Math 115 Syllabus Spring 2015

COURSE TITLE: PreCalculus Algebra and Trigonometry   **INSTRUCTOR:** _____   **SECTION:** _____

PREREQUISITE: By placement according to the Department of Mathematics   **CREDIT:** 3 semester hours.

EMAIL: You can reach your instructor by emailing your instructor at ma115mtlc@as.ua.edu. **Please put your instructor's name in the subject box.** Replies to automated emails will not be answered. All correspondence for this course will be made through your crimson email account.

TEXTBOOK AND ACCESS CODE: "Algebra and Trigonometry", 5th ed. by Robert Blitzer, published by Prentice Hall. This textbook will come in a package which includes the student access code to the publisher's website. An access code is required to complete all assignments and tests for this course. It allows the student to access the publisher's website for the course, where all assignments and tests must be completed and where the entire textbook may be viewed online. Access codes can be purchased with or without a hard copy of the textbook at a bookstore or online from the publisher.

COURSE DESCRIPTION: This is an **accelerated** combination of MATH 112 and MATH 113 (Algebra and Trigonometry) and is a fast track to MATH 125. This course is intended for students with a **very strong background** in college preparatory mathematics. Evaluation will be based on **online homework**, **quizzes**, **four tests**, and a **comprehensive final exam**.
- The course presents the essential characteristics and basic processes of inquiry and analysis in the discipline.
- The course encourages the development of critical thinking skills and requires students to analyze, synthesize, and evaluate knowledge.
- The course considers its subjects in relation to other disciplines and to the human condition.
- The course is not limited to majors in any discipline.
- The course does not focus on professional skills.

GENERAL LEARNING OUTCOMES FOR 100-200 LEVEL COURSES:
- Students will be able to discriminate between reliable and less reliable information in their decision-making.
- Students will be able to develop effective mathematical communication skills.

LEARNING OUTCOMES FOR THIS COURSE: Upon completion of this course, students will be able to
- Understand and graph polynomial, rational, exponential, logarithmic, and trigonometric functions and their inverses.
- Solve linear, quadratic, absolute value, rational, exponential, logarithmic equations and inequalities and trigonometric equations.
- Graph circles, parabolas, ellipses, and hyperbolas.
- Understand polar graphs, and complex numbers in polar form, their powers, and roots.
- Perform vector operations.
- Solve systems of equations.

COURSE GRADE: The course grading is under the "A, B, C, NC" policy, +/- grades will be given.

4 Tests	40% (10% each)	*COURSE GRADE SCALE*
Final Exam	30%	A+ 98% – 100%, A 92% – 97.9%, A- 90% – 91.9%
Quizzes	10%	B+ 88% – 89.9%, B 82% – 87.9%, B- 80% – 81.9%
Homework	8%	C+ 78% – 79.9%, C 72% – 77.9%, C- 70% – 71.9%
Study Plan	10%	NC < 70%
Class Participation	2%	Students must earn at least 70% (C-) to successfully pass this course.
Total	100%	

Note: The last day to drop this course with a W is March 25, 2015. No withdrawals from this course after this date.

Mathematics and Technology Learning Center (MTLC) Information:
LOCATION: B1 Tutwiler   **PHONE:** 348-2592   **WEBSITE:** www.mtlc.ua.edu

HOURS: Monday - Thursday: 8am – 10pm   **CLOSINGS:** Martin Luther King Holiday: Monday 1/19
                    Friday: 8am – 4:45pm   Spring Break: Monday 3/16 – Friday 3/20
  NOTE: Last day for help in MTLC is Friday 4/24 (8am–4:45pm)

TEST DEADLINES:			**ONLINE REGISTRATION TIMES:**
Test 1	Thursday	February 5	
Test 2	Thursday	February 26	Tests 1 – 4: 8am 1/19 – 5 pm 1/23
Test 3	Thursday	March 26	
Test 4	Thursday	April 16	
Final Exam	Monday–Friday	April 27 – May 1	Final Exam: 8am 4/13 – 5pm 4/20

Test times available during open registration period : check mtlc.ua.edu→Test Reg.
Final Exam times available during open registration period: 8 am, 11:30 am, 3:30 pm, 7 pm   (not all times may be available each day)

CALCULATOR: You will be allowed to use the **CASIO FX-260-School** version calculator (available at the University bookstores) or the testing calculator that is available on the computer during testing. Using another calculator is considered academic misconduct. No calculator help will be given during tests.

