UF ONLINE
MAC 1114
SYLLABUS

Summer B 2017 (updated 06/23/17)

The course home page is located in CANVAS. Log in at https://lss.at.ufl.edu.
You can send a message to the instructors below emailing directly or by
going to your inbox in CANVAS and selecting "Compose a new message".

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Table of Contents

1. Introduction

1a. Course Content

MAC 1114 is designed as a review of trigonometry to prepare for Analytic Geometry and Calculus, MAC 2311.   It can be combined with MAC 1140, Precalculus Algebra, to give credit for precalculus as required for some majors. Note that you can also meet that requirement by taking MAC 1147, which combines the material from MAC 1140 and MAC 1114 in a fast paced, single semester course.

A minimum grade of C (not C-) in MAC 1114 satisfies two hours of the University of Florida general education mathematics 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), along with a grade of C or higher in MAC 1140, can advance to MAC 2311, Calculus I (for engineers and scientists).

MAC 1114 does **not** satisfy the state core mathematics requirement. Students taking this course for general education credit and who do not need precalculus for their major or as preparation for calculus, might consider the math courses MGF 1106 or MAC 1105 instead. MAC 1105 does satisfy the state core mathematics requirement. For more information on math courses and math advisors, go to http://www.math.ufl.edu/.

This is an ONLINE VERSION of MAC 1114—all content is delivered online. Students view 17 lectures in the course management system CANVAS, and complete online homework and quizzes using Webassign software. Students are encouraged to post questions and answers on the course discussion board in CANVAS. Three semester exams and the final are posted in Webassign and administered through ProctorU.

1b. Prerequisites

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

MAC 1114 begins with a short review of some basic concepts of functions (Chapter 1). **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 login to Webassign through CANVAS. You can also use https://www.webassign.net/ufl/login.html to login to WebAssign (and then your Gatorlink login info as directed). Be sure to bookmark this link!

There are several purchase options:

♦ Purchase the textbook and WebAssign access codes together directly from the publisher at http://www.cengagebrain.com/course/1615664

(This page says MAC 1147, but the book and access codes are the same).

   o Option 1 (around $50): access to the e-book and a WebAssign access code.

   o Option 2 (around $110): custom UF paperback book, along with access to the e-book and a WebAssign access code

♦ Purchase the textbook at the UF bookstore or elsewhere.

   o 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 that you may need to purchase a separate access code.

   o Prices may vary.

♦ You may also purchase a WebAssign access code directly from WebAssign. This may cost more than using the direct link from Cengage.

Computer access and requirements: It is recommended that you use a computer, rather than your phone or a tablet to complete assignments, since there may be compatibility issues with CANVAS and Webassign. Safari is not recommended. If you are having trouble viewing these programs you may need to clear your browser history and cookies or change browsers. You should take your exams in ProctorU using a wired connection if at all possible.

1d. CANVAS

You will navigate our course using the course management system CANVAS, located at https://lss.at.ufl.edu. Use your Gatorlink username and password to login. Lecture videos, check point quizzes, grades, announcements, lecture outlines, and other information are posted in CANVAS.

You should check CANVAS regularly and consult with your instructor if you have any questions about recorded grades. You have one week after a grade is posted either in CANVAS or Webassign to resolve any grade concerns by contacting your course instructor. We will not consider these grading disputes at the end of the semester. Your grade is subject to being raised or lowered if there is a recording error, computational error, bubbling error, "padding" error, etc.

1e. Lectures

Viewing lecture presentations is an important aspect of the learning process. The lecture provides the main presentation of the course material. Each lecture consists of several videos for a total of approximately 1 hour. Lecture outlines that you can fill in as you watch the videos can be printed from CANVAS. We suggest that you read the book section(s), watch the lecture, work the checkpoint problems as they come up in the lecture, do the WebAssign Homework and textbook problems, and then take the WebAssign Quiz, in that order. **In particular, you should study the videos and corresponding textbook sections in order to understand the concepts and problem solving techniques before attempting the homework and taking a quiz**. You may work ahead; the WebAssign Quizzes are due as shown in the course calendar, but you may watch the videos and take the quiz as soon as they are posted.

You may contact your instructors or post questions on the course discussion board if you have questions about trigonometry. Be sure to take advantage of live and online office hours! The Broward Teaching Center at UF, teachingcenter.ufl.edu also provides open tutoring hours and online support and is a valuable resource.

1f. Calculator Policy

You may use a basic non-scientific calculator on homework, quizzes, check-ups, and exams. A basic non-scientific calculator can add, subtract, multiply, and divide, as well as having 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 which can also do trigonometry, logarithms and exponentials as well as more advanced functions. **You may not use a scientific calculator on exams, and any violations of this policy will be considered cheating.**

Remember that trigonometry skills are not learned through a calculator. Finding trig values and other computations by hand reinforces the fundamental concepts of the course which will be emphasized on exams. In future math courses you may not be allowed to use a calculator on tests. For example, MAC 2311, Calculus and Analytic Geometry at UF, currently allows no calculators for exams or quizzes.

