Math 179/004: Math Applications and Philosophy

Syllabus: Fall 2015

Instructor: Ms. Kuzat
Office Location: Bin 320
Office Hours: Tuesday & Thursday: 10:00AM-12:00PM
Monday & Wednesday 1:20PM -1:50PM
Office Phone: (903) 886-5435
Office Fax: (903)886-5945
University Email Address: Hanan.Kuzat@tamuc.edu
Faculty Web Page: www.tamuc.edu

Course Description:

Math Applications and Philosophy (3sch). Applications of mathematics which may include finance, graph theory, linear programming, statistics, probability, coding theory, conic sections, logic, topics from the history of mathematics, the mathematical method and philosophy, and mathematical writings.
A passing grade in this course will satisfy the mathematics course requirement for most art, music, criminal justice, literature/language, and some sociology degrees. Included in the course this semester are studies in finance, statistics, geometry, and functions.

Student Learning Outcomes:

Upon completion of this course, students will be able to:
1) understand financial concepts such as interest, annuities, and amortization
2) organize, display, and describe data
3) understand geometric concepts
4) solve application problems dealing with selected functions
5) work with various function types, including exponential and logarithmic functions

Common Core Learning Objectives:

Critical Thinking: Students will be able to analyze, evaluate, or solve problems when given a set of circumstances or data.
This common core learning objective will be assessed on the final exam using key questions that will be embedded on final exams in all sections of Math 179.

Communications: In written, oral, and/or visual communication, TAMU-C students will communicate in a manner appropriate to audience and occasion, with evident message and organizational structure.
This common core learning objective will be assessed using class projects.

Empirical and Quantitative Skills: Students will be able to understand and utilize mathematical functions and empirical principles and processes.

This common core learning objective will be assessed using classroom activities to include: daily activities on topics such as personal finance, probability and statistics, application problems, and functions and graphs; homework; class projects as discussed in the Projects section of this syllabus, and embedded questions on the final exam.

Materials: The **textbook** for this course is Mathematics: A Practical Odyssey, by Johnson & Mowry, 7th Edition, Brooks-Cole Publishing (Chapters 4, 5, 8, and 10). Chapters can be purchased individually online. At CengageBrain.com, students will have the option to rent print textbooks, purchase print textbooks or e-books, or purchase individual e-chapters, all for substantial savings over average retail prices. CengageBrain.com also includes Cengage Learning's broad range of homework and study tools, and the site features a selection of helpful free support content. You can access the e-book options at http://www.cengagebrain.com/shop/isbn/9780538495059?cid=D2S.
You will need a **notebook** for taking notes and storing handouts, exams, etc. All turned-in work must be done in pencil.
A Texas Instruments (TI-83, TI-83 Plus, TI-84, or TI-84 Plus) **graphing calculator** is required for this course. Graphing calculators other than Texas Instruments calculators may be used but classroom instruction on calculators will be given for TI equipment only. *Note: Calculators that solve problems for students, such as TI-Nspire, TI 89 or higher, etc, are NOT allowed to be used for this class. Students are also required to clear the memory of graphing calculators before and after each exam.

Internet access and email access is required. Students need to check their e-mail regularly at the address that they have provided to me for class announcements. Access to a computer and the Internet will be needed for some homework assignments.

Word processing software (Microsoft Word or compatible) and **presentation software** (Microsoft PowerPoint or comparable) will be required for the course.

Calculator Loan Program: The Mathematics Department has set up a calculator loan program to support students. Students can borrow a calculator for a semester with a fee ($10 - $15 for TI-83/84). The loan program works on a first come, first served basis.

Instructional Methods: Class time will be spent in lecture, demonstrations, quizzes, group work, and tests.

Grading Policy:

Exams 60%
Daily Work 20% (including: Homework, Quizzes, Projects, and Attendance)
Comprehensive Final 20%

Grading Scale: A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 59 or below
Note: A grade of D is considered passing in this course.

Daily Work: Homework will be assigned most class periods. **It is extremely important to complete all homework in order to be prepared for the exams.** You are expected to complete all homework by the due date announced in class. **No late homework will be accepted past the due date.** All work should be completed in pencil, please.
If you have questions concerning the homework, email me, or come by my office during my office hours for help.

Quizzes: Both individual and group quizzes will be sprinkled throughout the semester. Each quiz will cover material that will be emphasized on the course exams. Since regular class attendance is expected, no make-up quizzes will be given. Your lowest quiz grade will be dropped at the end of the semester.

