MATD 0455, Foundations of Mathematical Reasoning
First Day Handout for Students

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<th>Synonym and Section:</th>
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<tr>
<td>MATD 0455,001</td>
<td>MTWTh: 9:30 - 9:45 am HLC ACCelerator lab</td>
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<tr>
<td>MTWTh 9:45 – 11:30 am</td>
<td>MTWTh: 11:30 – 11:45 am HLC ACCelerator lab</td>
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<tr>
<td>Jan. 20 – Mar. 12, 2015</td>
<td>MTWTh 11:45 am – 12:15 pm HLC 1431</td>
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<tr>
<td>Instructor: Dr. Mary Parker</td>
<td>MW 12:45 – 1:00 pm HLC ACCelerator lab</td>
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<tr>
<td>Office Number: HLC 1431</td>
<td>MW 2:45 – 3:00 pm HLC ACCelerator lab</td>
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<tr>
<td>Phone: 512-522-1281 (messages)</td>
<td>Thursday 12:15 – 1:15 pm HLC 1431</td>
</tr>
<tr>
<td>512-223-7371 (while in office)</td>
<td>By appointment: Email to request an appointment at least a day in advance. Please suggest some choice of times.</td>
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Email: mparker@austincc.edu
http://www.austincc.edu/mparker/

Is this course right for you?

It is the right course if

1. Your major, here and where you want to transfer, if that is relevant, allows you to completely meet your math requirement with MATH 1342, Elementary Statistics.
2. You agree to enroll in the special section of MATH 1342, Elementary Statistics, and the one-hour lab course accompanying it, next semester after passing this MATD 0365.

It is **not the right course** for you if you are majoring in Diagnostic Medical Imaging – Radiology or Sonography, or any other major requiring MATH 1314, College Algebra.

**Prerequisite:** MATD 0330 or MATD 0332 with a C or better or a score on the math placement test that places beyond Basic Math level. DEVR 0300 with a C or better or a reading placement score that places beyond Reading Fundamentals.

**Required Texts/Materials:**

1. Online interactive textbook (MyStatway) available from the Carnegie Foundation for the Advancement of Teaching. Cost $85, which gives access to both semester’s materials.
2. Activities pages. Available electronically in MyStatway. Most of them will be also printed on paper and you are required to write on them and turn them in. Sometimes you will need to insert additional blank pages to write on.

**Required Technology:**

1. Internet access to use the online interactive textbook and course materials, including access to the applets needing the Wolfram CDF Player. Internet access is provided in several computer labs at ACC.
3. Scientific calculator. (Strongly recommend a calculator with a two-line display.) You may borrow a scientific calculator with a two-line display in the Testing Center and for tests in class and you may
use a calculator on your computer or cell-phone for homework. If you struggle with computations, it is better to do homework on the same calculator you will use on tests.

**Course Rationale:** This is an alternative course to MATD 0370 for students planning to take MATH 1342, Elementary Statistics. Students who are mandated to take Developmental Math by the TSI rules will not satisfy the TSI requirement unless they successfully complete the second semester (MATD 0166 + MATH 1342) with a C or better. Students must pass this course with a C or better to move on to the second semester pairing. Students who pass this course are not ready for MATH 0390, or any college level math course other than the designated MATH 1342 section paired with MATD 0166. Students who want to prepare for any other college level math course or who cannot be reasonably sure they can commit for the entire two-semester sequence should not take MATD 0455.

**Course Description:** This course surveys a variety of mathematical topics needed to prepare students for college-level statistics or quantitative reasoning. Topics include: design of statistical studies, graphical and numerical summaries of one-variable data and of relationships between two quantitative or categorical variables, linear and exponential models for data, and probability. Students who complete this course are expected to enroll in the paired courses MATH 1342 and MATD 0166 the following semester. This course is not for college credit.

