

ONLINE MAC 1147 SYLLABUS

SPRING 2018 (updated 01/04/2018)

The course home page is located in Canvas. Log in at <https://ufl.instructure.com/>.

You can send a message to one of the instructors below by going to your inbox in Canvas and selecting "Compose a new message". If you are requesting assistance on a certain problem, please include details showing your work on the problem; feel free to attach a photo of your work.

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Table of Contents

| | |
|---|-----------|
| 1. Introduction | 3 |
| 1a. Course Content | 3 |
| 1b. Prerequisites | 3 |
| 1c. Required Materials | 3 |
| 1d. Canvas | 4 |
| 1e. WebAssign | 4 |
| 1f. Lectures | 5 |
| 1g. Suggested workflow | 5 |
| 1h. Calculator Policy | 5 |
| 1i. Help | 7 |
| 1j. Success | 8 |
| 1k. Students with Disabilities | 8 |
| 1l. Academic Honesty | 8 |
| 1m. Complaints | 9 |
| 2. Testing with ProctorU | 9 |
| 3. Grading | 9 |
| 3a. Course Grade | 10 |
| 3b. Welcome Quiz | 10 |
| 3c. Self-evaluation | 10 |
| 3d. Lecture Checkpoints | 11 |
| 3e. Bonus | 11 |
| 3f. Textbook Homework | 11 |
| 3g. WebAssign Homework | 11 |
| 3h. Quizzes | 11 |
| 3i. Checkups | 12 |
| 3j. Exams | 12 |
| 3k. Extensions | 13 |
| 3l. Make-up Policy | 14 |
| 3m. Incomplete Grade | 14 |
| 4. Instructor Evaluations | 15 |
| 5. Calendar | 16 |
| 6. Textbook Homework Assignments | 17 |

1. Introduction

1a. Course Content

College algebra, functions, coordinate geometry, exponential and logarithmic functions, and trigonometry. This **fast-paced course** is designed as a review of algebra and trigonometry to prepare the student for calculus.

A minimum grade of C (not C-) in MAC 1147 satisfies four hours of both the pure math general education requirement and the state math requirement. Note: A student can receive at most four credits for taking both MAC 1147, and MAC 1140 or MAC 1114, and at most five credit hours for taking MAC 1147, MAC 1140, and MAC 1114. Students who successfully complete this course (C or better) can advance directly to MAC 2311, Calculus 1 (for engineers and scientists), or into MAC 2233, Survey of Calculus.

If your goal is to take MAC 2233, Survey of Calculus (for business majors), then you might want to talk to your advisor about taking MAC 1140, Precalculus Algebra, instead of this course (which includes trigonometry) since there is no trigonometry requirement for MAC 2233.

Students taking this course to meet general education or state requirements, who do not need precalculus for their major or as preparation for calculus, might consider taking MGF 1106 or MAC 1105. For more information on math courses and math advisors go to <http://www.math.ufl.edu/>.

1b. Prerequisites

This course assumes prior knowledge of intermediate algebra (Algebra 2) and trigonometry. Students should be able to do arithmetic without a calculator.

MAC 1147 begins with a short review of high school algebra topics (appendices A1 – A7). **You should already be competent in working this material.**

1c. Required Materials

- ◆ The textbook: **PRECALCULUS**, 10th edition, by Larson.
 - You may use either the e-book or a physical copy.
 - Access to the e-book is included with the WebAssign access code (and it cannot be excluded), so obtaining a hard copy is optional. You will need to login to WebAssign to view the e-book.
 - The campus bookstore also sells loose-leaf copies. Note that if you purchase a new textbook, a WebAssign access code might (or might not) come with it, so please be aware.
 - The solutions manual is not required.

- ◆ A valid WebAssign access code.
 - WebAssign provides a two-week grace period before you must purchase or enter an access code. **Do not purchase an access code before the end of drop/add unless you are sure you will remain in the course.** Access codes may not be refundable, depending on the circumstances and the vendor, so it's best to avoid those complications.
 - A WebAssign access code (includes access to an electronic version of the textbook through WebAssign) can be purchased at a discount and charged to your UF account by using the following link.

<https://www.bsd.ufl.edu/G1CO/IPay1f/start.aspx?TASK=INCLUDED>
 - You may also purchase an access code at full price directly from WebAssign, or possibly from the bookstore or elsewhere. If you are purchasing from the bookstore or elsewhere, be sure the access code is good for this course first by checking the code's prefix at the following site to make sure it works with the textbook.

http://www.webassign.net/user_support/student/cards.html
 - See the section [WebAssign](#) for details about logging in to the system.
- ◆ Two calculators as follows:
 - One scientific calculator that can be used for everything except exams.
 - One basic non-scientific calculator for use on exams. This calculator should have the ability to add, subtract, multiply, and divide, as well as the ability to take square roots (and perhaps buttons for percentages and storing values in memory). It is not the same as a scientific or graphing calculator.



1d. Canvas

Canvas is located at <https://ufl.instructure.com/>; use your Gatorlink username and your password to login. You can find your lecture videos, checkpoint quizzes, bonus questions, grades, announcements, lecture outlines, free help information, etc., at this site. (Online homework, quizzes, checkups, and exams are in WebAssign.) You are responsible for verifying that your grades are accurate. You have one week after a score has been posted to contact your instructor if you believe there has been a grading or a recording error.

Note: Important information may be included in the announcements in Canvas. You are expected to read them.

1e. WebAssign

Note: WebAssign and Canvas are separate systems, so there will be a delay before your scores in WebAssign are copied over to Canvas.

In WebAssign, you will find your online homework assignments (not the same as the textbook homework), quizzes, checkups, and exams. The online homework and quizzes can be completed early, but the checkups and exams cannot, so you should not expect to see checkups or exams shown in WebAssign until they are available to be completed.