Math 115 Assignments Spring 2015

Date	Section	Title	HW due 8am	Quiz due 9am
		Test 1 Material: Test 1 is on Thursday 2/5		
1/7	1.3	ORIENTATION Models and Applications	Thur. 1/15	Thur. 1/15_Qz1
1/9	1.4	Complex Numbers	Thur. 1/15	(1.4/1.5)
	1.5	Quadratic Equations	Thur. 1/15	Thur. 1/15_Qz 2
1/12	1.6	Other Types of Equations	Tue. 1/20	(1.6/1.7)
1/14	1.7	Linear Inequalities and Absolute Value Inequalities	Tue. 1/20	Tue. 1/20 _Qz3
		Syllabus Quiz		Tue. 1/20
1/16	1.7	Linear Inequalities and Absolute Value Inequalities	Tue. 1/20	Tue. 1/20 _Qz3
	2.1	Basics of Functions and Their Graphs	Tue. 1/20	
1/19		***No class due to Martin Luther King Holiday***		
1/21	2.2	More on Functions and Their Graphs	Tue. 1/27	(2.1/2.2) Tue. 1/27_Qz 4
1/23	2.5	Transformations of Functions	Tue. 1/27	(2.5/2.6)
	2.6	Combinations of Functions: Composite Functions	Tue. 1/27	Tue. 1/27_Qz5
1/26	2.7	Inverse Functions	Thur. 1/29	(2.7/3.1)
	3.1	Quadratic Functions	Thur. 1/29	Thur. 1/29_Qz 6
		Test Rules Quiz		Tue. 2/3
1/28	3.2	Polynomial Functions and Their Graphs	Tue. 2/3	(3.2/3.3)
1/30	3.3	Dividing Polynomials; Remainder and Factor Theorems	Tue. 2/3	Tue. 2/3_Qz7
2/2	3.4	Zeros of Polynomial Functions (ON TEST 2)	Tue. 2/10	Tue. 2/10_Qz 8
2/4		Test 1 Review		
		Test 1—Thursday 2/5 in MTLC B1 Tutwiler		

Date	Section	Title	HW due 8am	Quiz due 9am
		Test 2 Material: Test 2 is on Thursday 2/26		
2/2	3.4	Zeros of Polynomial Functions	Tue. 2/10	Tue. 2/10_Qz 8
2/6	3.5	Rational Functions and Their Graphs	Tue. 2/10	Tue. 2/10_Qz9
2/9	3.6	Polynomial and Rational Inequalities	Thur. 2/12	Thur. 2/12_Qz10
	4.1	Exponential Functions		
2/11	4.1	Exponential Functions	Tue. 2/17	Tue. 2/17_Qz11
	4.2	Logarithmic Functions	Tue. 2/17	(4.2,4.3)
2/13	4.3	Properties of Logarithms	Tue. 2/17	Tue. 2/17_Qz12
	4.4	Exponential and Logarithmic Equations		
2/16	4.4	Exponential and Logarithmic Equations	Thur. 2/19	(4.4/4.5)
	4.5	Exponential Growth and Decay; Modeling Data	Thur. 2/19	Thur. 2/19_Qz13
2/18	8.2	Systems of Linear Equations in Three Variables	Tue. 2/24	Tue. 2/24_Qz14
2/20	8.4	Systems of Nonlinear Equations in Two Variables & Review	Tue. 2/24	Tue. 2/24_Qz15
2/23	5.1	Angles and Radian Measure (ON TEST 3)	Tue. 3/3	
2/25		Test 2 Review		
		Test 2—Thursday 2/26 in MTLC B1 Tutwiler		

Date	Section	Title	HW due 8am	Quiz due 9am
		Test 3 Material: Test 3 is on Thursday 3/26		
2/23	5.1	Angles and Radian Measure	Tue. 3/3	(5.1/5.2)
2/27	5.2	Right Angle Trigonometry	Tue. 3/3	Tue. 3/3_Q16
3/2	5.3	Trigonometric Functions of Any Angle	Thur. 3/5	Thur. 3/5_Q17
3/4	5.4	Trig. Functions of Real Numbers, Periodic Functions	Tue. 3/10	Tue. 3/10_Q18
3/6	5.5	Graphs of Sine and Cosine Functions	Tue. 3/10	Tue. 3/10_Q19
3/9	5.6	Graphs of Other Trigonometric Functions	Thur. 3/12	Thurs. 3/12_Q20
3/11	5.7	Inverse Trigonometric Functions	Tue. 3/24	Tue. 3/24_Q21
3/13	5.8	Applications of Trigonometric Functions	Tue. 3/24	Tue. 3/24_Q22
3/23	6.1	Verifying Trigonometric Identities (ON TEST 4)	Tue. 3/31	Tue. 3/31_Qz23
3/25		Test 3 Review		
		Test 3— Thursday 3/26 in MTLC B1 Tutwiler		

