

MARTIN COMMUNITY COLLEGE
COURSE SYLLABUS
Semester/Year: Spring 2010

COURSE NUMBER: MAT 115 – (5H1E)	INSTRUCTOR:	Danny Talbert
COURSE TITLE: Mathematical Models	OFFICE NO:	Building 4, Office 41
CREDIT HOURS: 3	OFFICE/VIRTUAL HOURS:	TTH 4:00 – 6:00
CONTACT HRS/WK: 4 (2 Class, 2 Lab)	PHONE NO:	(252) 789 - 0273
PREREQUISITES: MAT 070 or appropriate score on placement test.	FAX:	(252) 792 – 0826
COREQUISITES: None	E-MAIL:	dtalbert@mcc.martincc.edu

COURSE DESCRIPTION:

This course develops the ability to utilize mathematical skills and technology to solve problems at a level found in non-mathematical-intensive programs. Topics include application to percent, ratio and proportion, formulas, statistics, function notation, linear functions, probability, sampling techniques, scatter plots, and modeling. Upon completion, students should be able to solve practical problems, reason and communicate with mathematics, and work confidently, collaboratively, and independently.

PROGRAM LEARNING OUTCOMES:

1. Demonstrate appropriate mathematical skills required for academic and work-related tasks.
2. Apply principles of sound critical thinking to analyze and solve problems and make logical decisions.
3. Demonstrate effective speaking, writing, and reading skills.
4. Demonstrate appropriate technology skills required for academic and work-related tasks.

COURSE LEARNING OUTCOMES:

At the completion of this course the students should be able to:

1. Apply a simple model of organized strategies to solve problems. Read a problem and decide what is given and what is to be found. Develop a plan for solving the problem. Check the answer and decide if it is reasonable
2. Solve ratio, proportion, and percent problems and apply the concepts to solve financial management problems such as installment loans, credit cards, home mortgages, and annuities.
3. Solve linear equations in any form including rearranging the parts of a literal equation. Formulating linear equations given the requisite data, graph resulting equations and interpret the resulting graph.
4. Construct frequency polygons, histograms and circle graphs and compute basic statistics, including the mean, median, mode, variance, standard deviation, probability of an independent/dependent event, odds of an event and the use of fundamental counting principle.

REQUIRED TEXTBOOKS:

Angel, Allen R., Abbott, Christine D. and Runde, Dennis C. (2009). *Survey of mathematics with applications*, (8th). Boston, MA: Pearson, Addison Wesley. ISBN: 0-321-501312-2.

SUPPLEMENTAL RESOURCES:

- 1) **MyMathLab** – MyMathLab is a series of text-specific, easily customizable online courses for Pearson Education textbooks in mathematics and statistics. Powered by CourseCompass (Pearson Education's online teaching and learning environment) and MathXL (our online homework, tutorial and assessment system).
- 2) **MathXL**, www.mathxl.com – MathXL is a powerful online homework, tutorial and assessment system that accompanies Pearson Education textbooks in mathematics or statistics. Students can take chapter tests in MathXL and receive personalized study plans based on their test results. The study plan diagnoses weaknesses and links students directly to tutorial exercises for the objectives they need to study and retest. Students can also access supplemental animations and video clips directly from selected exercises.
- 3) **InterAct Math Tutorial Website:** www.interactmath.com – Get practice and tutorial help online! The interactive InterAct Math tutorial website provides algorithmically generated practice exercises that correlate directly to the

exercises in the book. Students can retry an exercise as many times as they like with new values each time for unlimited practice and mastery. Each exercise is accompanied by an interactive guided solution that provides helpful feedback for incorrect answers. Students can also view a worked-out sample problem that guides them through an exercise similar to the one they're working on.

4) **Video Lectures on CD with Optional Captioning** – The video lectures for this text are also available on CD_ROM, making it easy and convenient for students to watch the videos for a computer at home or on campus. The complete digitized video set, affordable and portable for students, is ideal for distance learning or supplemental instruction (ISBN 13: 978-0-321-51091-4; ISBN 10: 0-321-51091-7)

5) **Academic Skills Center (ASC)**

This center is located in building 4 room 38B on the Main Campus. Each semester a schedule of hours is posted and students may drop in at any time to receive extra help in any course. The center has tutorial software in a variety of courses along with instructors and peer tutors to assist students. Use of this resource has been extremely helpful to students taking MAT 115 in the past.

LEARNING/TEACHING METHODS:

Lecture, student discussion, guided and independent practice, cooperative learning lab activities, computer tutorials and outside reading assignments.