**Course Objectives/ Learning Outcomes**

Upon successful completion of the course:

1. Students will feel a sense of accomplishment in their increasing ability to use mathematics to solve problems of interest to them or useful in their chosen fields.
2. Students will attain more positive attitudes based on increasing confidence in their abilities to learn mathematics.
3. Students will learn to understand material using standard mathematical and statistical terminology and notation when presented either verbally or in writing.
4. Students will improve their skills in describing what they are doing as they solve problems using standard mathematical and statistical terminology and notation.

**Specific topics included are:**

1. Solve multiple-step problems.
2. Solve application problems that require careful reading and the selection of the relevant information from a more extensive set of given information.
3. Appropriately use order of operations to evaluate numerical expressions on a scientific calculator.
4. Produce and interpret graphs of two-variable data and distinguish between the variables having an exact relationship and a non-exact (noisy) relationship.
5. Use graphs of formulas to approximate the solution of equations of the form \( y = f(x) \) for \( x \).
6. Work percentage problems including those based in two-way tables.
7. Solve linear equations and inequalities in one variable.
8. Identify when a relationship between two variables is linear and use linear models.
9. Identify when a relationship between two variables is proportional and use proportional models.
10. Identify when a relationship between two variables is exponential and use exponential models.
11. Use appropriate exponential model to answer a question and be able to convert between parameters.

Instructional Methodology: This course is taught in the classroom primarily as a lecture/discussion course. The course will have numerous group learning activities that are done in class.

Attendance/Class Participation: Regular and punctual class attendance is expected of all students. If a student misses as many as four class meetings, or a single test without contacting the instructor soon afterwards to discuss it, the instructor may withdraw the student from the class.

Grading:

70% Tests (14% for each of the four tests and the final exam.)

30% Daily attendance and daily work on the paper assignments and online assignments from MyStatway

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

Tests:

There will be four tests and a comprehensive final exam. At least half the problems on each test (and all the problems on the final exam) will be the types of questions found in the online checkpoints. You will be expected to give at least some feedback on some of the answers you don’t choose to explain what about that answer made you not choose it.

The final exam will definitely be held in class on the last day of class. Some of the tests may be held in class and some may be held in the HLC Testing Center. Make sure to bring your ACC ID to the Testing Center and do not bring your cell phone. You will need a scientific calculator for exams.

There will be NO make-up tests. The final exam grade can be substituted for a lower test grade on Test 1-4, including a zero for a missed test. But contact the instructor right away if you miss a test to avoid being withdrawn.

Daily attendance and daily work.

Outside of class:

- Do the paper homework as assigned in the previous class. Usually that will include the “Take-Home” pages, and sometimes it will include other problems.
- Read the assigned online pages in MyStatway and answer the questions embedded in those pages and any checkpoints.
- Before class time, read the assigned paper pages. You do not have to answer the questions – the point is to read enough that when you come to class you are ready to discuss the material instead of having to read it in class. Write any comments or questions you have before class on the left-hand part of the page.

In class:

- Efficiently participate with students on your team and in the class in a discussion of the assigned activities. This assumes that you are familiar with the main question(s) in the activities and have thought about them to some extent
- Write interpretations and sentences in every place they are requested. These explanations are the most important part of what you are learning. Explaining to each
other and listening to other’s explanations are the first steps in writing down your own explanations.

- Participate in the overall class summarizing what was learned that day.

**Why is it organized like this?**

- This method of active learning contributes to understanding and retention of the material, and increases your chances of success!

**Grading of Daily Work:**

The following will be included in your daily grade:

- Online work in MyStatway completed before 9:30 am on the day of class.
- Completion of paper homework assigned in the previous class and submitted at the beginning of class.
- Attendance in class for the full period.
- Evidence at the beginning of class that you have read and commented on the activities that you were assigned to read.
  - Some notes or comments written on the pages.
  - Participating in discussions of the material at the appropriate time without having to take time to read it in class.
- Evidence at the end of class that you have written interpretations for an appropriate number of the questions in the activities covered in class.

