

Cover Sheet: Request 10840

MAC1147 Precalculus: Algebra and Trigonometry

Info

Process	Course Modify Ugrad/Pro
Status	Pending
Submitter	Knudson, Kevin P kknudson@ufl.edu
Created	3/7/2016 3:36:00 PM
Updated	3/10/2016 8:18:11 AM
Description	Credits: 4. College algebra, functions, coordinate geometry, exponential and logarithmic functions, and trigonometry. Fast-paced review of algebra and trigonometry to prepare for calculus. Assumes prior knowledge of intermediate algebra (Algebra 2) and trigonometry. (M)

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Mathematics 011613000	Center, Douglas A	This will help to place students in the appropriate course.	3/7/2016
Added S16-syllabus-calendar-1147-live.pdf					3/7/2016
College	Approved	CLAS - College of Liberal Arts and Sciences	Pharies, David A		3/10/2016
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			3/10/2016
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|Modify for request 10840

Info

Request: MAC1147 Precalculus: Algebra and Trigonometry

Submitter: Knudson, Kevin P kknudson@ufl.edu

Created: 3/7/2016 3:36:00 PM

Form version: 1

Responses

Current Prefix

Enter the current three letter code (e.g., POS, ATR, ENC).

Response:
MAC

Course Level

Select the current one digit code preceding the course number that indicates the course level at which the course is taught (e.g., 1=freshman, 2=sophomore, etc.).

Response:
1

Number

Enter the current three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles.

Response:
147

Lab Code

Enter the current lab code. This code indicates whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).

Response:
None

Course Title

Enter the current title of the course as it appears in the Academic Catalog.

Response:
Precalculus: Algebra and Trigonometry

Effective Term

Select the requested term that the course change(s) will first be implemented. Selecting "Earliest" will allow the change to be effective in the earliest term after SCNS approval. If a specific term and year are selected, this should reflect the department's expectations. Courses cannot be changed

retroactively, and therefore the actual effective term cannot be prior to SCNS approval, which must be obtained prior to the first day of classes for the effective term. SCNS approval typically requires at least 6 weeks after approval of the course change at UF.

Response:
Earliest Available

Effective Year

Select the requested year that the course change will first be implemented. See preceding item for further information.

Response:
Earliest Available

Requested Action

Indicate whether the change is for termination of the course or any other change. If the latter is selected, all of the following items must be completed for any requested change.

Response:
Other (selecting this option opens additional form fields below)

Change Course Prefix?

Response:
No

Change Course Level?

Note that a change in course level requires submission of a course syllabus.

Response:
No

Change Course Number?

Response:
No

Change Lab Code?

Note that a change in lab code requires submission of a course syllabus.

Response:

No

Change Course Title?

Response:
No

Change Transcript Title?

Response:
No

Change Credit Hours?

Note that a change in credit hours requires submission of a course syllabus.

Response:
No

Change Variable Credit?

Note that a change in variable credit status requires submission of a course syllabus.

Response:
No

Change S/U Only?

Response:
No

Change Contact Type?

Response:
No

Change Rotating Topic Designation?

Response:
No

Change Repeatable Credit?

Note that a change in repeatable credit status requires submission of a course syllabus.

Response:
No

Change Course Description?

Note that a change in course description requires submission of a course syllabus.

Response:
No

Change Prerequisites?

Response:
Yes

Current Prerequisites

Response:
none

Proposed Prerequisites

Response:
Completion of ALEKS placement exam prior to registration

Change Co-requisites?

Response:

No

Rationale

Response:

CLAS advising center has gathered data showing that students who do not take the placement exam have a high non-success rate (<C or W). Placement exam prior to advising/registration will assist in proper placement during Preview and preregistration.

UNIVERSITY OF FLORIDA

MAC 1147 - SPRING 2016

CALENDAR / SYLLABUS as of 1/3/16

The course home page is located in Canvas. Log in to Canvas at <https://lss.at.ufl.edu>.

You can send a message to one of your instructors by going to the inbox in Canvas (top right) and clicking on the pencil.

Course Coordinator

Sherry Tornwall

Office: LIT 374

Office Hours: M5, T4, W3, F3

Phone: 352-294-2336

Email: tornwall@ufl.edu (please use the Canvas)

Teaching Assistants

See Canvas MAC 1147 Course Materials tab for information.