You should always use <https://www.webassign.net/ufl/login.html> to login to WebAssign (and then your Gatorlink login info as directed). When logging in, there are two different “LOG IN” buttons on the login page for WebAssign; you should use the one in the lower left (see Figure 1: WebAssign login page).

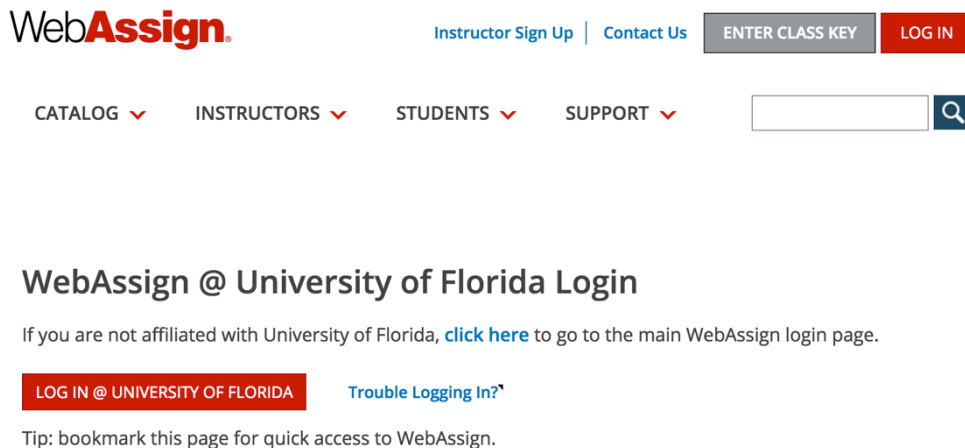


Figure 1: WebAssign login page

1f. Lectures

Viewing lecture presentations is an important aspect of the learning process. The lecture provides the main presentation of the course material in addition to the textbook. Each lecture consists of several videos for a total of approximately 1 hour. Lecture outlines can be printed from Canvas and used to take notes.

1g. Suggested workflow

We suggest that you read the book, watch the lecture, do the checkpoint problems as they come up in the lecture, do the corresponding textbook homework and the online homework, and then take the quiz (if applicable), in that order. The quizzes are due as shown in the [calendar](#), but you may take them earlier. You may work ahead on everything except for the checkups and exams.

1h. Calculator Policy

Only a basic (not scientific) calculator may be used on exams; for all other assignments, a scientific calculator may be used. A basic calculator has the ability to add, subtract, multiply, and divide, as well as the ability to take square roots (and perhaps buttons for percentages and storing values in memory). It is not the same as a scientific or graphing calculator. You will not be allowed to use a scientific or

graphing calculator on exams, nor will you be allowed to use your computer for calculations, and any violations of these policies will be considered cheating.

This is not a plug-and-chug calculator course. You need to understand the mathematics and be able to do the algebraic and trigonometric manipulations first, resorting to the calculator only at the ends of the problems (as necessary) to get the approximate answer(s) as the problems may require. Be sure to carefully read each problem since some will expect exact answers (e.g. $1/3$) and some will expect decimal approximations (e.g. 0.3333), and these are not usually equal. Unless a problem specifically asks for an approximation, you should assume it requires the exact answer.

When working with approximations, you should keep all digits of the intermediate steps in your calculations, and only round the final answer as required by the problem. Failure to do this can result in a rounding error and failure to receive credit for the question part. We will not grant any credit for rounding errors on your part. Every question in WebAssign that asks for an approximate answer can be completed correctly with a calculator with at least 8 digits. **If a problem seems like it requires more digits from your calculator than your calculator has, then you need to look at it algebraically and see how to simplify it so you don't need so many digits.**

You should try to use the basic calculator that you will be using on exams for nearly all calculations that you don't do by hand on checkpoints, homework, quizzes, and checkups, since that will be better practice for exams. Some problems on checkpoints, homework, quizzes, and checkups may have a step that requires computing an exponential, logarithmic, or trigonometric function value that is not a standard value that should be memorized or that cannot reasonably be completed without an additional aid. In those cases only, you should use a scientific calculator, table of values, or other appropriate aid in order to complete the problem. For example, you should not use an additional aid to compute $\sin 60^\circ$ or $\log \sqrt{10}$ since you should already be able to compute their values as $\sqrt{3}/2$ and $1/2$, respectively; but you can use an additional aid to compute an approximation to $\sin 79^\circ$ or to $\log 73$, as necessary.

If a problem on any exam would normally require the use of a scientific calculator, then you will be given additional information in the problem, either directly giving certain function values that you may need or giving you function values that can be used to compute the one you need. For example, if the approximate value of $\ln 6$ was needed, then an exam problem might give that value (possibly among others) to you, or the exam problem might give you approximations for $\ln 2$ and $\ln 3$, from which you can compute an approximation for $\ln 6$ since $\ln 6 = \ln 2 + \ln 3$. On every exam, you will be supplied with the approximate values for π and e at the top of the exam, so, if you need, for example, to compute π^{-3} , you can just multiply the approximations then take the reciprocal to get the answer, i.e. calculate $\frac{1}{\pi \times \pi \times \pi}$.

As you can see from the preceding discussion, all types of problems you see in homework can appear on exams even if you use a scientific calculator for the homework (and despite the fact you are NOT allowed to use a scientific calculator on exams).

1i. Help

For help resolving technical issues (computer problems, Gatorlink, etc.), contact the UF Computing Help Desk at <http://helpdesk.ufl.edu> or 352-392-HELP (4357).

Your instructors (listed on the front page of the syllabus) are glad to help. If you're seeking help on a specific problem, you should first have attempted the problem yourself. If you're seeking help online, you can take a snapshot of your work and attach that to a message (to one of the instructors) in Canvas requesting help. If you'd prefer to speak in person, the Course Coordinator has office hours posted on the web page shown on the cover. In addition to your instructors, the following third-party aids are available.

