td>
<td>10.1–10.3</td>
<td></td>
</tr>
<tr>
<td>4/20-4/24</td>
<td>10.3–10.4</td>
<td>Test 3: 11.2–11.11</td>
</tr>
<tr>
<td>4/27-5/1</td>
<td>10.4, Review</td>
<td></td>
</tr>
<tr>
<td>5/5</td>
<td>Final Exam (ALL sections)</td>
<td>Final Exam: Tues. 5/5, 7:10 to 9 pm</td>
</tr>
</tbody>
</table>

**Topics covered:**

Chapters 5.5, 6–8, 10–11 (but skip some sections, Sections 5.5 is review)

- **Section 5.5:**
  - Substitution in integrals

- **Chapter 6:**
  - 6.1 Area
- 6.2 Volume
- 6.3 Volume by cylindrical shells
- 6.4 Work
- 6.5 Average Value of a Function

• Chapter 7:
  - 7.1 Integration by parts
  - 7.2 Trig integrals
  - 7.3 Trig substitutions
  - 7.4 Partial fractions
  - 7.5 Integration Strategies
  - 7.6 Integral tables
  - 7.7 Approximate integration
  - 7.8 Improper Integrals

• Chapter 8:
  - 8.1 Arc length
  - 8.3 Applications to Physics & Engineering

• Chapter 10:
  - 10.1 Parametric curves
  - 10.2 Calculus with parametric curves
  - 10.3 Polar coordinates
  - 10.4 Area and length in polar coordinates

• Chapter 11:
  - 11.1 Sequences
  - 11.2 Series
  - 11.3 Integral Test
  - 11.4 Comparison Tests
  - 11.5 Alternating Series
  - 11.6 Absolute Convergence, Ratio & Root Tests
  - 11.7 Strategies for testing series
  - 11.8 Power series
  - 11.9 Representing functions as power series
  - 11.10 Taylor and Maclaurin series
  - 11.11 Applications of Series
Tentative Test Dates - subject to change

<table>
<thead>
<tr>
<th>Test</th>
<th>Date</th>
<th>Location</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>Tues. 2/11</td>
<td>WXLR A21 at the regular class</td>
<td>Time</td>
</tr>
<tr>
<td>Test 2</td>
<td>Tues. 3/24</td>
<td>WXLR A21 at the regular class</td>
<td>Time</td>
</tr>
<tr>
<td>Test 3</td>
<td>Tues. 4/21</td>
<td>WXLR A21 at the regular class</td>
<td>Time</td>
</tr>
<tr>
<td>Final</td>
<td>Tues. 5/5, 19:10 – 21:00</td>
<td>Location - TBA</td>
<td>Time</td>
</tr>
</tbody>
</table>

All watches and headphones must be removed and out of site during exams and quizzes. **ALL internet capable devices such as computers, phones and smart-watches, etc., are to be turned off and made inaccessible for the duration of an exam. Accessing one for any reason will result in an automatic score of 0 for the exam.** All papers associated with an exam (including scratch paper) MUST be submitted with the exam.

Your chance to challenge the grading of exams/quizzes expires once you leave the classroom with the exam/quiz, if you write on the exam/quiz paper after it has been returned to you, and/or two weeks have expired since exams were returned to the class.

Students in face-to-face or online courses taking exams/quizzes at Arizona State University should expect to be proctored. The process includes verifying the identity of the student and providing either live proctors or other forms of proctoring during the exam/quiz. In the case of face-to-face courses, students can be required to show a valid identification card, and expect to be monitored by proctors while taking either an exam/quiz.

**Grading Rubric:**

<table>
<thead>
<tr>
<th>Grade Allocations</th>
<th>Grade Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests</td>
<td>A 90%+</td>
</tr>
<tr>
<td>Homworks, Quizzes &amp; Recitations</td>
<td>B 80% - 89.99%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>C 70% - 79.99%</td>
</tr>
<tr>
<td>Total</td>
<td>D 60% - 69.99%</td>
</tr>
<tr>
<td></td>
<td>E &lt;60%</td>
</tr>
</tbody>
</table>

Note: Your current official grade is found via the link on my 271 Resource Page.