TA _____

Office _____

Office Hours _____

Email: _____

SPRING 2016– Live MAC1147 Calendar (as of 1/2/16)

Test 1* (L 1- L8) January 28, Thursday, 8:30-10 pm
 Test 2* ((L 9- L17) February 23, Tuesday, 8:30-10 pm
 Test 3* ((L 18- L25) March 22, Tuesday, 8:30-10 pm
 Test 4* ((L 26- L33) April 12, Tuesday, 8:30-10 pm
 Cumulative Final* (L1-L36) Wednesday, April 27 3:00-5:00 pm

*See Canvas for test locations.

Monday	Tuesday	Wednesday	Thursday	Friday
Jan 4 No class.	5 First Tuesday discussion class.	6 L1	7 First Thursday discussion class.	8 L2
11 L3	12 DQ 1 (L1-L2)	13 L4	14 DQ 1 (L1-L3)	15 L5 WA Quiz 1 due 10 pm
18 Holiday-no class	19 DQ 2 (L3-L4)	20 L6	21 DQ 2 (L4-L5)	22 L7 Canvas quizzes due 10 pm WA Quiz 2 due 10 pm
25 L8	26 DQ 3 (L5-L7)	27 Review L1-L8	28 DQ 3 (L6-L8) Test 1 tonight	29 L9 WA Quiz 3 due 10 pm
Feb 1 L10	2 HW 1 (L1-L8)	3 L11	4 HW 1 (L1-L8)	5 L12 WA Quiz 4 due 10 pm
8 L13	9 DQ 4 (L9-L12)	10 L14	11 DQ 4 (L9-L13)	12 L15 WA Quiz 5 due 10 pm
15 L16	16 DQ 5 (L13-L15)	17 L17	18 DQ 5 (L14-L16)	19 Review L9-L17 WA Quiz 6 due 10 pm
22 L18	23 DQ 6 (L16-L17) Test 2 tonight	24 L19	25 HW 2 (L9-L17)	26 L20 WA Quiz 7 due 10 pm
29 Spring Break - no class	March 1 Spring Break - no class	2 Spring Break -no class	3 Spring Break - no class	4 Spring Break - no class
7 L21	8 HW 2 (L9-L17)	9 L22	10 DQ 6 (L18-L21) Self-eval due 10pm	11 L23 WA Quiz 8 due 10 pm
14 L24	15 DQ 7 (L18-L21)	16 L25	17 DQ 7 (L22-L24)	18 Review L18-25 WA Quiz 9 due 10 pm
21 L26	22 DQ 8 (L22-L25) Test 3 tonight	23 L27	24 HW 3 (L18-L25)	25 L28 WA Quiz 10 due 10 pm
28 L29	29 HW 3 (L18-L25)	30 L30	31 DQ 8 (L26-L29)	April 1 L31 WA Quiz 11 due 10 pm
4 L32	5 DQ 9 (L26-L29)	6 L33	7 DQ 9(L30-L32)	8* Review L26-33. WA Quiz 12 due 10 pm
11 L34	12 DQ 10 (L30-33) Test 4 tonight	13 L35	14 DQ 10 (L33-34)	15 L36 WA Quiz 13 due 10 pm
18 Review final L1-L36 WA bonus L35	19 No disc class. WA bonus L36	20 Review final L1-L36	21 No class Reading Day	22 No class Reading Day

Cumulative final is April 27, Wednesday 3:00 pm.

***April 8-last day to drop/withdraw.**

Final grades are available on ISIS on May 4.

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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. If you feel this course will be too fast paced, you can take it over two semesters by taking MAC 1140 Precalculus Algebra and then taking MAC1114 Trigonometry. You have until the end of add/drop (first week of the semester) to change your schedule.

A minimum grade of C (not C-) in MAC 1147 satisfies four hours of the general education requirement and also satisfies the pure math portion of the state Writing/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 for general education credit or the pure math portion of the Writing/Math requirement, and 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**, 9th edition, by Larson.
 - You may use either the e-book or a hard copy.
 - The solutions manual is NOT required.
- ❖ A valid WebAssign access code.
 - WebAssign provides a two-week grace period to use the online homework system before you must purchase an access code.
 - You should always use <https://www.webassign.net/ufl/login.html> to login to WebAssign (and then your Gatorlink login info as directed). Once at the site, click on the **login** on the **left** side.