**No late daily work papers will be accepted.**

If you miss a class, it is your responsibility to look up the homework assignment for the following day and return to class the following day with that ready to submit. If you miss an assignment, you should, of course, do the work in order to prepare for the test over that material. But do not submit it. At the end of the semester, four daily work grades will be dropped before averaging. (The lowest in each of the four two-week segments of the course.)

**TSI Warning for students who are not TSI complete**

Students who are not TSI complete in math are not allowed to enroll in any course with a math skill requirement.

All students are required to be "continually in attendance" in order to remain enrolled in this course. If this is the only developmental class you are enrolled in, and you withdraw yourself from this course or are withdrawn by your instructor, then:

a) You may be withdrawn from courses that you should not be enrolled in, such as any class with a math skill requirement.

b) You will have a hold placed on your registration for the following semester. The Hold will require that you register for the next semester in person with an advisor or counselor and that you work with the Developmental Math Advisor during that semester.

c) You will continue to face more serious consequences, up to being restricted to only registering for developmental courses, until you complete the required developmental math course or satisfy the TSI requirement in another way.

More information can be found at [http://www.austincc.edu/math/tsiwarning.htm](http://www.austincc.edu/math/tsiwarning.htm).

**If you are unsure whether or not this warning applies to you, see an ACC advisor immediately.**
Importance of Completing Developmental Course Requirements
The first steps to achieving any college academic goal are completing developmental course requirements and TSI requirements. The first priority for students who are required to take developmental courses must be the developmental courses. TSI rules state that students are allowed to take college credit courses, if they are fulfilling their developmental requirements. Because successful completion of dev courses is so important, ACC will intervene with any student who is not successfully completing developmental requirements. This intervention can mean a hold on records, requiring developmental lab classes, working with the Dev Math Advisor, and monitoring during the semester.

Additional information about ACC's mathematics curriculum and faculty is available on the Internet at https://sites.google.com/a/austincc.edu/math-students/

Course Policies

Attendance/Class Participation
Regular and punctual class and laboratory attendance is expected of all students. If attendance or compliance with other course policies is unsatisfactory, the instructor may withdraw students from the class.

Withdrawal Policy
It is the responsibility of each student to ensure that his or her name is removed from the roll should he or she decide to withdraw from the class. The instructor does, however, reserve the right to drop a student should he or she feel it is necessary. If a student decides to withdraw, he or she should also verify that the withdrawal is submitted before the Final Withdrawal Date. The student is also strongly encouraged to retain their copy of the withdrawal form for their records.

Students who enroll for the third or subsequent time in a course taken since Fall, 2002, may be charged a higher tuition rate, for that course.

State law permits students to withdraw from no more than six courses during their entire undergraduate career at Texas public colleges or universities. With certain exceptions, all course withdrawals automatically count towards this limit. Details regarding this policy can be found in the ACC college catalog.

Incompletes
An instructor may award a grade of “I” (Incomplete) if a student was unable to complete all of the objectives for the passing grade in a course. An incomplete grade cannot be carried beyond the established date in the following semester. The completion date is determined by the instructor but may not be later than the final deadline for withdrawal in the subsequent semester.

Statement on Scholastic Dishonesty
A student attending ACC assumes responsibility for conduct compatible with the mission of the college as an educational institution. Students have the responsibility to submit coursework that is the result of their own thought, research, or self-expression. Students must follow all instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, and falsifying documents. Penalties for scholastic dishonesty will depend upon the nature of the violation and may range from lowering a grade on one assignment to an “F” in the course and/or expulsion from the college. See the Student Standards of Conduct and Disciplinary Process and other policies at http://www.austincc.edu/current/needtoknow
Student Rights and Responsibilities
Students at the college have the rights accorded by the U.S. Constitution to freedom of speech, peaceful assembly, petition, and association. These rights carry with them the responsibility to accord the same rights to others in the college community and not to interfere with or disrupt the educational process. Opportunity for students to examine and question pertinent data and assumptions of a given discipline, guided by the evidence of scholarly research, is appropriate in a learning environment. This concept is accompanied by an equally demanding concept of responsibility on the part of the student. As willing partners in learning, students must comply with college rules and procedures.