Test 4 Material: Test 4 is on Thursday 4/16				
Date	**Section**	**Title**	**HW due 8am**	**Quiz due 9am**
3/23	6.1	Verifying Trigonometric Identities	Tue. 3/31	Tue. 3/31_Qz23
3/27	6.2	Sum and Difference Formulas	Tue. 3/31	Tue. 3/31_Qz24
3/30	6.3	Double-Angle and Half-Angle Formulas	Thur. 4/2	Thur. 4/2_Qz25
4/1	6.5	Trigonometric Equations	Tue. 4/7	Tue. 4/7_Qz26
4/3		*No class due to Honor's Day*		
4/6	7.1	The Law of Sines	Thur. 4/9	Thur. 4/9_Q27
4/8	7.2	The Law of Cosines	Tue. 4/14	Tue. 4/14 _Q28
	7.3	Polar Coordinates		
4/10	7.3	Polar Coordinates	Tue. 4/14	Tue. 4/14_Q29
4/13	7.5	Complex Numbers in Polar Form; DeMoivre's Thm (ON FINAL)	Fri. 4/17	Fri. 4/17 _Q30
4/15		Test 4 Review		
		Test 4— Thursday 4/16 in MTLC B1 Tutwiler		

New Material & Review for Final Exam				
Date	**Section**	**Title**	**Completion Deadline**	
4/13	7.5	Complex Numbers in Polar Form; DeMoivre's Theorem	Fri. 4/17	Fri. 4/17 _Q30
4/17	7.6	Vectors	Tue. 4/21	Tue. 4/21_Q31
	7.7	The Dot Product	Tue. 4/21	Tue. 4/21_Q32
4/20-4/24		Review for Final Exam		
		Last day for help in the lab is Friday April 24		
		Comprehensive Final: Mon. 4/27 – Fri. 5/1		

Software Login Information: Registration in the software has already been done for you. You can login to your math 115 course:
1. Log into myBama, go to your Blackboard Learn courses, and click on Math 115.
   You will need your MyLabsPlus access code in order to get to the math content only for the first time. Click on any homework or quiz to enter your access code.

2. Website: www.ua.mylabsplus.com
   Username = crimson email prefix (ex: jksmith)
   Password = CWID (ex: 12345678)

ATTENDANCE/PARTICIPATION: Attendance for this course is mandatory. You are expected to attend all of your scheduled classes. Class meets each Monday, Wednesday, and Friday unless noted. Each class counts 1 point toward your class participation grade. Each class will consist of a lecture for the material assigned. You are expected to attend class in its entirety and participate in the classroom lectures and discussion. At the end of the semester one unexcused missed class will be dropped. The use of personal laptop computers and texting during class time is prohibited. The MTLC in B1 Tutwiler is available for you to do homework and quizzes and get free tutoring.

QUIZZES and HOMEWORK: A graded homework will be assigned on each section covered and approximately a quiz for every one or two sections. They must be completed before each expiration date and time. At the end of the semester a **minimum** of 3 homework grades and a **minimum** of 3 quiz grades will automatically be dropped. Homework can be worked on until all questions are correct. You can select similar question for any question that you miss and try again until you get it correct. You must hit the "Save" button one time to save your homework grade. You will have unlimited tries for each quiz. You must hit the "Submit" button to score your quiz. All deadlines are at 8:00 am for homework and 9:00 am for quizzes on the deadline day. NOTE: You will not be given help on your quizzes or tests. Tests must be taken in the MTLC.

STUDY PLAN: The study plan is due by 2pm on Friday 5/1. It consists of topics not mastered on quizzes (the latest quiz will count). Please use it as a way to study for each test and your final exam. The study plan counts as much as one test grade so make sure to take it seriously.

