

Spring 2008: MATD 0160, section 001, Synonym 18515 , February 19 – March 27, 2008
Topics in Developmental Math

Instructor. Dr. Mary Parker

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Office Hours and Location for this class: TTh 10:30 – 10:55 a.m. EVC 8310 (no phone)

Office Hours and Locations for the entire semester at other campuses.

MW 10:00 - 11:00 a.m. and 2:00 – 2:30 p.m. NRG 2147

MW 4:35 - 5:35 p.m. RVS 8131 (no phone)

By appointment: (Email at least a day in advance to ask for an appointment)

NRG 2147 MW 11:00 – 12:45 p.m. and

RVS 8131, MW 4:05 – 4:35 p.m. RVS 8131 and Mon 7:00 – 7:30 p.m. RVS as arranged (no phone)

Course Description:

This course is the one-hour version of MATD 0360. It covers a selection of mathematical topics from the MATD 0360 curriculum and, as needed, a few topics from the curriculum of other mathematics courses. Topics are chosen to address the skills needed in the courses with which it is paired.

MATD 0360: This course surveys a variety of mathematical topics needed to prepare students for the college-level courses MATH 1332, 1342, and MATH 1333. It also covers most THEA mathematics topics. Topics include the arithmetic of integers and rational numbers, evaluating expressions and formulas, calculator use, problem-solving using data interpretation and analysis, informal geometry, pattern recognition, percentages, ratio and proportion, measurements, algebraic techniques for solving linear equations and inequalities, quadratic equations, rational equations, systems of equations, etc. Students who need to prepare for MATH 1314, MATH 1324, MATH 1316, etc., should not take this course, but instead should take MATD 0370 and MATD 0390. The same course is offered in a one hour (0160) and two hour (0260) format. Prerequisites: A passing grade of C or better in MATD 0330 (Basic Math Skills) or an acceptable score on the ACC Mathematics Assessment Test taken before enrolling in ACC mathematics courses. ()
Course Type: D

Required Materials:

Basic Laboratory Methods for Biotechnology by Lisa Seidman and Cynthia Moore.

Course websites:

<<http://www.austincc.edu/mparker/0160>> and <<http://aconline.austincc.edu/>>

Instructional Methodology: This course has a lecture / discussion format and meets twice a week for a total of three hours per week. Students are expected to spend approximately six to nine hours per week preparing for the class.

Course Rationale:

This course is designed to give a very quick overview of specific topics from several math courses that are important to support learning the skills needed in the course that is paired with this course.

This particular section is paired with the Biotech course which is designed to prepare students for an internship.

Course Objectives and Syllabus:

The syllabus for this course includes material from the following chapters of the text: 8, 9, 10, 11, 12, 13, 21, 22 and various handouts. Details are included on the course calendar.

Overall Objectives for MATD 0160:

1. Students will increase their ability to use mathematics to solve problems of interest to them or useful in their chosen fields. Students will attain more positive attitudes about their mathematical skills based on their flexibility in using those skills to solve a variety of problems.
2. Students will improve their skills in describing what they are doing as they solve problems using standard mathematical terminology and notation.

Specific objectives for this particular section of the class:

1. Understand and use logarithms.
2. Develop facility with the metric system.
3. Use proportional reasoning in multiple contexts and understand the similarities between the types of problems that can be solved with proportional reasoning.
4. Understand the difference between problems that can be solved with proportional reasoning and those which cannot.
5. Use exact linear relationships in multiple ways to solve problems.
6. For exact exponential relationships, evaluate the output values and graph the relationship.
7. Use a spreadsheet to find the best linear model to fit given data.
8. Use a spreadsheet to find the best exponential model to fit given data.
9. Summarize data using appropriate graphs (histograms, scatterplots) and appropriate numerical summaries (mean, median, mode, standard deviation)
10. Understand the basic principles of data production from both sampling and designed experiments.
11. Understand the basic principles of measurement..

Prerequisite.

Completed TSI requirement for both mathematics and reading. Students who are exempt from TSI requirements or have those requirements waived must have demonstrated equivalent skills.

Grading:

There are three graded components of the class: tests, homework assignments, and daily quizzes. The three test grades are averaged together and count 75% of the overall grade. The total homework grade and daily quiz grade are averaged and count 25% of the overall grade.

A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: below 60

Additional grading option: Students who are struggling to make high enough grades to earn a C may earn a C without the above average by (1) completing ALL homework on time except possibly three assignments, (2) taking all quizzes except possibly one quiz, (3) taking all tests on time, and, during the last week, satisfactorily completing an extra assessment of math skills needed in lab work. This assessment will be outside of the math class time. Details will be worked out in the preceding week.

The internships do not all require the same types of work and the same mathematical skills. When students are considered for assignment to internships, their skill levels in various areas are reviewed. If you use this alternative grading option to earn a C, you will not be eligible for the particular internships which require somewhat higher-level mathematical skills.

One of the reasons this alternative option is provided is that the five weeks of this class is a very short time to review many math skills. Some students who have forgotten quite a lot of the math they once knew will not be able to recall enough in five weeks to do well, but, when they begin the full degree program and take classes over several semesters of 16-week courses, will be able to master all the necessary mathematics more easily.