Project(s): Individual and group application projects related to course materials and projects will be assigned during the semester. These projects, designed to be completed outside of class, will vary in scope and should be completed neatly and thoroughly. The completion of these projects plays a part in meeting the Common Course Learning Objectives. In particular, a common major assignment throughout all sections of Math 179 will include visual presentations (PowerPoint, etc.) created on topics such as personal finance, statistics, geometric applications, and/or functions in the Real World.

Exams: There are three scheduled exams that will be given after completion of each chapter or section of material covered. Partial credit may be given on exams if all work is neatly shown on the exam. The exams will consist of a variety of problems and short answer questions, but the bulk of the questions on each exam will involve problem solving. When diagrams are drawn, students should be careful that figures are clearly marked and easily understood. Explanations should be clear and understandable. An item's response should not need interpretation if full credit is to be given. **Cell phones and other such devices must be turned off and stored out of the student's reach during an exam.** The only electronic device allowed during tests and quizzes is a stand-alone calculator and only with the instructor's permission.
I realize that at times throughout the semester, emergency situations may arise that affect a student's performance on an exam or even prevent a student from attending on an exam day. However, **make-up exams will not be given unless pre-arranged and accompanied by a documented University excused absence**. Therefore, I am willing to replace each student's lowest exam grade with the student's grade on final exam, provided the final exam section score is higher. This provision will only be applied to ONE exam, so students should make every effort to be present and well prepared for all exams.

Exam Schedule: Tests will be given at regular intervals throughout the semester, whenever a section of material is complete. Tentative testing dates are as follows, but subject to change:
Test 1 – Week of 9/28
Test 2 – Week of 10/26
Test 3 – Week of 11/30

Final Exam: The final exam is a comprehensive exam. The final exam for Math 179 is scheduled for **Thursday, December 14th from 10:30 AM – 12:30 PM**. Please note that this is an unusual time and make your arrangements to be present. Make-up final exams will not be allowed. Questions asked on this final exam will assist with the completion of Common Core Learning Objectives.

Attendance and Continual Enrollment: Due to the nature of this course, **attendance is a must to be successful in this class**. I will take roll every class period and it is expected that you follow the guidelines set forth by the Class Attendance Policy in the current Undergraduate Catalogue. Your attendance will be a part of your Daily Work grade for this course.
If you represent TAMU-C on an athletic team, departmental team, scholastic team, choir, band, or other group and must miss class, notify me in writing with the appropriate documentation within one week of the absence in order not to be counted absent. Arrangements for make-up work will be made at that time. All students should be aware that, according to University policy, they are NOT allowed to drop this math course, and that they must be continually enrolled in a math course until they have successfully completed their college-level math course. Therefore, all students should take this course seriously and make every effort to be in attendance and to be successful on the daily assignments and exams. Your efforts will help you quickly complete your Core Curriculum requirement for a college-level mathematics course. Unless it is an emergency, please do not approach me as I am beginning a class period's lesson so we may start on time. Please be in your seat and ready to work when the class period begins.

Supplemental Instructions: Throughout your work in this class, you will be given additional written instructions that govern the appearance, scope, and content of your projects. These supplemental instructions have the same force as the syllabus for grading purposes.

Getting Help Outside of Office Hours:

Tutoring: Students can choose to attend tutoring in the Math Skills Center, TRIO, and other on-campus tutoring sessions.

Mach III/TRIO Program: The Mach III/TRIO Program is available for students who qualify for additional resources, such as private tutoring. In order to qualify, students must meet certain conditions, such as being a first-generation college student. For more information, contact TRIO at 903-886-5833 or in the Halladay Student Services building, Room 301.

Math Skills Center: The Mathematics Department has a Math Skills Center (Binnion 328) that is available to all students. **Hours: M/W 8am – 8pm, T/R 8am – 6pm, and F 8am – 12 noon.** Computer tutorials, video libraries, and live tutors are there to help you with all subject matter in this course. I encourage you to take full advantage of this FREE service. Every Math 179 student is urged to attend the Math Skills Center in order to receive help in areas of math where the student may feel uncertain.
In addition, the **Academic Success Center** also offers supplemental instruction/tutoring for students and their hours can be found at the university web site.