1g. Help

Your instructor is available during office hours (or by appointment) on campus, and by email or arranged video conference, to answer your questions about the course material.

For technical issues accessing CANVAS or the course videos, please contact the UF computing help desk, 352-392-HELP. For questions about Webassign, contact the Webassign support team, (800) 955-8275, or click on the help button at the top of each webassign page. You may also contact your instructors, but we are not IT experts!

1h. Success

Success in MAC 1114 depends largely on your attitude and effort. Keeping up with the lecture videos is critical. In a six week semester especially you must work daily on the material as opposed to trying to cover it in one time setting. We recommend that you

print out the lecture outline before each lecture and fill it in as you watch the video. However, it is not effective to sit and copy notes without following the thought processes involved in the lecture. The checkpoint problems are designed to encourage you to try out the new concepts and skills immediately to be sure you understand the material.

Be aware that much of the learning of mathematics at the university level takes place outside of the lecture presentations. It is important to spend 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. As mentioned above, you should also review the concepts and skills presented in each lecture **before** you attempt homework problems **It is critical that you do not fall behind in this course. In a concentrated six week semester, you should expect to spend at least 15 hours per week working on this course. Students who actively participate have greater success.**

USE THE RESOURCES AVAILABLE AS YOU STUDY! Ask questions either in office hours, on the discussion board or by email, or through the Broward Teaching Center. Do not let misunderstandings go unanswered. We are all committed to student success but you must take the initiative to get help in time.

We recommend studying with others, and an important resource to facilitate communication in an online course is the MAC 1114 discussion board in CANVAS. You should check the discussion board regularly, and we urge you to post questions and answers for fellow students. The effort of asking questions and communicating ideas clearly, as well as the practice of writing solutions, are effective tools in helping you better understand trigonometry. The instructors for MAC 1114 will check the discussion board regularly to answer student questions and to post selected problem solutions.

1i. Students with Disabilities

Students requesting classroom accommodation must first register with the Dean of Students Office Disability Resource Center (DRC), [dso.ufl.edu/drc/](dso.ufl.edu/drc/). This office will provide a documentation letter to the student to present to the course instructor. This must be done as early as possible in the semester so that there is adequate time to make proper accommodations.

1j. 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).

2. Testing

2a. General Policies

You must register with ProctorU for each exam at least 4 days prior to the exam date as listed on the course calendar. It is highly recommended that you reserve time slots for all of your exams early in the semester in order to guarantee you can take your tests at the most convenient time.

Students are responsible for material covered in the lecture notes, including all assigned book homework problems and WebAssign material. There is no partial credit unless a question has multiple parts that can be graded separately.

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 CELL PHONES, NO NOTES, NO BOOKS, NO OUTSIDE HELP!

2b. Semester Exams

The first three exams each consist of 15 questions and have a 90-minute time limit. You must sign up with ProctorU for a 100 minute time slot starting at 2PM and ending by 11:59PM (so that the final starting time is 10:15PM) on the day of the exam. Each exam counts as 80 points of your course grade.

2c. Final Exam

The final exam consists of 18 questions and has a 2-hour time limit. You must sign up for a 130 minute time slot starting at 2PM on the exam date listed in the course calendar. The last available start time is 10 PM.

IMPORTANT: The final exam is comprehensive and required of all students. The score is critical to your final grade in two ways:

1) The final exam counts as 100 points (20 %) of your course grade.

2) **The final exam can be used to improve your grade on one of the three semester exams. That is, if your final exam grade has a higher percent score than the lowest of your three semester exam scores, its percent score prorated to 80 points will replace that lowest test.** For example, if your lowest semester exam score is 56 points (70%) and you earn 80 points (80%) on the final, the exam score of 56 will be replaced by 64 (80% of 80 points) in the gradebook. If the final exam score is lower, however, the original semester test score will remain. Your final exam score cannot be adjusted; your score for the final exam will not be replaced by any other score.

3. Grading

3a. Course Grade

The course grade is based on 500 points accumulated as follows:

Welcome Quiz (in CANVAS)	2 points (0.4%)
Self-evaluation (in CANVAS)	1 point (0.2%)
Lecture Checkpoints (in CANVAS)	34 points (6.8%)
WebAssign Homework	45 points (9%)
WebAssign Quizzes (best 9 of 10, 4 points each)	36 points (7.2%)
Checkups (in WebAssign)	42 points (8.4%)
Midterm Exams (in WebAssign; 3 at 80 pts. each)	240 points (48%)
Cumulative Final Exam (in WebAssign)	100 points (20%)

In addition, extra credit may be earned from class participation including discussion board posts.