There are several purchase options:

- ❖ Purchase the textbook and/or WebAssign access code from the book publisher at <http://www.cengagebrain.com/course/1-1Z09XE5>
 - Purchase the textbook and WebAssign access codes together for \$95 for the custom UF paperback book, access to the e-book, and a WebAssign access code; or
 - \$50 for access to the e-book and a WebAssign access code.

Note: At this site it lists WebAssign as the 1st edition. If you purchase the access code elsewhere I don't think they call it any edition. Also, when they send you the access code, they refer to it as a pin code. Yes, they make it confusing!
- ❖ Purchase the textbook and/or WebAssign access code at a bookstore or elsewhere.
 - Either the UF custom 9th edition or the complete 9th edition may be used. If you purchase a new textbook, a WebAssign access code might (or might not) come with it, so please be aware.
 - Purchase a WebAssign access code directly from WebAssign.
 - Prices may vary.
- ❖ Copies of the book and the solutions manual are also available for in-library use at the reserve desk at UF Smathers Library West and the Marston Science Library.

1d. E-Learning Canvas

Canvas is located at <https://lss.at.ufl.edu> ; use your Gatorlink username and password to login. You can find your grades, announcements, lecture outlines, free help information, etc., at this site. You are responsible for verifying that your grades are accurate. You have one week after a score has been posted to contact your TA if you believe there has been a grading or a recording error.

1e. Lectures

The lecture presentations are an important aspect of the learning process. The lecture provides the main presentation of the course material. You are responsible for learning the material missed due to an absence. After each lecture the completed notes will be available on the door of Little 374. Lecture outlines can be printed from Canvas. It is suggested that you read the book, attend lecture or watch the pre-taped video, do the corresponding book homework and the WebAssign Homework, and then take the WebAssign Quiz. The WebAssign quizzes and

WebAssign homework are generally due on Fridays (see WebAssign for actual dates), but it is recommended that you take them earlier.

You may print the lecture outlines which can be found on Canvas under Course Materials or you can purchase them at Target copy Center at 1412 West University Avenue for about \$18.

1f. Calculator Policy

A calculator may be used on WebAssign homeworks and WebAssign quizzes, but NOT on discussion quizzes and exams.

1g. Discussion Sections

Discussion sections meet once a week (either Tuesday or Thursday, depending on the section in which you are registered) give you a valuable opportunity for open discussion of the lecture material and assigned problems in a smaller class setting. A significant portion of the points that determine your grade are earned in discussion class. If necessary, twice during the semester you may attend a different period of your TA's discussion class. Go to www.math.ufl.edu/courses to see when and where your TA teaches.

Your main resource person is your discussion leader, a teaching assistant (TA) in the mathematics department. He or she is available during office hours (or by appointment) to answer your questions about the course material. Your TA is responsible for grading/recording your discussion quizzes, homework, free response on tests, and lecture participations. You must retain all returned papers in case of any discrepancy with your course grade. As mentioned above, **you should check Canvas regularly and consult with your discussion leader if you have any questions about recorded grades. All grade concerns must be taken care of within one week of receiving the score.** Your grade is subject to being raised or lowered if there is a recording error, computational error, bubbling error, "padding" error, etc.

If you have concerns about your discussion class which cannot be handled by your TA, please contact the course coordinator, Mrs. Tornwall, in Little 374, tornwall@ufl.edu (use Canvas email).

1h. Help (free)

- ◆ Your main resource person is your teaching assistant (TA) in the mathematics department. He or she is available during office hours to answer your questions about the course material. You may also contact the course coordinator, Mrs. Tornwall, during her office hours for help or **any** of the MAC 1147 TAs.