- ◆ Free tutoring is at the Teaching Center, located at SE Broward Hall. Their web page is <https://teachingcenter.ufl.edu/tutoring/>. *Note: Any exam prep or other materials should not be considered a good indicator of what the exams in this course are like. This goes for all third-party note or review services.*
- ◆ The Little Hall Math Lab, located in LIT 215, provides free drop-in help.
- ◆ The Office of Academic Support offers free tutoring sessions to UF students. See <http://oas.aa.ufl.edu/programs/tutoring/>.
- ◆ The Mathematics Department maintains a list of qualified private tutors for hire. Go to <https://math.ufl.edu/> and search for "tutors" to find the list.
- ◆ After using 5 attempts on all parts of a WebAssign homework problem, a "Talk to a Tutor" link will appear. That link will connect you to NetTutor, a separate online tutoring service for which you can purchase time.
- ◆ The textbook has a website with various resources available to assist students: <http://www.larsonprecalculus.com/precalc10e/>.
- ◆ UF's Counseling & Wellness Center provides information and workshops on developing math confidence. The center also offers counseling support in case of issues with academics, adjusting to the stress of college life, or personal challenges. Please use this resource before you get overwhelmed! See <http://www.counseling.ufl.edu/cwc/>, or call (352) 392-1575. In a crisis, consider calling:
 - Alachua County Crisis Center: 352-264-6789
 - Alachua County Rumor Control: 352-264-6557
 - National Suicide Hotline: 1-800-SUICIDE (7842433)
 - National Suicide Prevention Lifeline: 1-800-273-TALK (8255)

1j. Success

Success in MAC 1147 depends largely on your attitude and effort. Keeping up with the videos is critical. Most students find it beneficial to work daily on the material as opposed to saving it all for one day. It is not effective to sit and copy notes without following the thought processes involved in the lecture. For example, you should try to answer the questions posed by the lecturer. Students who actively participate have greater success.

Be aware that much of the learning of mathematics at the university level takes place outside of the classroom. You need to spend time reviewing the concepts of each lecture **before** you attempt homework problems. It is also important to spend some time looking over the textbook sections to be covered in the next lecture to become familiar with the vocabulary and main ideas beforehand so that you will be better able to grasp the material presented in the videos. **You should expect to spend at least 12 hours per week working on this course. Many students will need to spend more time than this to be successful in this course.**

If you do not complete the textbook homework (not graded) in addition to all other assignments, and complete all assignments thoroughly, then you are likely not prepared enough to do well on exams. This is especially true for the trigonometry material covered on Exam 3, where everyone needs extra practice. Note that if you find you need even more practice beyond the existing assignments, you can use the unassigned problems in the textbook, in which case please feel free to ask your instructor(s) questions about any of those problems.

1k. Students with Disabilities

Students requesting accommodation must first register with the Disability Resource Center. (See <https://drc.dso.ufl.edu/>.) The Dean of Students will provide documentation to the student who must then provide this documentation to the Online Coordinator when requesting accommodation.

1l. Academic Honesty

All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust, and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct. The conduct set forth hereinafter constitutes a violation of the Academic Honesty Guidelines (University of Florida Rule 6C1-4.017).

1m. Complaints

Each online distance learning program has a process for student complaints within its academic and administrative departments at the program level. Go to <http://www.distance.ufl.edu/student-complaint-process> for more information.

2. Testing with ProctorU

You must sign-up with ProctorU for each exam at least 72 hours (3 days) prior to the exam date to avoid a late sign-up charge. **It is highly recommended that you reserve your exam time slots for all of your exams early in the semester in order to guarantee you can take the exam at the most convenient time for you.** See the course [calendar](#) for the dates of the exams.

For each exam, you should have only the following items: pencils or pens, your Gator1 picture ID card or a government-issued picture ID, a basic non-scientific calculator, and up to 10 sheets of completely blank, white, scratch paper (no holes, lines, printing, etc.). **NO scientific or graphing calculators are allowed.** NO CELL PHONES, NO NOTES, NO CALCULATOR MANUALS, NO BOOKS, NO OUTSIDE HELP! You should be taking each exam in a room where you are isolated from anyone else.

To help avoid technical issues, **ProctorU recommends that you use a hard-wired connection** as opposed to wireless. For questions about ProctorU, contact their 24/7 help desk at <https://www.proctoru.com/testitout>. You can contact their help desk and speak with a live representative to ensure your camera and system are operating correctly prior to the exam.

Finally, while we like allowing students to take exams at whatever time of day they wish, it is better if you both start and finish each exam between 8am and 10pm, since during those hours ProctorU can call us to try to resolve any issues that may arise. That being said, an ounce of prevention is worth a ton of cure, and **you should arrange for the best possible testing environment, internet connection (wired is better than wireless), and computer to use during your exam.** These things are completely under your control, and if you have difficulty making suitable arrangements then you need to reconsider taking this course online.

3. Grading

You should check Canvas regularly and consult with the Online Coordinator if you have any questions about recorded grades. All grade concerns must be taken care of within one week of receiving the score in Canvas. Your grade is subject to being raised or lowered if there is a recording error, computational error, “padding” error, etc.

For information on dropping courses and withdrawals, go to <https://catalog.ufl.edu/ugrad/current/regulations/info/drops.aspx>.

For information about UF grades and grading policies go to <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

3a. Course Grade

You will have ample opportunity to earn your grade in this course. There will be no extra assignments, extra make-ups, rounding up, etc. because you “need” a certain grade, so please do not bother asking. (Any such requests may be ignored.) If you “need” a certain grade, you should work hard all semester to make sure it happens.