Homework:

Homework will be assigned in 20 lessons, with one to be done every weekday from approximately the day the course begins until it ends. Obviously, you are supposed to work the homework exercises yourself (or getting help from a colleague) and then check them with these answers instead of just copy the answers! It must be neatly organized in a notebook, by lesson. Loose papers will not be graded.

Homework will be checked for completion each day in class. A grade of 0-5 will be assigned on the homework from each of the lessons since the previous class. (Twenty lessons means a total of 100 points.) If you miss a day and come in the NEXT class day, before class, I will check your homework and assign a grade for the missed class's homework.

Daily quiz grades:

There is a quiz every class day except the first and the last day, and quiz is worth 15 points. I will drop the lowest grade of the 8 quizzes and add the others for the quiz grade.

Tests:

These will be composed of problems similar to those in the textbook and handouts. The first two tests will be in the Testing Center at EVC.

Test 1: Thursday, Feb. 28 through Tuesday, Mar. 4. Covers Chs. 8 - 9.

Test 2: Tuesday, Mar. 18 – Friday, Mar. 21. Covers all material discussed through Tuesday, Mar. 18.

Test 3: Thursday, Mar. 27 in class. Covers all material in the class.

Withdrawals and Attendance

Students are expected to attend class every day. If you miss a class, you must complete the homework relevant to that class and present it to the instructor during office hours before class the NEXT class day. Students who miss more than two classes may be withdrawn. After the withdrawal date (Spring 2008, 5-week session: March 21, 2008), neither the student nor the instructor may initiate a withdrawal. It is the student's responsibility to initiate all withdrawals in this course. The instructor **may** withdraw students for lack of participation but makes **no** commitment to do this for the student.

Students entering a Texas public college or university starting Fall 2007 and later are allowed only a very limited number of withdrawals (i.e. Ws on their transcripts) during their entire undergraduate career. For all students, withdrawals can have negative consequences, including increasing the tuition to be paid when the course is taken again and eligibility for financial aid. Review this and other important information about withdrawals at <http://www.austincc.edu/withdraw/>

Incompletes

Incomplete grades (I) will be given only in very rare circumstances. Generally, to receive a grade of I, a student must have taken all examinations, be passing, and have a personal tragedy occur after the last date to withdraw which prevents course completion.

Students with Disabilities: Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office of Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of the semester. Students who are requesting accommodation must provide the instructor with a letter of accommodation from the Office of Students with Disabilities (OSD) at the beginning of the semester. Accommodations can only be made after the instructor receives the letter of accommodation from OSD.

Students with a temporary condition that make it difficult for them to use the Testing Center (such as a condition that requires frequent restroom breaks) can be served by the Office for Students with Disabilities as well. Ask for information if you need it.

Scholastic Dishonesty: Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to, cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, work, research or self-expression. Academic work is defined as, but not limited to, tests, quizzes, whether taken electronically or on paper; projects, either individual or

group; classroom presentations; and homework.

Students who violate the rules concerning scholastic dishonesty will be assessed an academic penalty that the instructor determines is in keeping with the seriousness of the offense. This academic penalty may range from a grade penalty on the particular assignment to an overall grade penalty in the course, including possibly an F in the course. ACC's policy can be found in the Student Handbook under Policies and Procedures <http://www.austincc.edu/handbook>

Academic Freedom: Institutions of higher education are conducted for the common good. The common good depends upon a search for truth and upon free expression. In this course the professor and students shall strive to protect free inquiry and the open exchange of facts, ideas, and opinions. Students are free to take exception to views offered in this course and to reserve judgment about debatable issues. Grades will not be affected by personal views. With this freedom comes the responsibility of civility and a respect for a diversity of ideas and opinions. This means that students must take turns speaking, listen to others speak without interruption, and refrain from name-calling or other personal attacks.

Student Discipline: Classroom behavior should support and enhance learning. Behavior that disrupts the learning process will be dealt with appropriately, which may include having the student leave class for the rest of that day. In serious cases, disruptive behavior may lead to a student being withdrawn from the class. ACC's policy on student discipline can be found in the Student Handbook or on the web at <http://www.austincc.edu/handbook/>

Student Services

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Class Rules:

1. In accordance with school policy, you may not bring food or drink into class.
2. You must turn off or mute volume on beepers and cellular phones BEFORE CLASS BEGINS so as not to disrupt class.
3. Arrive for class a few minutes early so that you can have your materials out and be ready to start class on time.
4. Disruptive behavior (talking to others while I am lecturing, rudeness, etc.) will not be tolerated.
5. Class discussion will focus on the material being presented and will be about matters relevant to the entire class. Discussion of your individual situation belongs in office hours or, occasionally, in the part of the class time that I have identified as devoted to working individually with students.
6. Children are not allowed to attend class with you.
7. Remember you are here to learn; be prepared to participate in class discussion. We are all unique individuals and in this class everyone's opinion will be respected whether we agree or disagree.
8. Counseling services are available to help you with a variety of needs, if you would like more information please ask.
9. Ask immediately if you need help! I am here to help you learn. Getting behind even one day will cause you to be confused and frustrated. And it is very difficult to catch up after getting behind much more than one day. Don't let that happen!!
10. Tests may not be taken late. Some flexibility is allowed in the times to take each test except the final exam, which is on the last day of class.
11. If you enroll in the class late, you are subject to the same rules as students who enrolled in the class before the class began. The standard grading scheme allows enough flexibility for all students to make up a reasonable number of absences.