SYLLABUS FOR MATH 1301 (College Algebra) – Spring Semester 2016

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OFFICE HOURS: Monday, Tuesday, Wednesday and Thursday 8:00– 8:30 in S729,
Mondays 2:45 – 3:30
Tuesdays10:00 – 12:00 N925 and 12:00 – 1:00 in S729, and by appt.
Wednesdays 2:45 – 3:30 S729
Thursdays 10:00 – 11:00

Prerequisite: A grade of "C" or better in MATH 1300 or placement by exam taken at UH-Downtown, or a score of 270 on the math section of THEA. If you do not meet this prerequisite, you may be dropped from the course without prior notification at your own expense. Please see your instructor immediately if you do not meet this prerequisite, so you can be enrolled in the appropriate MATH course.

TEXTBOOK: *College Algebra with Modeling and Visualization*, Fifth Edition, by G. Rockswold, Pearson, 2014 (Book bundled with MyMathLab)

Where to Find Course Resources: The first place to seek assistance and resources is from your instructor, both inside and outside of class. Your instructor will provide the times and locations where he or she is available for office hours to work with you outside of class. Next, students enrolled in MATH 1301 at UHD have access to the Center for Math & Statistics (formerly called the Math Lab) in the Academic Support Center (925-N) where they may get additional tutoring with understanding concepts or improving their skills. The Center is staffed with mathematics faculty and student assistants, and offers tutorial help, videos, calculators, and computer access on a walk-in basis. The Center for Math & Statistics maintains extensive hours which are published each semester. You are encouraged to visit the Center for Math & Statistics throughout the semester whenever you feel you need extra help, no appointment required. It is also an excellent place to study the textbook and work on homework problems, so that you can receive immediate answers to your questions as necessary.

Educational objectives: At the end of the course, a student should be able to, at minimum: (1) write complex numbers in standard form and perform the four elementary operations with complex numbers; (2) solve quadratic equations in one variable by the methods of factoring, extraction of roots, completing the square, and the Quadratic Formula; (3) properly use function notation and inverse function notation and interpret its meaning in context; (4) recognize the equation of a straight line and determine the equation of a line from information such as: given two points on the line, or, one point on the line and the slope of the line; (5) state and apply the definition of a function, determine the domain and range of a function, evaluate expressions involving functional notation, simplify expressions involving the algebra of functions, and given a function find its inverse, if it exists; (6) solve problems involving direct and inverse variation; (7) graph linear functions and quadratic functions by hand; (8) recognize the important features of graphs of polynomial functions and piecewise-defined functions; (9) find the vertex and intercepts of a parabola; (10) state the fundamental properties of polynomial functions; (11) solve quadratic inequalities, state the solution using interval notation and graph the solution; (12) state the inverse relationship between exponential and logarithmic functions, graph both types, use properties of logarithms to rewrite expressions, and solve exponential and logarithmic equations; (13) solve absolute value equations and inequalities; (14) solve systems of equations in three variables by algebraic techniques; (15) state and use the relationship between the slopes of parallel and perpendicular lines; (16) interpret the meaning of the slope of a line in context; (17) interpret the meaning of function intercepts in context; (18) compute midpoints and apply the Midpoint Formula to interpolate and extrapolate.

Department Grading Policy: The final exam for this course is comprehensive and counts 1/3 of your course average. Your course average will be used to assign your final course grade according to the standard college formula shown here.

90-100	"A"
80-89	"B"
70-79	"C"
60-69	"D"
0-59	"F"
The following case is an exception: If your final exam score is less than 50, you will receive an "F" for the course regardless of your average.	

Attendance Policy: An attendance policy is enforced for this class! Your failure to attend class, or make contact with faculty to adequately explain your absence by the 10th class day of the semester will result in your being administratively dropped from this course. Being dropped from this course may affect your enrollment status and/or your financial aid eligibility. If a student misses the equivalent of more than 6 hours of class, the instructor will notify the MS department office that the student is in violation of the Attendance Policy.

Method of Evaluation:

Three (3) of four major in-class exams at 100 points each will be counted as 47% of your grade. The final exam grade will count 33% (1/3 of your semester grade). The final exam contains all multiple choice questions to be taken on a scantron provided by the instructor. The remaining 20% of your grade is from in-class activities (group work), your MML online homework, and MML quizzes.

Please be aware that the **last day to withdraw from a course with a course grade of "W" is** March 31st . This date is published in the semester class schedule. If you do not complete the course requirements and do not officially withdraw, you will receive a course grade of "F." This is university policy over which your instructor has no control. You cannot receive the grade "I" for Incomplete unless you have a documented personal emergency that prevents you from completing the last fraction of the course, such as the last test and/or the final exam. You must have a passing average based on the work you have already completed to receive an "I."

In-class Activities (Group Work): Over the course of the semester, there will be several in-class assignments which can be done in groups. On that day when an in-class assignment is given, the assignment will count as the roll sheet. Be sure to turn in your assignment even if it is incomplete to be counted as present!