The course grade is comprised as follows:

| | |
|--|--------|
| 1 Welcome Quiz (in Canvas) | 0.4% |
| 1 Self-evaluation (in Canvas) | 0.2% |
| 37 Lecture Checkpoints (in Canvas; drop 3) | 7.2% |
| 37 Bonus Questions (in Canvas) | 1.8% |
| 37 WebAssign Homeworks (drop 3) | 6.0% |
| 15 WebAssign Quizzes (drop 3) | 7.2% |
| 3 Checkups (in WebAssign; 3% each) | 9.0% |
| 3 Midterm Exams (in WebAssign; 16% each) | 48.0% |
| 1 Cumulative Final Exam (in WebAssign) | 22.0% |
| <hr/> | |
| <i>TOTAL</i> | 101.8% |

The course grade is then determined by your final percentage as follows, **with cutoffs strictly enforced**:

| Grade | Percentage | Grade | Percentage |
|-------|------------------|-------|------------------|
| A | 90.00% and above | C | 70.00% to 73.99% |
| A- | 87.00% to 89.99% | C- | 67.00% to 69.99% |
| B+ | 84.00% to 86.99% | D+ | 64.00% to 66.99% |
| B | 80.00% to 83.99% | D | 60.00% to 63.99% |
| B- | 77.00% to 79.99% | D- | 57.00% to 59.99% |
| C+ | 74.00% to 76.99% | E | 56.99% and below |

3b. Welcome Quiz

The Welcome Quiz can be found in Canvas. It is due at the beginning of the semester; see the [calendar](#) for the due date. You should read the syllabus before attempting it.

3c. Self-evaluation

The Self-evaluation is a quiz found in Canvas after Exam 2. Its purpose is to let you know your approximate standing in the class. See the [calendar](#) for the due date.

3d. Lecture Checkpoints

In each video is a Checkpoint problem that pertains to the concept recently covered. You should work the Checkpoint problem and write your answer down (a, b, c, d, or e), since you will need to enter your multiple-choice answers in Canvas. Checkpoint problems are due by the lecture due date (see the [calendar](#)), but it is best to do them as soon as possible. You can only submit your answers once. After submitting your answers, the feedback will contain a link to a video with solutions.

3e. Bonus

For each lecture, watching the lecture videos and then answering the bonus question found in Canvas can earn you bonus (i.e. available credit beyond the 100% already available). This must be done by the due date given for each lecture (see [calendar](#)); there are no extensions or make-ups for bonus.

Each bonus question will ask about a picture that appears in one of the lecture videos for 5 seconds, and you can only submit your answer once. If you miss one of the pictures, please question if your time is better spent hunting down that picture or improving your skills through more practice that can raise your exam scores.

There will be no other bonus points, extra assignments, or extra make-ups.

3f. Textbook Homework

The textbook homework assignments listed at the end of this syllabus represent the minimum number of problems you should do in each section. Some homework problems suggest the use of a graphing calculator; they are designed to help you visualize important concepts and to reinforce the mathematical processes involved. The use of a graphing calculator when doing homework is not required, though a scientific calculator may be required to finish working certain problems. The textbook homework will not be graded, but you are encouraged to ask questions about it as necessary. You are allowed to seek outside assistance with the textbook homework, but you need to be able to work problems on your own to succeed.

There is a link provided in Canvas with the textbook answers.

3g. WebAssign Homework

You have ten attempts per question/part for each WebAssign homework. **You can see the number of submission attempts (and how many you've used) for any problem by clicking the plus icon to the right of the problem number.** (This applies to any assignment in WebAssign, including exams.) This homework should be completed AFTER working the textbook homework. See the [calendar](#) for the due dates. You are allowed to seek outside assistance with the WebAssign homework, but you need to be able to work problems on your own to succeed.

3h. Quizzes

You have three attempts per question and one hour for each quiz in WebAssign. The countdown timer begins once you open the quiz and it cannot be reset, so **DO NOT**

open a quiz unless you're ready to take it. A quiz can cover anything that has a due date on or before the due date of the quiz as shown on the [calendar](#). While the quizzes are open-note and open-book by virtue of not being proctored, you should prepare for them as if they are closed-note and closed-book to better reinforce your learning as you progress through the course. **You are required to work each quiz by yourself, with no assistance from anyone else whatsoever.**

3i. Checkups

The checkups (in WebAssign) are designed to give you some feedback on your understanding of the course material prior to the corresponding midterm exam. (There is no checkup for the Final Exam.) Because of this, your first attempt to answer each question should be a thoughtful one, on your own, without referring to the textbook, notes, or anyone else. You are required to work the checkups on your own, but you may ask your instructors for assistance. If you have any trouble answering a question correctly under those conditions, then that indicates your need to review, study, or work more practice problems from the textbook. However, the checkups cannot cover every possibility that could appear on an exam, so they should not form the sole basis of your studying for an exam.

You have three attempts per question for each checkup. Each checkup will be made available one week before its due date shown on the [calendar](#), but it should not be attempted until all preceding assignments are completed.

3j. Exams

All exams are in WebAssign but are proctored through ProctorU; their dates are shown on the [calendar](#), but they will not be visible in WebAssign until the start of the exam window. You must sign up for an appointment with ProctorU, and during that appointment they will open the exam for you and monitor while you take the exam. See [Testing with ProctorU](#) for more information.

Students are responsible for material covered in the lecture notes (including practice problems at the end of some lectures), all assigned textbook homework problems, and all assigned WebAssign material. Note that questions on the exams will mostly resemble these problems, but some may also be different (while still covering the same material). **Completing the checkup is not, in and of itself, sufficient preparation for an exam.**

The three midterm exams each consist of 15 questions and have a 90-minute time limit. The final exam consists of 18 questions and has a 2-hour time limit. There is no partial credit unless a question has multiple parts that can be graded separately, in which case each part will be worth a fraction of the question's point-value. For each exam, you will have two attempts per question, and your last submitted answer is the one that counts.