Statement on Students with Disabilities
Each ACC campus offers support services for students with documented disabilities. Students with disabilities who need classroom, academic or other accommodations must request them through Student Accessibility Services (SAS, formerly OSD). Students are encouraged to request accommodations when they register for courses or at least three weeks before the start of the semester, otherwise the provision of accommodations may be delayed.

Students who have received approval for accommodations from SAS for this course must provide the instructor with the ‘Notice of Approved Accommodations’ from SAS before accommodations will be provided. Arrangements for academic accommodations can only be made after the instructor receives the ‘Notice of Approved Accommodations’ from the student.

Students with approved accommodations are encouraged to submit the ‘Notice of Approved Accommodations’ to the instructor at the beginning of the semester because a reasonable amount of time may be needed to prepare and arrange for the accommodations.

Additional information about Student Accessibility Services is available at http://www.austincc.edu/sas/

Safety Statement
Austin Community College is committed to providing a safe and healthy environment for study and work. You are expected to learn and comply with ACC environmental, health and safety procedures and agree to follow ACC safety policies. Additional information on these can be found at http://www.austincc.edu/ehs. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the Emergency Procedures poster and Campus Safety Plan map in each classroom. Additional information about emergency procedures and how to sign up for ACC Emergency Alerts to be notified in the event of a serious emergency can be found at http://www.austincc.edu/emergency/.

Please note, you are expected to conduct yourself professionally with respect and courtesy to all. Anyone who thoughtlessly or intentionally jeopardizes the health or safety of another individual will be immediately dismissed from the day’s activity, may be withdrawn from the class, and/or barred from attending future activities.

Use of ACC email
All College e-mail communication to students will be sent solely to the student’s ACCmail account, with the expectation that such communications will be read in a timely fashion. ACC will send important information and will notify you of any college related emergencies using this account. Students should only expect to receive email communication from their instructor using this account. Likewise, students should use their ACCmail account when communicating with instructors and staff. Instructions for activating an ACCmail account can be found at http://www.austincc.edu/accmail/index.php.
Testing Center Policy
Under certain circumstances, an instructor may have students take an examination in a testing center. Students using the Academic Testing Center must govern themselves according to the Student Guide for Use of ACC Testing Centers and should read the entire guide before going to take the exam. To request an exam, one must have:

- **ACC Photo ID**
- Course Abbreviation (e.g., ENGL)
- Course Number (e.g., 1301)
- Course Synonym (e.g., 10123)
- Course Section (e.g., 005)
- Instructor’s Name

Do NOT bring cell phones to the Testing Center. Having your cell phone in the testing room, **regardless of whether it is on or off**, will revoke your testing privileges for the remainder of the semester. ACC Testing Center policies can be found at [http://www.austincc.edu/testctr/](http://www.austincc.edu/testctr/)

Student And Instructional Services
ACC strives to provide exemplary support to its students and offers a broad variety of opportunities and services. Information on these services and support systems is available at:
[http://www.austincc.edu/s4/](http://www.austincc.edu/s4/)
Links to many student services and other information can be found at:
[http://www.austincc.edu/current/](http://www.austincc.edu/current/)
ACC Learning Labs provide free tutoring services to all ACC students currently enrolled in the course to be tutored. The tutor schedule for each Learning Lab may be found at:
[http://www.austincc.edu/tutor/students/tutoring.php](http://www.austincc.edu/tutor/students/tutoring.php)
For help setting up your ACCeID, ACC Gmail, or ACC Blackboard, see a Learning Lab Technician at any ACC Learning Lab.

Math Department Contact Information
Department Chair: Constance Elko
Department email: math@austincc.edu

**Calendar:** (This calendar may be modified.)

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