**Email:** All email is to be sent using your ASU email address following proper email etiquette. You should have received an email outlining proper email etiquette, please refer to it for required information.

**Quizzes:** Will be given, they may or may not be announced. Some quizzes may be administered online via WeBWorK, https://webwork.asu.edu. Make-ups will not be given for ANY reason; for this reason, your lowest quiz score will be dropped.
**Homework:** Will be administered two ways:

- Most homework problems will be online via WeBWorK, https://webwork.asu.edu. Due dates appear on WeBWorK. **Extensions are not granted for ANY reason; for this reason, your 3 lowest WeBWorK homework scores are dropped.**

- Written problems will be assigned, they are to be submitted at the beginning of your recitation class the week they are due. **No late homework will be accepted for ANY reason; for this reason, your lowest written homework assignment will be dropped.**

**Recitations:** Recitations help students to improve conceptual understanding in a collaborative work environment. You will be assigned group work in your recitation classes. This work may be from your textbook, you must have your book with you for class. It will be collected during the class. **You are allowed 1 free absence from recitation. After that, deduction will be as follows: 2 absences, -1% from your course grade; 3 absences, -5% from your course grade; 4 absences, -10%; 5 or more absences, -20% from your course grade for each absence. These deductions are in addition to the points that you will lose for not being there to do the work. To have your attendance count, you must arrive in class on time and remain the entire class time; late arrival or early departure results in an absence.**

**Technology:** Unless your instructor has given permission, you may not use your personal technology in the classroom. This means cell phones, tablets, and personal computers are put away. In all cases, cell phones must be **turned off at all times** in the classroom. Violation of this policy results in your being dropped from the class, no further warnings will be given. **Graphing Calculator:** A graphing calculator is recommended for this course. Examples of highly recommended models are the TI-nspire, TI 83/84 or Casio 9850GB Plus. Calculators that do symbolic algebra, such as the Casio FX2, Casio 9970Gs, TI-89, TI-92, or TI-nspire CAS cannot be used during an exam for which calculator use is allowed.

**Exams:** There will be three midterms and one final exam given during the semester. Exams are usually given in your class on the date indicted elsewhere in this syllabus. Calculators will not be allowed on exams. You will be required to show a picture ID in which you are clearly recognizable in the picture (i.e. no faded out pictures or extremely old IDs will be accepted); failure to have your picture ID for an exam will result in no score. Makeup exams are given at the discretion of the instructor and ONLY in the case of verified medical or other emergency, which **must** be documented. The instructor must be notified **before** the test is given. Call the Math Department Office (480-965-3951) and leave a message or directly notify your instructor.

**Exams are not to be discussed with anyone until after the exam period is over and your exam has been returned to you. Violation of this policy will be considered a violation of academic integrity. The policy is in place to keep the integrity of the exam intact until after any make-up exams have been given.**
Important Dates:

Add/Drop Deadline ............................................. Jan. 19
MLK Day – NO CLASSES ........................................ Jan. 20
First Test ........................................................... Feb. 11
Spring Break – NO CLASSES ................................. Mar. 8–15
Second Test ....................................................... Mar. 24
Course Withdrawal Deadline ................................. Apr. 5
Third Test .......................................................... Apr. 21
Complete Withdrawal Deadline ......................... May 1

Note: It is the student’s responsibility to verify that (s)he has in fact withdrawn from the class.

Course Final . . . May 5 - failure to take the final results in a grade of E

Extra Help: Dot not hesitate to come to my office during office hours to discuss a homework problem or any aspect of the course. You should also seek out your TAs for office hours in the Math Community Center (known as MC² and located in WXLR A303).

In addition to those sources mentioned above, you can also seek free help:

- Make an appointment with me.
- Use my schedule to find free time.
- Use MC² for other TAs who may have time to help.
- Your TAs may be open to appointments as well, ask.
- MC² is a good place to meet and work with other mathematics students.