TESTS: All tests and the final exam must be taken in the computer lab (MTLC) by the scheduled deadlines posted on the front page of this syllabus. **The final exam is mandatory and comprehensive**. You must register for a time to take your tests on your scheduled test days. The dates and times for online registration are shown on the front page of this syllabus. Instructions for registration are in Test Rules below. You may take any test early (before its test week).

MAKE-UP POLICY: Missed assignments will be scored zero. No makeup tests will be given.
- If homework or quizzes are missed due to any circumstance, the zero scores will be part of your three dropped homework or quizzes at the end of the semester.
- If a test is missed due to ANY circumstance, **no makeup test will be given**. The zero score will be considered your lowest and will be replaced by the final exam score. **Only one** zero test score may be replaced.
- Students who will miss any assignments due to official University business must make other arrangements **beforehand.**

REPLACEMENT POLICY: The lowest test grade will be replaced with the grade made on the final exam if the final grade is higher. However, test grades penalized due to academic misconduct will not be replaced.

EARLY COURSE COMPLETION: You can work ahead of the syllabus deadlines, and take tests and the final exam early. Once you have taken your final, you do not have to continue coming to class. All the remaining attendance requirements will be automatically counted.

EXTRA - HELP: Center for Academic Success (CAS): website: http://cas.ua.edu , phone number 348-8854.

DISABILITY STATEMENT: Students with disabilities must be registered with the Office of Disability Services (ODS) before receiving any special academic accommodations. If you have a disability, but have not yet contacted ODS, please call 348-4285 or visit 133-B Martha Parham Hall East to make an appointment to register for services. ODS will provide packets of information about your specific accommodations, which you must distribute to **your instructors and to the MTLC (B1 Tutwiler)**. **The MTLC must receive your paperwork at least one week prior to a test to allow for accommodations on that test.** Students must bring their paper work each semester.

WORKING FROM HOME: The Math 115 course work can be done on your personal computer with internet access.
- There are two ways to get to your course:
    1. Log into MyBama go to your Blackboard Learn courses and click on Math 115.
    2. Log into ua.mylabsplus.com with your crimson email prefix and your CWID for password.
- The course MAY NOT WORK with Safari; use a different internet browser.
- If you get a "**timeout error**" when using the software, delete your browser's cookies or clear the browser's history and/or try a different browser.
- **No deadline extension will be given because of issues with a home computer**. To be safe, work well ahead of the deadlines at home, so that if there is any problem you will be able to go to the MTLC and complete the assignment before the deadline.
- **Tests must be taken in the MTLC.**

EMAIL: All correspondence for this course will be made through your crimson email account. If you have trouble with your crimson email account, then contact the OIT service desk located in Gordon Palmer. You can reach your instructor by emailing at ma115mtlc@as.ua.edu. **Please put your instructor's name in the subject box**. Replies to automated emails cannot be answered.

MTLC RULES
1. The MTLC is a math classroom. Please be quiet during your visit to the MTLC.
2. Food, drinks (including water), tobacco products, companions, and talking on your phone are NOT allowed in the lab.
3. Other than mathematics, no activities such as talking, surfing the Internet, playing computer games, typing a paper, sleeping, etc. are allowed in the MTLC. If these activities are observed, you will be asked to leave the MTLC.
4. The use of a computer in the MTLC is on a first-come first-serve basis; no reservation can be made for normal course work.
5. Please do not hesitate to ask questions in the MTLC. Staff members in the MTLC are there to help you.

CODE OF ACADEMIC CONDUCT: All students in attendance at the University of Alabama are expected to be honorable and to observe standards of conduct appropriate to a community of scholars. The University expects from its students a higher standard of conduct than the minimum required to avoid discipline. Academic misconduct includes all acts of dishonesty in any academically related matter and any knowing or intentional help or attempt to help, or conspiracy to help, another student. The Academic Misconduct Disciplinary Policy will be followed in the event of academic misconduct.

DISABILITY STATEMENT: If you are registered with the Office of Disability Services, please make an appointment with me as soon as possible to discuss any course accommodations that may be necessary. If you have a disability, but have not contacted the Office of Disability Services, please call 348-4285 or visit 133-B Martha Parham Hall East to register for services. Students who may need course adaptations because of a disability are welcome to make an appointment to see me during office hours. Students with disabilities must be registered with the Office of Disability Services, 133-B Martha Parham Hall East, before receiving academic adjustments.

MTLC COMPUTER LOGIN: Use your personal Crimson information to log into the computer: your own crimson user account and your crimson user password. (If you do not know this information please go to OIT service desk located in Gordon Palmer for assistance.)