- ◆ **In addition to attending your discussion section regularly and visiting any MAC1147 discussion leader, lecturer, or the course coordinator**, during their office hours, the following aids are available.
 - ◆ The Teaching Center Math Lab, located at SE Broward Hall, offers free informal tutoring. You may want to attend different hours to find the tutors with whom you feel most comfortable. Go to www.teachingcenter.ufl.edu to find their hours. You can also request free one-on-one tutoring.
 - ◆ Supplemental Instructor (SI) is provided by the Teaching Center. Check your tab bar on Canvas's home page for a link to the SI.
 - ◆ Solutions, interactivity, videos, and tutorial help is available for free at www.LarsonPrecalculus.com.
- ◆ Textbooks and solutions manuals are located at the reserve desk at the Marston Science Library and Smathers Library West.
- ◆ Private Tutors: If after availing yourself of these aids, you feel you need more help, you may obtain a list of qualified tutors for hire at www.math.ufl.edu. Search "tutors".
- ◆ The Counseling Center has some informative information on developing math confidence. Go to <http://www.counseling.ufl.edu/cwc/Developing-Math-Confidence.aspx> for information on math confidence and information on joining the Academic Confidence Group
- ◆ Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

1i. Success

Success in MAC 1147 depends largely on your attitude and effort. Keeping up with the material 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 lecture. **You should expect to spend at least 12 hours per week working on this course – four in class hours and eight hours outside of class.**

It can also be very helpful to study with a group. This type of cooperative learning is encouraged, but be sure it leads to a better conceptual understanding. **You must be able to work through the problems on your own.** Even if you work together, **each student must turn in his or her own work, not a copied solution, on any collected individual assignments.**

1j. Students with Disabilities

Students requesting classroom accommodation must first register with the Disability Resource Center (DRC). The DRC will provide documentation to the student who must then provide this documentation to the course coordinator, Mrs. Tornwall, Little 374, when requesting accommodation.

1k. Academic Honesty

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

2. Testing

The first four exams are at 8:30 p.m. See the course calendar for the dates. The cumulative final is during finals week. Room locations will be posted on Canvas prior to the exams

- ◆ Students are responsible for material covered in the lecture notes, including practice problems at the end of some lectures, all assigned book homework problems, and all assigned WebAssign material.
- ◆ There are sample exams under the Modules link on Canvas. Also, sample exams are available from the Teaching Center one week prior to the exam.
- ◆ You should bring to each test only* the following:
 - Your UF Gator One Card.

- Soft lead pencils.
- Knowledge of your section number.

*It is suggested that you do not bring anything of value to the test since you are not allowed to take items such as backpacks to your seat.

- ◆ **NO CALCULATORS ARE PERMITTED.** All electronic devices must be put away. This includes phones. Scratch paper will be provided.
- ◆ The Test Form Code, as well as **your UF ID**, and name must be encoded correctly or you will **lose points**. You must also take the test in your assigned test location or you will lose points on your test.
- ◆ No one will be admitted to the test 30 minutes after the starting time of the test. No one will be permitted to leave the test until 30 minutes after the stated start time.

3. Grading

3a. Course Grade

The course is based on 500 points accumulated as follows:

Web Tour (in Canvas)	1 point (0.2%)
Calendar and Syllabus Quiz (in Canvas)	2 points (0.4%)
Contract (in Canvas)	1 point (0.2%)
Self-evaluation (in Canvas)	1 point (0.2%)
Book HWs (3@10 pts, for a max of 20 pts)	20 points (4%)
Discussion Quizzes (best 8 of 10 @ 10 pts)	80 points (16%)
Online WA HWs (34 @ 1 pt, max. of 30)	30 points (6%)
Online WA Quizzes (best 10 of 13 @ 2 pts)	20 points (4%)
Exams (best 3 of 4 @ 80 pts)	240 points (48%)
Cumulative Final Exam	105 points (21%)

Add your bonus points, then use the scale below to determine your final letter grade. The **course grade is determined by the number of points** you have, **not by the percentage**, and will be strictly enforced.

- A = 450-500 points (90%)
- A - = 435-449 points (87%)
- B+ = 420-434 points (84%)
- B = 400-419 points (80%)

B - = 385-399 points (77%)

C+ = 370-384 points (74%)

C = 350-369 points (70%)

C- = 335-349 points (67%)

D+ = 320-334 points (64%)

D = 300-319 points (60%)

D- = 285-299 points (57%)

E = below 285 points

For information on dropping courses and withdrawals go to

<https://catalog.ufl.edu/ugrad/current/regulations/info/drops.aspx#drop>

For information about UF grades and grading policies go to

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

3b. Course Introduction Quizzes

The Web Tour Quiz, the Calendar/Syllabus Quiz, and the Contract are to make sure you understand what is expected of you in this course. You will find these assignments on Canvas under Assignments. They are due at the beginning of the semester.