3k. Extensions

DO NOT wait until the last possible minute to start an assignment, since if you encounter any problems YOU will be out of luck!

An **extension period** is a short amount of time, after the regular due date, which can be used to complete an assignment late but without any penalty. No assignment will be accepted after its extension period. Note that applying an extension changes the due date but does not grant extra time on a quiz; once a quiz is opened, the timer starts counting down until it runs out and then you can no longer work on the quiz.

The extension periods for assignments are as follows:

- ◆ Bonus: 0 days (no extension period)
- ◆ Exams: 1 day (24 hours), already added to the due dates in WebAssign and the exam windows in ProctorU
- ◆ All other assignments: 2 days (48 hours), with extensions in WebAssign provided through the “automatic extension” mechanism (see below)

For the first two weeks of the semester, all assignments will have extensions through the end of the second week, and you do not need to do anything to enable the extensions for the first two weeks. There will be no further extensions allowed for those assignments. After the first two weeks, the published due dates and extension periods apply, and you will need to enable the extensions in WebAssign as needed.

To use an extension:

- ◆ If the assignment is in Canvas, then you do not need to do anything to make use of an extension; the extension period has already been incorporated in the “Available until” date and time. Just complete the assignment like normal before the “Available until” date and time expire. You may notice the score in the Canvas gradebook highlighted to show the assignment was completed after the “Due” date; this does not affect your grade in any way.
- ◆ If the assignment is an exam, then the extension period has already been incorporated into the due date shown in WebAssign and the extension day is available for scheduling through ProctorU, so no special action is required on your part except to schedule the appointment with ProctorU. **You are strongly advised to plan to take each exam on its due date, that way if something happens and you are unable to take it that day you will be able to re-schedule for the extension day.**
- ◆ For all other assignments (in WebAssign), you will have to request an “automatic extension” to enable the extension period. Use the following steps **prior to opening the assignment**.
 1. In WebAssign go to the course, and in **My Assignments** scroll down under **Current Assignments** to find **Past Assignments**. Click on **Past Assignments**. *Note: It is impossible to request the extension until the assignment is past its due date.*

2. Find the assignment for which you wish to request the extension. Beneath the due date of the assignment there will be an [Extension Request](#) link. Click that link.
3. A window will pop up showing the available automatic extension. Click the button at the bottom that says Accept Automatic Extension.
4. The pop-up window should now display the extension information and confirm that the extension has been applied. Close the window by clicking on [Close this window](#) in the upper right corner of the pop-up.

3l. Make-up Policy

Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence.

Due to the ability to work ahead on most assignments, the extensions allowed, and the fact that most assignment categories have multiple drops (see [Course Grade](#)), most assignments will not be permitted make-ups. The only exceptions to this no make-up policy are that one midterm exam may be made up (see the following paragraph) and that the Final Exam may be made up with approved hardship documentation. If you miss the Final Exam due to negligence, we may permit you to make it up shortly thereafter, but there will be a penalty applied to your score.

Each student shall be permitted one make-up exam for any reason, with the greater of the original exam score and the make-up exam score used in grade calculations. This make-up exam will be taken after Exam 3, but before the Final Exam; see the [calendar](#) for the date. Before taking the make-up, in ProctorU you will need to sign up for the generic "Make-up Exam". (The usual 3-day sign-up rule applies.) When you log on to take the make-up, at that time you will choose which make-up exam you want to take. There is a separate make-up exam for each of the midterm exams, but you may only take one of the make-up exams. (Any attempt to take more than one will result in none of them counting and prosecution for cheating.) The make-up exam will be similar to the corresponding midterm in both the number of questions and the topics covered by the exam.

WARNING: Many students end up taking Make-up Exam 3 because they underestimate the amount of work they need to put into the course for the trigonometry part of the course and are not prepared enough. Unfortunately, this is a poor strategy, since the Make-up Exam 3 is right after Exam 3, leaving little additional time to prepare further. Please take Exam 3 very seriously to keep your grade up. If you haven't worked through all of the textbook homework problems, you are not prepared enough.

3m. Incomplete Grade

A grade of I (incomplete) will be considered only if you meet the Math Department criteria which are found at <http://www.math.ufl.edu/department/incomplete->

[grades/](#). An I only allows you to make up your incomplete work, not to redo your work. Also, any request for an I must be received before the final exam.

4. Instructor Evaluations

Students are asked to provide feedback on the quality of instruction in this course based on ten criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