COURSE POLICIES
Students are responsible for material covered in class whether or not it is in the text. Working regularly on assigned problems and attending class is essential to survive. You are expected to read the text, preferably before the material is covered in class. Quizzes are given and frequently reflect material that has recently been discussed in class. No late HW will be accepted and no make-up quizzes will be given. Make-up exams are at the discretion of the instructor and only in case of documented emergency. In any case, no make-up exams will be given unless the student has notified the instructor before the test is given. Please schedule an appointment to see me during office hours if you have a disability that will require accommodations in this class.
SoMSS and University Policies and Procedures

For semester deadlines related to enrollment, withdrawal or payments, see the academic calendar available at http://students.asu.edu/academic-calendar

Academic Dishonesty
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.

Students are expected to maintain the highest ethical standards at all times and in all dealings and interactions with fellow students, faculty, teaching assistants and staff.

Any (parts of) exams, assignments, reports, or solutions to these, from current or previous semesters, posted to any website not affiliated with ASU will result in academic integrity disciplinary actions against the students posting them and the students using them.

Inclusivity
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.

Classroom behavior: Make sure you arrive on time for class
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.

Students with Disabilities
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 as soon as possible. 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 as soon as possible. Your instructor will work with you on alternative and reasonable arrangements for any time missed.

**Failing grades (The E, EN and EU grades)**
— The E grade is for students who participated in the class but did not earn enough credit to pass or attain the D grade.
— The EN grade is for student who never once participated in the class. 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.
— The EU grade is for students who participated, but then stopped after a certain point and never resumed.

**Course Withdrawal**
A student may withdraw from a course with a grade of W during the withdrawal period. The instructor’s signature is not required. It is a student’s responsibility to verify that they have in fact withdrawn from a class.

**The grade of Incomplete**
A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents the student who is doing acceptable work (C or better) from completing a small percentage
of the course requirements. (I use no more than 15% of the work remaining, including the final.) The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed.

**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 Policy:** 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.

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.

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.

**Early Examination Requests** (Reference: ACD 304-01): Requests for early final examinations may not be granted by instructors. Requests that seem to have merit may be referred to the dean of the college in which the student is enrolled. If the dean finds that a student must leave early because of circumstances beyond the student’s control, the dean may authorize arrangements whereby the student can complete the course work and take the final examination before leaving. Ordinarily, however, it will be necessary for the dean to advise the student to clear with each instructor and arrange for an “incomplete” grade in each course. Under the policy covering “incompletes,” the student must arrange to complete the course work and take the final examination within one calendar year. If the student is unable to return to the university to take a final examination for the removal of the “incomplete,” the dean may make arrangements for the student to take the final elsewhere, under reliable supervision.

**Ethics**
It is highly unethical to bring to your instructor’s attention the possible impact of your mathematics grade on your future plans, including graduation, scholarships, jobs, etc. The instructor may exercise an option to withdraw you from the course if they think you are compromising the ability to assess your work independently of any other consideration. Students found to be involved in academic dishonesty will be removed from the class and a grade of E for the course will be submitted to the registrar. The student will be advised to repeat the course with another professor, possibly at another institution. This is the least action taken. Further, more serious actions may be taken if the situation indicated that such actions are appropriate. We will act very harshly against cheating
during Quizzes or Exams. For the university’s complete policy regarding ethics, including cheating, plagiarism and other forms of academic dishonesty, see the Student Academic Integrity Policy at the following web address: http://provost.asu.edu/academicintegrity

ACADEMIC DISHONESTY!
In the “Student Academic Integrity Policy” manual, ASU defines “‘Plagiarism’ [as] using another’s words, ideas, materials or work without properly acknowledging and documenting the source. Students are responsible for knowing the rules governing the use of another’s work or materials and for acknowledging and documenting the source appropriately.” You can find this definition at: http://provost.asu.edu/academicintegrity. Academic dishonesty, including inappropriate collaboration, will not be tolerated. There are severe sanctions for cheating, plagiarizing and any other form of dishonesty.

Student Conduct Statement
Students are required to adhere to the behavior standards of the Arizona Board of Regents Policy Manual Code of Conduct, Academic Affairs Manual ACD 125 Computer, Internet, and Electronic Communications, and the ASU Student Academic Integrity Policy. Students are entitled to receive instruction free from interference by other members of the class. If a student is disruptive, an instructor may ask the student to stop the disruptive behavior and warn the student that such disruptive behavior can result in withdrawal from the course. An instructor may withdraw a student from a course when the student’s behavior disrupts the educational process according to procedures of the Student Services Manual SSM 201-10.