3c. Self-evaluation

The Self-evaluation which is found in Canvas is after Exam 2. Its purpose is to let you know your approximate standing in the class. See the calendar for the due date.

3d. Textbook Homework

The text assignments on page 13 represent the minimum number of problems you should do in each section and serve as a basis for your questions in your discussion section. Homework must be done neatly and work must be shown for credit. You do not need to copy the problem from the book. Homework will be checked for completeness and a few problems will be graded for accuracy. The work should be your own and not copied from the solutions manual. Homework will be collected three times during the semester. See the calendar for collection dates. Some homework problems suggest the use of a graphing calculator. These are designed to help you visualize important concepts and to reinforce the mathematical processes involved. The use of a calculator when doing homework is not required.

Calculators are not permitted on quizzes or tests.

3e. Discussion Class Quizzes

These will be administered in the discussion section the last 10-15 minutes of class by your discussion leader. Quizzes will be based on the previous lectures and homework assignments. See the calendar for more information. If you feel there is a grading error or posting error on Canvas, you must discuss it with your TA within one week. No aids may be used on the discussion quiz.

3f. WebAssign Homeworks and Quizzes

If you purchased a new book, the WebAssign access code probably came with the book. If you did not purchase a new book then you will need to purchase the access code. See section 1c for information on purchasing the access code.

To access WebAssign go to <http://webassign.net/ufl/login.html> (You must use this full url.) and use your Gatorlink login and password. Click on the login on the **left** side. If you have previously purchased the access code you will now enter it. If you have not yet purchased the access code, you can use the free grace period for the first few weeks.

You must score a minimum of 70% on the WebAssign Homeworks before you can take the corresponding WebAssign Quiz. You have 10 attempts and unlimited time on each WebAssign Homework. You have three attempts and one hour on each WebAssign Quiz. The WebAssign Homeworks and Quizzes are generally due by 10:00 p.m. on Fridays. See WebAssign for the specific due dates.

DO NOT wait until the last minute to take a quiz, since if you encounter a computer glitch or if WebAssign is down, YOU will be out of luck!

The best attempt for each WebAssign quiz and homework is the score that is counted. The WebAssign homeworks and quizzes are open-book and open-note. You may have someone help you with the WebAssign homeworks, but NOT with the quizzes.

If you feel your answer is correct, but WebAssign marks it wrong, see your TA during office hours or email your TA. You have one week from the due date to take care of this.

For questions on how to use WebAssign contact WebAssign Support or post on the Canvas Discussion board for help from your classmates. Often just using a different browser solves the problem.

3g. Lecture Participation and/or Video Bonus Points

There are eight bonus points available for either attending lecture or watching the pre-taped videos by the due date. You may choose to earn your bonus points by attending the live lectures, watching the pre-taped videos, or a combination of the two. However, you may earn a maximum of only eight lecture participation/video bonus points.

Lecture Participation points will be given in lecture four times during the semester. They are worth two points which will be added to your total points. You may use your book, your notes, work in groups, or get help from the lecturer. To receive credit you must put your TA's name and your section number on your paper. There are no make-ups.

Video bonus points are earned by watching the videos and answering the check point questions before the due date. The bonus questions are found on Canvas under Assignments. The due dates are 10 pm the day of the live lecture.

3h. Make-up Policies

All make-up work must be completed by Monday, April 19 at noon.

- ◆ **Exams** - If you have a conflict due to a UF sponsored event or an assembly exam in another course, you need to bring your documentation to Mrs. Tornwall in Little 374 at least one week (otherwise 5 point penalty) before the exam to sign up for the make-up which will be given within one week of the test date.

If you miss for any other reason you must notify Mrs. Tornwall within a week of the exam (otherwise 5 point penalty). To be eligible for this make-up you must receive at least half of the lecture participation/or video bonus points by the end of the semester. This make-up will be given at the end of the semester.

- ◆ There is a 10 point penalty for missing the final due to negligence.

If other classes are scheduled during the exam time, University policy states that the assembly exam takes precedence over the evening class and the evening class instructor must provide make-up work and cannot penalize students who miss because of an assembly exam.