5. Calendar **UF Online MAC 1147 Course Calendar for Spring 2018**

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------------------------------|------------------------------|-------------------------------|----------------------------|--------------------------|
| 8-Jan | 9-Jan Welcome Quiz | 10-Jan L1 | 11-Jan L2 | 12-Jan Quiz 1 |
| 15-Jan Martin Luther King, Jr. Day | 16-Jan L3 | 17-Jan L4 | 18-Jan Quiz 2 | 19-Jan L5 |
| 22-Jan L6 | 23-Jan L7 | 24-Jan Quiz 3 | 25-Jan L8 | 26-Jan L9 |
| 29-Jan L10 | 30-Jan Quiz 4 | 31-Jan L11 | 1-Feb L12 | 2-Feb Quiz 5 |
| 5-Feb Checkup 1 | 6-Feb Exam 1 | 7-Feb | 8-Feb L13 | 9-Feb L14 |
| 12-Feb Quiz 6 | 13-Feb L15 | 14-Feb L16 | 15-Feb L17 | 16-Feb Quiz 7 |
| 19-Feb L18 | 20-Feb L19 | 21-Feb | 22-Feb L20 | 23-Feb Quiz 8 |
| 26-Feb L21 | 27-Feb L22 | 28-Feb | 1-Mar L23 | 2-Mar Quiz 9 |
| 5-Mar SPRING BREAK | 6-Mar SPRING BREAK | 7-Mar SPRING BREAK | 8-Mar SPRING BREAK | 9-Mar SPRING BREAK |
| 12-Mar L24 | 13-Mar Quiz 10 | 14-Mar | 15-Mar Checkup 2 | 16-Mar Exam 2 |
| 19-Mar Self-evaluation | 20-Mar L25 | 21-Mar L26 | 22-Mar L27 | 23-Mar Quiz 11 |
| 26-Mar L28 | 27-Mar L29 | 28-Mar | 29-Mar L30 | 30-Mar Quiz 12 |
| 2-Apr L31 | 3-Apr L32 | 4-Apr | 5-Apr L33 | 6-Apr Quiz 13 |
| 9-Apr L34 | 10-Apr L35 | 11-Apr Quiz 14 | 12-Apr | 13-Apr L36 |
| 16-Apr L37 | 17-Apr Quiz 15 | 18-Apr | 19-Apr Checkup 3 | 20-Apr Exam 3 |
| 23-Apr | 24-Apr | 25-Apr Make-up Exam | 26-Apr | 27-Apr |
| FINAL EXAM: SATURDAY, APRIL 28 | | | | |

L# includes:

Checkpoint Problems (Canvas)
 Bonus Question (Canvas)
 Homework (WebAssign)

In Canvas:

ufl.instructure.com

Welcome Quiz
 Checkpoint Problems
 Bonus Questions
 Self-evaluation

In WebAssign:

webassign.net/ufl/login.html

Homework*
 Quizzes**
 Checkups
 Exams

FOR ALL EXAMS:

You must register at least 3 days in advance with ProctorU to avoid having to pay an extra fee.

*Textbook homework should be completed prior to the WebAssign homework.

**Quizzes should be taken after any other assignments due on the same day shown on this calendar.

6. Textbook Homework Assignments

You should read the textbook sections covered in each lecture before viewing the videos. After each lecture, review your notes and the text to make sure you understand the main ideas prior to working the exercises.

If you have questions about the reading or homework exercises, you may ask your instructor (or a qualified tutor, etc.).

You should complete each assignment before the next lecture, since the material in each lecture often builds on previous concepts.

L1 Real Numbers

Reading: Syllabus, Appendix A.1

Exercises (A.1), page A11: 1, 3, 6, 7, 9, 16, 19, 21, 25, 27, 33, 35, 37, 38, 41, 44, 47, 49, 57, 62, 69, 71, 73, 74, 75, 77

L2 Exponents and Radicals

Reading: Appendix A.2

Exercises (A.2), page A23: 1, 4, 8, 10, 13, 20, 25, 26, 29, 30, 39, 41, 46, 47, 49, 51, 52, 53, 55, 57, 58, 59, 60, 61, 63, 65, 68, 71, 72, 73, 74

Additional exercise: Simplify the radical expression $\sqrt[3]{81x^7y^2} \cdot \sqrt[3]{36x^2y^2}$.

L3 Polynomials and Factoring

Reading: Appendix A.3

Exercises (A.3), page A33: 1, 2, 5, 8, 11, 17, 23, 25, 29, 31, 33, 35, 39, 41, 43, 45, 49, 53, 57, 65, 69, 75, 81, 88, 91, 92

L4 Rational Expressions

Reading: Appendix A.4

Exercises (A.4), page A42: 4, 5, 7, 15, 19, 29, 31, 35, 38, 42, 45, 50, 53, 54, 55, 58, 59, 60, 61, 67, 70, 72, 73, 77, 79, 80

L5 Solving Equations

Reading: Appendix A.5

Exercises (A.5), page A56: 1, 3, 4, 12, 17, 19, 21, 24, 33, 37, 41, 42, 43, 50, 51, 54, 62, 64, 70, 75, 78, 79, 82, 84, 85, 87, 88, 90, 91, 94, 96, 98, 99, 100

Additional exercises: Find all real solutions and check your answers.

1. $6x^{-2} + x^{-1} = 2$

2. $8(m - 4)^4 - 10(m - 4)^2 + 3 = 0$

3. $(y + 3)^{2/3} - 2(y + 3)^{1/3} - 3 = 0$

4. $4(x + 1)^{1/2} - 5(x + 1)^{3/2} + (x + 1)^{5/2} = 0$

5. $\frac{1}{x - 3} + \frac{3}{x + 3} = \frac{6x}{x^2 - 9}$

6. $\frac{x^2 - 9}{x^2 - 2x - 3} = \frac{3}{2}$

7. $x^8 - 4x^4 - 5 = 0$

8. $3x^4 + 10x^2 - 25 = 0$

9. $\sqrt{x + 7} + 3 = \sqrt{x - 4}$

10. $2x = 1 - \sqrt{2 - x}$

11. $x = \sqrt{15 - 2x}$

12. $(5x^2 - 6)^{1/4} = x$

13. $\sqrt[3]{4x + 3} = \sqrt[3]{2x - 1}$

14. $(2x - 1)^{2/3} = x^{1/3}$

15. $\sqrt{x} - (3)\sqrt[4]{x} - 4 = 0$

16. $x^{1/2} + 3x^{-1/2} = 10x^{-3/2}$

17. Factor $x^6 - 2x^4 + x^2$ completely and find all of the real solutions of the equation $x^6 - 2x^4 + x^2 = 0$.

L6 Linear Inequalities and Algebraic Errors

Reading: Appendices A.6 and A.7

Exercises (A.6), page A64: 4, 5, 15, 28, 34, 38, 54, 55, 69, 73, 75, 76, 79, 80, 81, 83, 86, 89, 91, 93, 95, 97, 101, 105, 109, 110, 111, 112, 114