TEST RULES

1. There are four 70-minute tests and a 150-minute mandatory, comprehensive final exam. Test deadlines are listed on the front page of this syllabus.

2. **You are encouraged to take your tests early**. "Early" means **any time before the Test Week** for that particular test. No registration is needed for early tests. You may not begin a test if the MTLC is scheduled to close before the end of your full allotted time. You must begin an early test by 4:45pm Monday – Thursday, or by 3pm Friday (2pm for a final exam).

3. **You must register for a time to take an exam on a test deadline day.** The front page of the syllabus lists beginning and ending dates/times for online registration. To **register online**, go to the MTLC website (www.mtlc.ua.edu), select link *Test Registration*, log in as instructed, select link *Register*, then choose an available time. You will take ALL tests at this same time on their scheduled days. A separate online registration will occur for the Final Exam. You may freely change your test time while online registration is active. Be sure to verify your registration: log back in to the test registration site.

4. **If you miss a test**, your zero score will be considered your lowest and may be replaced by your final exam score. However, only one zero test score may be replaced.

5. Arrive on time for your test. Tardiness will cost you working time on the test. Bring your ID and pencils with you. Follow signs to the back hallway. Staff will check your ID and give you a personalized test paper (which is your initial scratch paper), then direct you to your seat.

6. Absolutely **NO HAND-HELD ELECTRONIC DEVICES** other than a **CASIO fx-260 SOLAR SCHOOL** calculator may be active in the testing area. All calculator covers must be removed and put out of sight during testing. Use of any unapproved electronic device during a test will be treated as academic misconduct. No calculator help will be given during tests.

7. Cellphones must be turned completely off and all other belongings must be placed on the floor. Once you enter the testing area, all review material must be put away. As soon as you are seated, you may begin your exam. The MTLC will give you additional scratch paper as needed; no other paper is allowed. When you are finished, bring all your papers to the lab entrance where staff will collect them.

8. You will be allowed to review your test before you leave the lab. You may **not** write down any information pertaining to test questions to take with you when you leave the MTLC after an exam. You may not share any test information with anyone who hasn't taken the test. Violators will be charged with academic misconduct.

9. **You may not leave your table during a test without permission**. This includes getting water and using the restroom. Cell phones must be left at the table.

10. Special MTLC Study Hours during test weeks: Monday 8am–10pm, Tuesday – Thursday 9pm–10pm ONLY, Friday 8am–4:45pm ONLY. The lab will be closed for studying, and open only for testing, during finals week.

SEVERE WEATHER GUIDELINES: In the case of a tornado warning (tornado has been sighted or detected by radar; sirens activated), all university activities are automatically suspended, including all classes and laboratories. If you are in a building, please move immediately to the lowest level and toward the center of the building away from windows (interior classrooms, offices, or corridors) and remain there until the tornado warning has expired. Classes in session when the tornado warning is issued can resume immediately after the warning has expired at the discretion of the instructor. Classes that have not yet begun will resume 30 minutes after the tornado warning has expired provided at least half of the class period remains.

UA is a residential campus with many students living on or near campus. In general classes will remain in session until the National Weather Service issues safety warnings for the city of Tuscaloosa. Clearly, some students and faculty commute from adjacent counties. These counties may experience weather related problems not encountered in Tuscaloosa. Individuals should follow the advice of the National Weather Service for that area taking the necessary precautions to ensure personal safety. Whenever the National Weather Service and the Emergency Management Agency issue a warning, people in the path of the storm (tornado or severe thunderstorm) should take immediate life saving actions.

When West Alabama is under a severe weather advisory, conditions can change rapidly. It is imperative to get to where you can receive information from the National Weather Service and to follow the instructions provided. Personal safety should dictate the actions that faculty, staff and students take. The Office of Public Relations will disseminate the latest information regarding conditions on campus in the following ways:

- Weather advisory posted on the UA homepage
- Weather advisory sent out through Connect-ED--faculty, staff and students (sign up at MyBama)
- Weather advisory broadcast over WVUA at 90.7 FM
- Weather advisory broadcast over Alabama Public Radio (WUAL) at 91.5 FM
- Weather advisory broadcast over WVUA 7. WVUA 7 Storm Watch provides a free service you can subscribe to that allows you to receive weather warnings for Tuscaloosa via e-mail, pager or cell phone. Check http://www.wvua7.com/stormwatch.html for details.