ASSESSMENTS/METHODS OF EVALUATION:

To demonstrate attainment in program and course learning outcomes for MAT 115, one must achieve an overall average of 70% or better. To achieve these outcomes, you must successfully complete the following:

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| 1. Major Tests | Average will count 50 % |
| 2. Graded Homework, Hybrid Assignments and Outside Reading Assignments | Average will count 30 % |
| 3. Final Exam | Exam will count 20 % |

GRADING POLICY:

Grades will be assigned on the following scale:

93 – 100%	A
85 – 92%	B
77 – 84%	C
70 – 76%	D
Below 70%	F
Administrative Withdrawal	WF*

*Administrative withdrawal is used when students do not meet the attendance requirement.

COURSE OUTLINE:

Week – 1, 2 & 3

Course Introduction
Critical Thinking Skills (Chapter 1)
Sets (Chapter 2)

Week – 4, 5, 6 & 7

Logic (Chapter 3)
Number Theory and The Real Number System (Chapter 5.1 – 5.6)
Algebra, Graphs and Functions (Chapter 6)

Week – 8, 9, 10 & 11

The Metric System (Chapter 8)
Consumer Mathematics (Chapter 11)

Week – 12, 13, 14, & 15

Probability (Chapter 12)
Statistics (Chapter 13)

Week – 16

Review and Final Exam

THIS COURSE OUTLINE IS A GUIDE AND IS SUBJECT TO CHANGE!
KEEPING UP WITH CHANGES IS YOUR RESPONSIBILITY.

STUDENT ATTENDANCE POLICY:

- The current MCC Attendance Policy applies which can be found in the Martin Community College Career Catalog for policies and curriculum requirements online at www.martincc.edu. Attendance at every class is necessary for maximum benefits from this course. Students are required to attend the face to face class meetings a minimum of 85% of the time in order to receive credit for the course. Attendance for the hybrid portion of the course will be accounted for in given assignments. Three tardies and/or early departures equal one hour's absence. Missing more than 10 minutes at the beginning or end of class will constitute an absence not a tardy.
- Absence from class may be excused in the following circumstances:
 - Verifiable death of an immediate family member
 - Verifiable hospitalization of self or immediate family member
 - Documented emergency at the discretion of the instructor.(Definition of "immediate family member," mother, father, sibling, spouse, child, grandparent)
- Students will be counted absent from the date of registration.
- Students must be present in at least one class during the first ten percent of a course in order to be considered enrolled in the class. If a student has not attended at least one class by the ten percent census date, the instructor will administratively withdraw the student.
- Students who miss more than six contiguous contact hours may be administratively withdrawn from the class by the instructor and given a grade of "WF." The "WF" will be equivalent to an "F" when calculated into the student's GPA.
- Students may remove a "WF" by submitting appropriate paperwork for an official withdrawal by the last day to officially withdraw without receiving an "F." The last day to officially withdraw without receiving an "F" is published in the academic calendar for each academic year.

REQUEST FOR EXCUSED ABSENCES FOR RELIGIOUS OBSERVANCES

- In compliance with G.S. 115D-5, MCC policy permits a student to be excused, with the opportunity to make-up any test or other missed work, a minimum of two excused absences per academic year for religious observances required by the student's faith. The policy limits the excused absences to a maximum of two days per academic year.
 - Students who wish to be excused for a Religious Observance required by their faith must complete and submit a request form to the instructor(s) prior to the census date of each class. The *Request for Excused Absences for Religious Observances* form can be picked up from Student Services. This does not supersede the college-wide attendance policy as outlined in the college catalog or syllabus, with the exception of a reasonable accommodation for the make-up of missed course work.

COURSE POLICIES:

Assignment Due Dates:

All assignments are due at the beginning of a class period. If a student is absent when an assignment is due it is their responsibility to see that the instructor receives that assignment the next time the student is in class. If this happens frequently a student's grade for that work may be lowered 10 points each day that it is late.

Make-up Policy:

Test can be made up only in cases of legitimate verifiable absences and must be made up within three days.

Cellular Phones and Pagers

Cell phones and pagers should be set to silent mode before entering class.

Academic Integrity Statement

The President or any other authorized college official may dismiss, suspend, or expel any student who disrupts the legal mission, educational processes or function of the college. Deliberately cheating or knowingly and intentionally engaging in acts of plagiarism is a violation of the Student Governance and Conduct Code Cheating will result in a failing grade for the course and possible expulsion.

Open Door Policy

Martin Community College is an equal opportunity institution and maintains an "open door policy" for eligible applicants and serves all students regardless of race, color, creed, sex, age, handicap, religion, or national origin.

Contact Person

If you cannot reach your instructor, you may contact Dr. Phyllis Broughton, Dean of Academic Affairs and Student Services at (252) 792 – 0247 by phone, pbroughton@martincc.edu by e-mail, or in person at her office in Building 2, Room 33.

Accessing the MCC Career Catalog

To access the Martin Community College Career Catalog for policies and curriculum requirements, please go online to www.martincc.edu.

Disability Statement

Martin Community College Supports the Americans with Disabilities Act and is sensitive to the needs of applicants with documented disabilities. If you have a need for a disability-related accommodation, please notify the Student Services counselor at (252) 792-0293.