- ◆ **Discussion quizzes** - There are no make-ups , unless,
 - a) you are participating in a UF sponsored event, for which you must bring your documentation at least one week prior to Mrs. Tornwall.
 - b) you miss at least three discussion quizzes for which you have valid, documentable reasons for your absences. You will be allowed to make up the excused absences that are in excess of two. To be eligible for this make-up you must receive at least half of the lecture participation/or video bonus points by the end of the semester. Bring your documentation to Mrs. Tornwall in Little 374 within one week of your third discussion quiz absence.
 - c) you miss because of a religious holiday. You must notify Mrs. Tornwall within the first three weeks of class if you will be missing discussion class **due to a religious holiday**.
 - d) you miss because of a court-ordered obligation – see Mrs. Tornwall.
- ◆ **Homework collection** – There are no make-ups, unless you are participating in a UF sponsored event. In this case you must bring your HW to your TA prior to the collection day along with your documentation.

If you are not able to be in discussion class that day, you can turn your HW in early to your TA or have someone take it to class for you. You must turn in ALL the HW from the lectures that were on the test. There is a two-point penalty for not being in discussion class.
- ◆ **WebAssign, Lecture Participation** - There are no make-ups.

3i. Incomplete

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/>. If you meet the criteria you must contact Mrs. Tornwall before finals week to be considered for an I. An I only allows you to make up your incomplete work, not redo your work.

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. Textbook Homework Assignments

You should read the textbook sections covered in each lecture before coming to lecture. 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 TA (or the course coordinator during office hours).

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

L1 Real Numbers

Reading: Student Guide, Appendix A.1

Exercises (A.1), page A11: 6, 7, 9, 12, 16, 17, 19, 25, 27, 35, 39, 40, 43, 50, 53, 55, 61, 65, 72, 73, 80

L2 Exponents and Radicals

Reading: Appendix A.2

Exercises (A.2), page A23: 1, 4, 6, 7, 8, 13, 14, 19, 20, 26, 29, 41, 44, 50, 52, 56, 58, 60, 62, 64, 65, 72, 74, 75, 78, 81, 84

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, 15, 19, 21, 23, 33, 35, 37, 39, 43, 45, 47, 52, 56, 61, 69, 76, 79, 89, 94, 103, 104, 107

L4 Rational Expressions

Reading: Appendix A.4

Exercises (A.4), page A42: 1, 2, 3, 4, 7, 12, 16, 22, 30, 35, 39, 44, 51, 54, 56, 60, 62, 66, 70, 78, 79, 81, 82

L5 Solving Equations

Reading: Appendix A.5

Exercises (A.5), page A56: 1, 3, 4, 10, 14, 19, 21, 26, 34, 38, 40, 42, 44, 50, 63, 70, 76, 78, 80, 84, 85, 86, 90, 92, 95, 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. $\sqrt{x} - (3)^4\sqrt{x} - 4 = 0$

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, 7, 9, 15, 28, 38, 40, 53, 54, 58, 69, 76, 78, 81, 82, 83, 85, 87, 89, 91, 94, 95, 98, 102, 103, 109

Exercises (A.7), page A72: 15, 16, 22, 26, 31, 33, 43, 49, 55, 64, 67, 72

L7 Rectangular Coordinates and Graphs

Reading: Sections 1.1 and 1.2

Exercises (1.1), page 8: 1, 2, 3, 4, 14, 24, 32, 45, 51, 54, 56, 58

Note: The correct answer for 58(a) is $(x_0, -y_0)$.

Exercises (1.2), page 19: 3, 4, 5, 10, 26, 28, 29, 31, 34, 38, 43, 47, 48, 71, 74, 76, 79, 90

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: 1, 2, 3, 4, 5, 6, 9, 11, 14, 19, 23, 30, 39, 45, 51, 53, 55, 65, 67, 70, 74, 87, 89, 90, 91, 93, 94, 96, 99, 101, 102, 103, 104, 105, 112

Exercises (1.4), page 44: 1, 2, 4, 7, 11, 12, 24, 29, 32, 36, 40, 47, 48, 57, 58, 59, 61, 63, 64, 68, 71, 73, 78, 82, 85, 86, 88, 89, 90, 93

L9 Analyzing Graphs of Functions

Reading: Section 1.5

Exercises (1.5), page 56: 1, 2, 3, 4, 5, 6, 7, 9, 11, 13, 18, 20, 23, 33, 37, 55, 56, 62, 66, 71, 72, 73, 83, 85, 88a, 93, 94, 95, 96, 98