Exercises (A.7), page A72: 3, 7, 10, 15, 19, 21, 23, 25, 28, 29, 33, 37, 39, 43, 51, 53, 55, 56, 57

L7 Rectangular Coordinates and Graphs

Reading: Sections 1.1 and 1.2

Exercises (1.1), page 8: 1, 2, 3, 4, 9, 11, 13, 26, 28, 29, 38, 40, 43, 47, 48, 51, 52, 53, 54, 58

Exercises (1.2), page 19: 2, 4, 5, 11, 15, 21, 28, 29, 31, 33, 37, 40, 41, 42, 43, 45, 47, 67, 69, 72, 73, 78, 80, 83 a, b, 87, 88, 89

Additional exercises:

1. Find the equation of a circle in standard form with center at the point $(-3, 2)$ and tangent to the line (touching the line) $y = 4$.
2. Given the circle $x^2 + (y + 1)^2 - 1 = 8$, find its center, radius, and intercepts. (Hint: Sketch the graph.)

L8 Linear Equations and Functions

Reading: Sections 1.3 and 1.4

Exercises (1.3), page 31: 2, 4, 5, 9, 11, 13, 21, 23, 27, 39, 41, 47, 55, 65, 67, 68, 69, 70, 71, 73, 87, 89, 91, 93, 94, 95, 99, 101, 103, 104, 105, 107, 110, 111

Exercises (1.4), page 44: 1, 3, 4, 5, 7, 11, 13, 17, 18, 22, 23, 27, 33, 41, 42, 44, 46, 53, 56, 57 a, c, 59, 61, 63, 64, 67, 75, 78, 81, 85, 86, 89, 90, 92

L9 Analyzing Graphs of Functions

Reading: Section 1.5

Exercises (1.5), page 56: 1, 2, 6, 7, 9, 11, 13, 19, 24, 36, 40, 55, 63, 66, 67 a, c, d, e, 71, 73, 74, 75, 76, 83, 85, 91, 92, 93, 94, 95, 96, 99

L10 A Library of Functions and Transformations of Functions

Reading: Sections 1.6 and 1.7

Exercises (1.6), page 65: 2, 3, 4, 5, 6, 7, 8, 9, 12, 35, 43, 48, 49, 50

Exercises (1.7), page 72: 1, 2, 3, 4, 5, 8, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 34, 36, 37, 40, 43, 45, 47, 49, 50, 63, 64, 65, 66, 67, 68, 69, 70

L11 Combinations of Functions

Reading: Section 1.8

Exercises (1.8), page 81: 1, 2, 3, 5, 10, 11, 13, 17, 23, 31, 33, 35, 38, 42, 43, 45, 47, 49, 61, 62, 63, 65, 67, 69, 72, 73 a

L12 Inverse Functions

Reading: Section 1.9

Exercises (1.9), page 90: 1, 2, 3, 4, 5, 6, 15, 19, 23, 25, 29, 31, 33, 35, 37, 39, 45, 47, 48, 51, 55, 61, 62, 63, 66, 68, 73, 77, 80, 83, 89, 91, 92, 93, 97, 100

L13 Quadratic Functions

Reading: Section 2.1

Exercises (2.1), page 120: 1, 3, 5, 6, 7, 8, 12, 14, 16, 26, 35, 39, 47, 52 no calc, 53 no calc, 57, 63, 66, 67, 69, 71, 73, 75, 76, 77

L14 Polynomial Functions of Higher Degree and Division of Polynomials

Reading: Sections 2.2 and 2.3

Exercises (2.2), page 132: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 17, 19, 21, 23, 24, 25, 53, 61, 65, 69, 73, 74, 75, 78, 93 a, b, 99, 100, 101, 103, 105, 106, 107

Exercises (2.3), page 142: 4, 5, 6, 7, 19, 33, 42, 45, 51 a, b, 62, 67, 80, 83, 86, 87, 89, 93

L15 Complex Numbers

Reading: Section 2.4

Exercises (2.4), page 150: 1, 2, 3, 4, 5, 6, 9, 11, 15, 16, 19, 21, 25, 27, 33, 35, 37, 41, 43, 45, 52, 54, 55, 57, 58, 59, 61, 63, 65, 66, 68, 77, 79, 81, 83, 85, 88 a, 89, 91, 92, 95

L16 Zeros of Polynomial Functions

Reading: Sections 2.5 and 2.6

Exercises (2.5), page 162: 2, 3, 4, 9, 11, 14, 15, 20, 25, 30, 33, 41, 43, 48, 54, 55, 60, 61, 64, 68, 95, 98, 99, 100, 101, 102, 103 a, b, d, 105, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 119, 120, 121, 123

Exercises (2.6), page 175: 1, 2, 3, 10, 13, 15

L17 Rational Functions

Reading: Section 2.6

Exercises (2.6), page 175: 19, 21, 23, 27, 29, 31, 37, 39, 40, 41, 42, 72 a, 78, 81

L18 Nonlinear Inequalities

Reading: Section 2.7

Exercises (2.7), page 185: 1, 2, 7, 11, 23, 26, 28, 29, 35, 37, 39, 40, 44, 46, 52, 53 no calc, 55 no calc, 68, 70, 71, 75, 80, 86, 87 a

L19 Linear and Nonlinear Systems of Equations

Reading: Sections 7.1 and 7.2

Exercises (7.1), page 475: 1, 2, 4, 5, 7, 10, 16, 19, 23, 26, 30, 31, 32, 33, 38, 41, 54, 57, 58, 63, 65, 67, 68, 69, 70