Classroom Behavior: All students are expected to exercise self-discipline and respect for the rights of others at all times. Behavioral disruptions that interfere with the business of the classroom or with another individual's ability to learn may be referred to the Dean of Students.

Please be sure that all cell phones and other electronic devices are turned off or silenced. If you expect to have to get up during class, please select an inconspicuous position to minimize disruptions. Courtesy to others is important. That means respecting the opinions of others, and in general, doing your part to make this a positive learning environment for all students. Food and beverages, while acceptable, should be consumed as quietly as possible, and you must clean up after yourself.
Students will be expected to interact in class and via electronic means in an appropriate manner. All instructor contact information can be found on this syllabus and on the course website. Please use email for the quickest response to a question or concern.
"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (Student's Guide Handbook, Policies and Procedures, Conduct.)

Academic Integrity:
As stated in the Student Handbook, academic dishonesty in this class will not be tolerated. If any materials or equipment are found to be available to the student at any time considered inappropriate by the instructor, the very fact that the materials are inappropriately available to the student is grounds for an accusation of academic dishonesty. The instructor reserves the right to fail the student for the assignment or the course, as well as report the student to the Academic Dean and/or the Dean of Students. The instructor considers this an extremely serious matter. Please make sure you are not in a situation that could be viewed negatively in this regard.
I find that a majority of students are honest in doing their schoolwork. However, we must take measures to protect the academic integrity of the classroom**. I have a NO TOLERANCE policy for cheating and if you are caught cheating; you will fail that portion of the course, and possibly the entire course.**
Cheating in this course is defined as the following:

- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of nearby classmates.
- Having notes/practice work/etc. available during quizzes or tests.
- Possession or access to test items before the test is given.
- Deception in getting an excused absence to obtain the undeserved opportunity to make-up work.
- Use of cell phones or text messaging technology during exams or quizzes. **You may NOT use the calculator on your cell phones or any other similar electronic devices (such as I-Pods, I-Touch, etc.). IF ONE OF THESE DEVICES IS AVAILABLE, IN ANY WAY, DURING AN EXAM OR QUIZ, THE STUDENT WILL BE GIVEN AN AUTOMATIC "0" ON THE ASSIGNMENT.**
- Improper citations in written works, or using another person's ideas and words as your own without giving proper credit.
- **Any** method, no matter how well rationalized or accepted, which improves a person's grade by any means other than study and skillful performances on exams and/or other assignments.

Students found guilty of an act of academic dishonesty in this course will be subject to receiving an "F" in this course.
Students with Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other

things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce, Room 132, Gee Library
Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu

My Commitment: I will do my best to make quality presentations each class and, in return, I expect that you will do your best to learn the material presented in and outside classes. It is important that you be actively engaged in class activities. Questions are welcome in my classroom, and I will gladly schedule outside help for you if necessary. I know that together our efforts can contribute significantly to your education in this class.

BY REMAINING ENROLLED IN THIS COURSE, ALL STUDENTS AGREE TO ABIDE BY THE POLICIES OF THIS CLASS, AS STATED IN THE SYLLABUS.

Any changes to this syllabus will be communicated directly to you in class by the instructor. You are responsible for being aware of any such changes.

Good Luck and WORK HARD!!!

Math 179 MWF Tentative Schedule (Fall 2015) For Students

Week 1 (August 31& September 2)
Syllabus, 4.1

Week 2 (September 7& 9)
Labor Day, 4.2

Week 3 (September 14 & 16)
4.3, 4.4

Week 4 (September 21& 23)
Statistics Activity, Review for Exam 1

Week 5 (September 28 & 30)
Exam 1, 5.1

Week 6 (October 5& 7)
5.2, 5.3

Week 7 (October 12 & 14)
5.3, 5.4

Week 8 (October 19 & 21)
5.6, Finance Activity

Week 9 (October 26 & 28)
Review for Exam 2, **Exam 2**

Week 10 (November 2 & 4)
8.1, 8.2

Week 11 (November 9 & 11)
8.2, 8.3

Week 12 (November 16 & 18)
Geometry Activity, 10.0

Week 13 (November 23& 25)
10.1, Thanksgiving Holiday

Week 14 (November 30 & December 2)
Review for Exam 3, **Exam 3**

Week 15 (November 30 & December 2)
Review for Final Exam

Week 16 (December 14th)
FINAL EXAM, 1:15 AM – 3:15 PM