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, 10, 12, 35, 36, 39, 43, 47, 48, 49, 50

Exercises (1.7), page 72: 1, 2, 3, 4, 5, 9, 11, 13, 14, 15, 16, 17, 19, 20, 21, 23, 25, 27, 29, 31, 33, 39, 47, 50, 51, 53, 55, 57, 71, 73, 74, 75, 76, 78, 80

L11 Combinations of Functions

Reading: Section 1.8

Exercises (1.8), page 81: 3, 9, 13, 17, 18, 23, 25, 31, 34, 35, 37, 42, 43, 45, 51, 55, 59, 60, 61

L12 Inverse Functions

Reading: Section 1.9

Exercises (1.9), page 90: 1, 2, 3, 4, 5, 6, 14, 19, 21, 27, 29, 33, 35, 37, 39, 45, 49, 50, 57, 61, 63, 64, 65, 70, 72, 73, 76, 79, 84, 86, 88, 92, 93, 95, 96, 97, 101

L13 Quadratic Functions

Reading: Section 2.1

Exercises (2.1), page 120: 3, 5, 6, 7, 9, 11, 15, 22, 32, 43, 44, 48, 50, 58, 68, 74, 75, 76, 77, 80, 83, 87, 88, 89, 90, 92

L14 Polynomial Functions of Higher Degree and Division of Polynomials

Reading: Sections 2.2 and 2.3

Exercises (2.2), page 133: 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 21, 23, 27, 29, 61, 63, 65, 69, 71, 76, 78, 80, 82, 85, 87, 97a, b, 100a, b, 105, 107, 108, 109, 110, 111, 112, 113, 115

Exercises (2.3), page 144: 2, 3, 4, 5, 6, 8, 12, 24, 34, 38, 48, 55, 60, 67, 68, 84, 87, 90, 92, 95, 97

L15 Complex Numbers

Reading: Section 2.4

Exercises (2.4), page 152: 1, 2, 3, 4, 5, 6, 7, 9, 13, 17, 19, 25, 27, 36, 38, 42, 45, 47, 49, 51, 56, 60, 64, 65, 67, 69, 72, 81, 85, 87, 93, 94, 96, 97, 99

L16 Zeros of Polynomial Functions

Reading: Sections 2.5 and 2.6

Exercises (2.5), page 164: 2, 3, 4, 5, 6, 9, 11, 13, 15, 17, 20, 26, 30, 33, 46, 48, 50, 52, 56, 62, 63, 78, 99, 104, 113, 115, 116, 117, 118, 119, 120, 121, 122, 123, 128, 130, 131

Exercises (2.6), page 177: 2, 3, 7

L17 Rational Functions

Reading: Section 2.6

Exercises (2.6), page 177: 10, 13, 15, 21, 28, 29, 31, 34, 35, 38, 41, 42, 43, 44, 67, 73
a, b, 78, 80, 81, 82

L18 Nonlinear Inequalities

Reading: Section 2.7

Exercises (2.7), page 187: 1, 2, 3, 4, 7, 13, 15, 24, 28, 30, 35, 36, 37, 38, 46, 52, 53, 66,
74, 76, 78, 90

L19 Linear and Nonlinear Systems of Equations

Reading: Sections 7.1 and 7.2

Exercises (7.1), page 473: 3, 4, 8, 10, 12, 14, 16, 20, 23, 26, 30, 32, 38, 42, 56, 59, 66,
70, 71, 72

Exercises (7.2), page 484: 12, 16, 21, 22, 30, 31, 32, 33, 34, 42, 44, 49 a, c, 52, 62

L20 Exponential Functions

Reading: Section 3.1

Exercises (3.1): page 208: 5, 6, 13, 14, 15, 16, 17-22 all without a calculator, 23-26
all, 39-44 all without a calculator, 52, 54, 57 use calculator, 63 use calc., 65 use calc.,
72, 73, 74, 76, 78, 79, 84, 85

L21 Logarithmic Functions

Reading: Section 3.2

Exercises (3.2), page 218: 1-7 all, 9, 11, 13, 15, 17, 19, 25-28 all, 30, 32, 33, 37-40 all,
43, 45, 46, 48, 49, 52, 53, 56, 61, 63, 66, 68, 74, 76, 82, 83, 84, 88