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.
What is a recitation?

This course has a mandatory weekly 50 minute recitation, usually taught by a TA (Teaching Assistant). Recitation is where you hand in your written homework for the week. The homework is due at the beginning of the recitation; it should be placed on the table at the front of the room by the time class begins. The TA may give a brief lecture and answer a few questions, and then for most of the session, you will work in groups to solve problems from the recitation workbook. This work is handed in at the end of the session. Frequently, there will be a brief 5-10 minute quiz at the end of the recitation class to help you prepare for the exams.

Why do we have recitation?

The lectures have a limited time and frequently a large number of students, hence there tends to be more time spent listening than doing. As mathematics requires active problem solving, the best way to accomplish this is with the recitations with smaller numbers of students and very little lecture. The recitation is an opportunity for you to problem solve with other students so that you can benefit from more perspectives. In addition, being able to communicate mathematics is an important tool to determine how well you understand; so discussing problems in small groups builds useful skills.

Why doesn’t the TA spend the entire recitation answering questions?

Having the TA speak the whole time would defeat the primary purpose of the recitation being a problem solving environment. There are many other opportunities to ask homework or even general questions. Your instructor has several office hours every week, your TA holds office hours every week, you can use the Mathematics Community Center (located in WXLR A303) to get help from other TAs, you can use the email instructor button within WeBWorK to get help on a specific homework question, and/or you can email your instructor or TA. These resources are all available outside recitation where we want you to concentrate on group collaboration.

You said recitation is mandatory. What if I cannot make it?

If you miss recitations, your course grade will suffer; see your syllabus for further information on this aspect.

If you have a conflict for a particular week and it is impossible for you to attend your recitation, then you need to contact your TA (copy your instructor on the email). If possible for you to attend another recitation being held by your TA that week, you may arrange to attend the other recitation that one week; making sure that your homework is turned in on time for your recitation. If your TA does not have another session that week that you can attend, it is possible that another TA who does can allow you to come to their recitation that week; even this arrangement needs to be arranged via your TA (making sure the instructor is copied on all communications regarding this). Do not attempt to attend a different recitation without advance permission, you will not be given credit. This policy is in place in case you get ill or need to attend an ASU sponsored activity. No more than two such exceptions will be allowed.
If you have a frequent conflict, then you registered for the wrong recitation and that is a problem.

**How is the recitation graded?**

The recitation is meant to be a low stress environment. Your grade for each recitation is based on your adequate preparation and *participation* in the group work (you are not allowed to work alone). If you show up for an entire session and make a legitimate effort to contribute within your group, you will get full credit for the recitation. If you goof off, ignore your group, or work on things other than the assigned calculus problems, you will be docked points. If you show up late or leave early, you will be counted absent and get no credit. The decision of the TA on participation grading is final.

In addition to a recitation score each week, you may have a quiz. Each quiz is graded on a 10 point basis. Each written homework that you submit in recitation is graded on a 10 point basis. See more information regarding quiz and homework policies in your syllabus.

Overall, the recitation score, quiz scores, and written homework score make 25% of your overall course grade.

**Do I need to solve all of the problems assigned every week?**

Absolutely not! The problem sets are (usually) designed to make sure that you do not run out of problems to work on. That means that most groups will not complete all of the problems assigned each week before the end of the recitation. If particular problems will be looked at (perhaps even graded), you will be warned in advance so you can be sure to work those first. This does not mean that you stop working once you have those solved or your recitation grade will suffer.

Frequently, each group is given a different primary problem or two that the group will present to the rest of the class. These are the first problems the group works on, once they have solved those, they can choose (as a group) which one to work on next.

**I would prefer it if the recitation was not graded at all.**

I have done this course with and without recitations. The average student gets over 90% in the recitation portion of their grade. Without the recitation grades, at least 15% more of your grade would be determined by exams. This means, that in the vast majority of cases, having a graded recitation will increase your overall average in the course giving you a better chance of passing. In other words, a graded recitation is much more likely to help you than to hurt you.

**I have more questions.**

You should certainly ask your TA and or instructor if you have questions that have not been addressed here, just as you should do with any question about calculus.

*revised January 23, 2020*