Using MyMathLab (Required Homework): To supplement what is done in class, you are **required** to use an online resource called MyMathLab. In order to use MyMathLab, you must purchase a Student Access Code from the UHD Bookstore (bundled with the text or separately) or purchase it online at www.coursecompass.com If you purchased a MyMathLab code for MATH 1301 last semester (i.e. you are repeating the class), you DO NOT need to purchase a new code this semester. Your account will still be active, but you will need to enroll in a new section. You can use MyMathLab on any computer that has Internet access. If you do not have a computer at home with Internet access, you can log into MyMathLab from a UHD computer, print out the MyMathLab assignment, work through the exercises on paper, and then enter the answers in MyMathLab when you are next on campus. To register with MyMathLab, you will also need a valid email address - **use one that you regularly check**. You must register with MyMathLab at www.coursecompass.com only the first time that you use it. (1) The course ID number will be given to you. (2) The zip code for UHD is 77002. (3) You will then create a Login Name and Password which you will use to log in whenever you use MyMathLab at www.coursecompass.com Make sure to record your exact login name and password for future logins. *Note:* The computers in the Center for Math & Statistics (N-925), the Academic Computing Labs (S-800, C-300, B-200), the CMS Lab (S-738), and the SI Lab (S-405) can be used to access MyMathLab. Some of the features you can access are:

- Complete and submit homework assignments and quizzes online (All MML assignments & quizzes are due on test days)
- All Homework and Quizzes can be done over again until the grade is 100
- You can check your MyMathLab homework grades and other course grades in the Gradebook
- You can check your semester grade at any time in the Gradebook feature of MML
- View a complete online version of the textbook and look at multimedia sources such as online video clips that accompany the textbook, and much more.
- There are several icons to the right of every homework question to provide help.

Extra Credit: On each test day, if all the MML homework due on that day averages 90 or better, 5 pts. Extra credit will be added to the test score. 5 more points will be added if the quizzes average 90 or better.

Course Content: The course covers the following sections of the textbook. In some cases, not all pages from a section are covered.

Chapters	*Sections*
Chapter 1	1.1 Numbers, Data, and Problem Solving 1.2 Visualizing and Graphing Data 1.3 Functions and Their Representations 1.4 Types of Functions 1.5 Functions and Their Rates of change
Chapter 2	2.1 Linear Functions and Models 2.2 Equations of Lines 2.3 Linear Equations 2.4 Linear Inequalities 2.5 Piecewise-Defined Functions
Chapter 3	3.1 Quadratic Functions and Models 3.2 Quadratic Equations and Problem Solving 3.4 Complex Numbers 3.4 Quadratic Inequalities
Chapter 4	4.1 Nonlinear Functions and Their Graphs 4.2 Polynomial Functions and Models 4.5 The Fundamental Theorem of Algebra 4.6 Rational Functions and Models 4.7 More Equations and Inequalities

Chapter 5	5.1 Combining Functions 5.2 Inverse Functions and Their Representations 5.3 Exponential Functions and Models 5.4 Logarithmic Functions and Models 5.5 Properties of Logarithms 5.6 Exponential and Logarithmic Equations

Calculator Policy: Each student is expected to purchase or otherwise have access to a scientific calculator (or a graphing calculator) throughout the semester and will be allowed to use a scientific calculator (or a graphing calculator) on the final exam. The advanced features of the graphing calculator must not be used during the final exam. A scientific calculator is one that includes "ln" and "log" keys.

Suggested Textbook Practice Problems: There is a list of practice problems from the textbook included in this syllabus. You may also find a link to this list on my webpage, in *MyMathLab*, and on Blackboard Learn. These are optional, but provide extra practice to help you learn the concepts. The more you practice, the better you will know and remember the concepts for the quizzes and tests.

Supplies Needed:

- A 3-ring binder to keep all notes, homework, quizzes, and exams.
- Graph Paper
- Scientific Calculator (one that has log and ln) or a graphing calculator
- The Student Solution Manual to the textbook to help with the homework explanation (optional & can be ordered from the text website)

College Algebra Success Tips:

- Be on time and attend every class session.
- Do all assigned homework problems!!
- Try not to fall behind. In fact, try to stay ahead!
- Ask questions in class whenever you feel yourself starting to get lost!
- Keep track and record ALL grades so that you can be aware of your average throughout the semester.
- Read the textbook (often more than one time) after I have introduced the lesson and before you start your homework – IT IS VERY HELPFUL! Work through the examples and compare your solutions with the book.
- Get in the habit of first writing the entire problem, and then clearly and legibly write each step in solving the problem and clearly write out the solution. Writing helps catch faulty thinking!
- Sit in the front of the class to avoid distraction.
- Use the Center for Math and Statistics (N-925) for tutoring with all homework (check my schedule for my hours in N925 for FREE tutoring).
- Become part of a small group (3-4) that meets to do homework together in N925 and study for exams.
- Obtain the phone number or email address of a classmate in case of absence to keep up with any assigned work or due dates.
- Study for all tests – try preparing study sheets and reviewing with classmates.
- Attend the Final Exam Review (date and time to be announced later) and bring with you a hard copy of the review with as many problems worked as possible.
- Use my office hours for homework questions or academic questions as they arise.
- Do not get up during class or leave early unless you inform the instructor ahead of time. Plan ahead - use the restroom, get water, etc. before class begins or wait until it is over.

Honesty Code: Please remember that as a member of the UHD academic community you are bound to observe the academic honesty code in all your school work. A grade of "0" will be given for any course work where cheating is detected.

STATEMENT ON REASONABLE ACCOMMODATIONS: UH-Downtown complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for students with a disability. In accordance with Section 504 and ADA guidelines, UHD strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. If you believe that you have a documented disability requiring academic adjustments/auxiliary aids, please contact the Office of Disability Services, One Main St., Suite 409-South, Houston, TX 77002. (Office) 713-226-5227 (Website) www.uhd.edu/disability/ (Email) disabilityservices@uhd.edu

VISIT THE UHD ALGEBRA STUDENT WEB PAGE FOR MORE INFORMATION (including the Final Exam Review):

http://cms.uhd.edu/qep/algebra