L22 Properties of Logarithms

Reading: Section 3.3

Exercises (3.3), page 225: 4, 5, 6, 7, 15, 16, 18, 19, 21-37 all, 39, 41, 42, 43, 45, 49, 52,
54, 56, 57, 59, 60, 62, 64, 68, 73, 74, 75, 76, 78, 80, 84

L23 Exponential and Logarithmic Equations

Reading: Section 3.4

Exercises (3.4), page 235: 1, 3, 5, 7-17 all, 20, 22, 24, 26, 32, 36-62 even, 72-82 even, 87-90 all

L24 Exponential and Logarithmic Models

Reading: Section 3.5

Exercises (3.5), page 245: 1, 5, 8, 10, 14, 16, 21, 24, 26, 33, 34, 36, 44, 57

L25 Radian and Degree Measure

Reading: Section 4.1

Exercises (4.1), page 269: 1-7 all, 9, 12, 14, 16, 17-31 odd, 35, 38, 39, 42, 44, 52, 54, 55, 56, 57, 61, 62, 64, 66, 69-73 all

L26 Trigonometric Functions and the Unit Circle

Reading: Section 4.2

Exercises (4.2), page 277: 1-5 all, 8, 9-13 all, 18, 19, 20, 22, 23, 29, 32, 33, 35, 36, 38, 40, 49, 53, 54, 60, 61

L27 Right Triangle Trigonometry and Trigonometric Functions of Any Angle

Reading: Sections 4.3 and 4.4

Exercises (4.3), page 286: 1-5 all, 7, 11, 21, 23, 25, 27, 29, 43, 44, 50, 52, 54, 56, 57, 59, 61, 63, 64, 66, 67, 68, 69, 70, 71, 72, 77, 78-85 all, 88

Exercises (4.4), page 296: 1-9 all, 11, 19, 20, 21, 22, 24, 28, 30, 31, 34, 36, 37, 39, 41, 43, 46, 48, 49, 51, 55, 56, 63, 66, 68, 70, 74, 91, 96, 97, 103, 106

L28 Graphs of Sine and Cosine Functions

Reading: Section 4.5

Exercises (4.5), page 306: 1-5 all, 7, 18, 19, 21, 23, 25, 27, 29, 32, 35, 37, 43, 44, 48, 59, 61, 73, 76, 80, 83, 86, 88, 97, 102

L29 Graphs of Other Trigonometric Functions

Reading: Section 4.6

Exercises (4.6), page 317: 1, 2, 3, 5-14 all, 17, 21, 24, 28, 34, 37, 49, 62, 63, 85, 86, 87, 92

L30 Inverse Trigonometric Functions

Reading: Section 4.7

Exercises (4.7), page 326: 1, 2, 3, 4, 5-17 odd, 19 no calc, 20 no calc, 39, 40, 42, 46, 47-52 all, 54, 56, 58, 66, 70, 72, 74, 78, 80, 81, 83, 86, 97-102 all, 104a, 104b use calc, 108a, 108b use calc, 110-114 all

L31 Applications

Reading: Section 4.8

Exercises (4.8), page 336: 1, 5, 10, 16, 20, 22, 24, 26, 29, 33, 34, 36, 37, 40, 42, 46

L32 Using Fundamental Identities

Reading: Section 5.1

Exercises (5.1), page 355: 1-6 all, 8, 9, 10, 14, 15-20 all, 21-45 odd, 49, 53, 56, 57, 61, 63, 69, 71

L33 Verifying Trigonometric Identities

Reading: Section 5.2

Exercises (5.2), page 362: 1-8 all, 13, 16, 19, 27, 29, 33, 39, 41, 47, 59, 61, 64, 67, 68, 69, 71

L34 Solving Trigonometric Equations

Reading: Section 5.3

Exercises (5.3), page 371: 3, 4, 5, 9, 11, 13, 17, 19, 23, 27-45 odd, 63, 65, 73, 85, 87

L35 Sum and Difference Formulas

Reading: Section 5.4

Exercises (5.4), page 379: 1-7 all, 9, 11, 17, 27-41 odd, 45, 47, 53, 57, 63, 65, 69, 73, 81-84 all, 86

L36 Multiple-Angle and Product-to-Sum Formulas

Reading: Section 5.5

Exercises (5.5), page 389: 1-7 all, 9-27 odd, 33, 37, 41, 45, 65, 68, 69