Your course grade is determined by your final point total and percentage according to the following scale, with cutoffs strictly enforced (we do round up totals within 0.5 points – not percent--to the next cutoff):

Grade	Points
A	450—500 (90.0% and above)
A−	435—449 (87.0% to 89.9%)
B+	420—434 (84.0% to 86.9%)
B	400—419 (80.0% to 83.9%)
B−	385—399 (77.0% to 79.9%)
C+	370—384 (74.0% to 76.9%)
C	350—369 (70.0% to 73.9%)
C−*	335—349 (67.0% to 69.9%)
D+	320—334 (64.0% to 66.9%)
D	300—319 (60.0% to 63.9%)
D−	285—299 (57.0% to 59.9%)
E	0—284 (56.9% and below)

*NOTE: A grade of C− DOES NOT give General Education credit!

 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

3b. Welcome Quiz

The Welcome Quiz is designed to make sure that you understand the course expectations and procedures. You will find this assignment on CANVAS. It is due at the beginning of the semester; see the calendar for the due date.

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 as you are watching the video and write your answer down (a, b, c, d, or e), since you will need to enter your answers later in CANVAS. Checkpoint problems are due by the lecture due date (see the calendar).

3e. Textbook Homework

Textbook exercises for each lecture are posted at the end of this syllabus. These complement the online homework and provide additional practice. 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 is not required, though a scientific calculator may be required to complete certain problems. The textbook homework is not graded, but you are encouraged to ask questions about it as necessary.

3f. WebAssign Homeworks and Quizzes

You have 10 attempts and unlimited time on each WebAssign Homework. There are 3 attempts and one hour on each WebAssign Quiz. See the calendar for the specific due dates. You will not know if your quiz answers are correct until after the due date, just like a quiz you would take in class. The extra attempts are to give you a chance to look over your work and correct errors. **DO NOT wait until the last minute to take a quiz, since if you encounter a computer glitch or if WebAssign is down, you may be out of luck!** We count the best attempt for each WebAssign assignment (quiz or homework). The WebAssign Homeworks and Quizzes are open-book and open-note. **But remember, on the exams you will have to work problems on your own without any assistance**.

3g. Checkups

The Checkups (in WebAssign) are designed to give feedback on your understanding of the course material prior to the corresponding exam. They will be like a longer WebAssign Quiz. See the calendar for the due dates. There are no time extensions.

3h. Bonus Points and Discussion Board

We encourage you to visit the MAC 1114 Discussion Board regularly to ask and answer questions about course material and homework. Your instructors will also check and post on the discussion board. While we encourage participation at any time, we find it

especially useful in preparing for exams. You can earn extra credit by posting at least one question and responding to another students' question on the discussion board set up for each exam (up to 6 points overall). Additional points may be earned by submitting worked out solutions to review problems (to be determined).

3i. Make-up Policy and Extensions

ALL WORK MUST BE COMPLETED BEFORE THE FINAL EXAM (except for the Final Exam).

♦ Extensions: In a shortened six week semester you must work every day to keep up with assignments, and if possible to work ahead so that you will have some breathing room. However, if you do fall behind, you will be able to submit assignments in CANVAS (except for bonus) up to 24 hours after the due date and still receive full credit. You can automatically request up to a 48-hour extension within the Webassign program for homework and quizzes, **but not checkups and exams**. Please note that an extension does not grant you any additional time to take a timed assignment once it is started. Also, with several assignments due in a week, using extensions can cause you to fall even further behind. They are only meant to be used in the case of an emergency. Please contact your instructors if you are having difficulties.

♦ Make-up Checkups and Exams: There are no make-ups for the checkups**. If illness or other extenuating circumstances cause you to miss an exam, contact your instructors as soon as possible and no later than 24 hours after the test for approval to reschedule the exam.**

♦ Homeworks and Quizzes: There are no make-ups, since one quiz is dropped and it is possible to get assistance with homework before you use up your ten attempts.

EXCEPTION: If you must miss class for an extended time due to illness or a family emergency, contact your course instructor to discuss extension of due dates. You must provide documentation.

3j. 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 work already graded or to retake the course**. You must request an I before the final exam for departmental approval, and must provide documentation of extenuating circumstances.

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.

5. Textbook Homework Assignments

You should read the textbook sections covered in each lecture before viewing the video. 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 watching the next lecture video, since the material in each lecture builds on previous concepts.
These problems are not collected, but should be worked along with online homework to build skills and understanding.

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

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

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

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
Reading: Section 4.7

L30 Inverse Trigonometric Functions

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

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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
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
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