Exercises (7.2), page 486: 1, 8, 9, 12, 16, 25, 28, 30, 31, 33, 41, 42, 43, 49 a, b, 51, 61, 64

L20 Exponential Functions

Reading: Section 3.1

Exercises (3.1): page 206: 13, 14, 15, 16, 19, 20, 21, 23, 25, 27, 29, 31, 37, 39, 41 no calc, 43 no calc, 44 no calc, 45, 47, 49, 53, 57, 59, 62 a, 63 a, 67, 68, 69, 71, 73, 78, 79

L21 Logarithmic Functions

Reading: Section 3.2

Exercises (3.2), page 216: 1, 2, 4, 5, 7, 13, 15, 16, 17, 18, 19, 20, 25, 26, 27, 28, 29, 31, 33, 37, 38, 39, 40, 41, 43, 45, 47, 48, 49, 53, 61, 62, 63, 64, 65, 66, 67, 70, 77, 84, 85, 86, 88

L22 Properties of Logarithms

Reading: Section 3.3

Exercises (3.3), page 223: 2, 4, 5, 13, 15, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 53, 58, 69, 73, 75, 77, 79, 81, 91, 92, 93, 97, 101, 102, 104

L23 Exponential and Logarithmic Equations

Reading: Section 3.4

Exercises (3.4), page 233: 1, 2, 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 33, 35, 36, 42, 44, 52, 55, 56, 57, 60, 72, 74, 77, 78, 79, 83, 85, 89, 90, 91, 92

L24 Exponential and Logarithmic Models

Reading: Section 3.5

Exercises (3.5), page 243: 1, 5, 6, 7, 12, 15, 21, 23, 25, 27, 31, 33, 35 a, b, d

L25 Radian and Degree Measure

Reading: Section 4.1

Exercises (4.1), page 267: 1, 2, 3, 4, 5, 6, 7, 9, 11, 14, 15, 17, 21, 23, 25, 27, 29, 33, 35, 37, 51, 53, 55, 58, 60, 63, 65, 69, 70, 71, 72, 73, 74, 75, 77, 78

L26 Trigonometric Functions and the Unit Circle

Reading: Section 4.2

Exercises (4.2), page 275: 2, 4, 7, 9, 10, 11, 12, 19, 21, 23, 31, 33, 35, 37, 39, 41, 49, 51, 52, 53, 54, 55, 60, 61

L27 Right Triangle Trigonometry and Trigonometric Functions of Any Angle

Reading: Sections 4.3 and 4.4

Exercises (4.3), page 284: 1, 2, 3, 4, 5, 13, 21, 23, 40, 45, 57, 59, 61, 63, 64, 65, 67, 68, 72, 75, 76, 77, 78, 79, 80, 81

Exercises (4.4), page 294: 1, 2, 3, 4, 5, 6, 8, 11, 16, 19, 21, 24, 27, 31, 34, 45, 49, 51, 53, 67, 72, 91, 97

L28 Graphs of Sine and Cosine Functions

Reading: Section 4.5

Exercises (4.5), page 304: 1, 2, 3, 4, 5, 7, 9, 13, 15, 17, 19, 21, 23, 25, 27, 29, 35, 39, 43, 49, 51, 57, 65, 69, 71, 75, 78, 79, 89, 91

L29 Graphs of Other Trigonometric Functions

Reading: Section 4.6

Exercises (4.6), page 315: 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 27, 29, 35, 37, 57, 58, 59, 60, 85, 87, 88

L30 Inverse Trigonometric Functions

Reading: Section 4.7

Exercises (4.7), page 324: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19 no calc, 37, 38, 39, 41, 43, 45, 47, 49, 51, 55, 59, 63, 67, 71, 75, 76, 79, 81, 99, 105, 106, 107, 108

L31 Applications

Reading: Section 4.8

Exercises (4.8), page 334: 1, 5, 9, 13, 17, 19, 21, 22, 24, 27, 29, 30, 32, 34, 35, 39, 40

L32 Using Fundamental Identities

Reading: Section 5.1

Exercises (5.1), page 353: 1, 2, 3, 4, 5, 6, 8, 13, 15, 16, 17, 18, 21, 27, 29, 35, 40, 41, 44, 50, 53, 56, 57, 61, 71, 75

L33 Verifying Trigonometric Identities

Reading: Section 5.2

Exercises (5.2), page 360: 1, 2, 3, 4, 5, 6, 7, 8, 12, 15, 20, 21, 22, 26, 30, 32, 36, 38, 52, 55, 56, 63, 64, 67

L34 Solving Trigonometric Equations

Reading: Section 5.3

Exercises (5.3), page 370: 1, 2, 3, 4, 8, 11, 18, 20, 21, 24, 26, 36, 37, 40, 43, 47, 60, 64, 65, 67, 69, 71

L35 Sum and Difference Formulas

Reading: Section 5.4

Exercises (5.4), page 378: 1, 2, 3, 4, 5, 6, 8, 12, 18, 24, 27, 29, 33, 35, 39, 41, 47, 51, 53, 57, 59, 65 no calc, 69, 73, 81, 82

L36 Multiple-Angle and Product-to-Sum Formulas

Reading: Section 5.5

Exercises (5.5), page 388: 1, 2, 4, 5, 7, 9, 11, 15, 21, 25, 27, 35, 41, 45

L37 Law of Sines, Law of Cosines

Reading: Sections 6.1 and 6.2

Exercises (6.1), page 406: 5, 7, 9, 11, 13, 15, 17, 24, 25, 27, 30, 33, 34, 35, 36, 38, 40, 45, 48, 49, 50, 51, 52, 53

Exercises (6.2), page 413: 5, 7, 9, 11, 13, 15, 17, 25, 26, 29, 30, 37, 40, 43, 44, 45, 46, 49, 51, 52, 55, 58, 59