MATH 0302/1332 NON-STEM Corequisite
Beginning Algebra/Contemporary Mathematics I

Western Texas College

I. Basic Course Information
   A. MATH 0302 Course Description: The course supports students in developing skills, strategies, and reasoning needed to succeed in mathematics, including communication and appropriate use of technology. Topics include the study of numeracy and the real number system; algebraic concepts, notation, and reasoning; quantitative relationships; mathematical models; and problem-solving.
      1. This is a mainstreamed intensifier providing contact hours for additional, just-in-time instructional support for the student's success in MATH 1332.
   B. MATH 1332 Course Description: Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communications should be embedded throughout the course.
      1. The final overall grade the student earns in Math 1332 will also be the final overall grade the student earns in Math 0302.
   C. Any required prerequisites: Students must have the appropriate placement test score.
   D. Advancement Via Individual Determination (AVID) learning strategies will be implemented periodically throughout the course.
   E. This course has been designed for those students whose chosen field of study is a NON-STEM mathematical pathway. If the student's field of study changes to a STEM mathematical pathway, then additional mathematics course work maybe required.
   F. Project Base Learning (PBL) is an active learning method in which students gain knowledge and skill by investigating and responding to a tangible, engaging and complex question, problem or challenge.
   G. Online course content is administered through the college's learning management system (LMS), Moodle, also called eCampus. A link to Moodle can be found on mywtc.edu or the college's home page, www.wtc.edu (the big M with a graduation cap).
II. Student Learning Outcomes
   A. Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
   B. Define, represent, and perform operations on real number, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.
   C. Apply algebraic reasoning to manipulate expressions and equations to real world problems.

D. Use algebraic reasoning to solve problems that require ration, rates, percentages, and proportions in a variety of contexts using multiple representations.
E. Use graphs, tables, and technology to analyze, interpret, and compare data sets.
F. Construct and use mathematical models in verbal, algebraic, graphical and tabular form to solve problems from a variety of contexts and to make predictions and decisions.
G. Apply the language and notation of sets.
H. Determine the validity of an argument or statement and provide mathematical evidence.
I. Solve problems in mathematics of finance.
J. Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems.
K. Interpret and analyze various representations of data.
L. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world setting, including, but not limited to, personal finance, health literacy, and civic engagement.

III. Course Requirements
A. Major Requirements—All major requirements must be proctored.
1. In-Class Participation
2. Unit Exams
3. Midterm Exam
4. Final Exam
B. Minor Requirements
1. Binder Checks
2. Homework
3. Quizzes
4. Projects

IV. Testing Requirements
A. Students are NOT allowed to use their book or notes of any kind while completing major requirements.

V. Information on Books and Other Course Materials
A. Required Book: A Survey of mathematics with Applications, 9th edition, by Angel, Abbott, and Runde. ISBN: 978-0-321-75966-5
B. Calculators: Students must have a calculator that provides them with the ln (natural log) function key. A TI-84 or higher is strongly recommended. However, the TI-89, TI-Inspire with CAS or any other calculator with CAS capability are not permitted.

VI. Other Policies, Procedures and important dates: Please refer to the WTC Course Catalog for the following:
A. Campus Calendar
B. Final exam schedule
C. How to drop a class
D. Withdrawal information
E. Student Conduct

F. Academic Integrity
G. Class Attendance
H. Students with disabilities

VII. Planned Course of Study

Chapters and Sections to be covered throughout the semester	
Ch. 2—Sets	2.1 Set Concepts 2.2 Subsets 2.3 Venn Diagrams and Set Operations 2.4 Venn Diagrams with Three Sets and Verification of Equality of Sets 2.5 Applications of Sets
Ch. 3—Logic	3.1 Statements and Logical Connectives 3.2 Truth Tables for Negation, Conjunction, and Disjunction
Ch. 11—Consumer Mathematics	11.1 Percent 11.2 Personal Loans and Simple Interest 11.3 Compound Interest 11.4 Installment Buying 11.5 Buying a House with a Mortgage 11.6 Ordinary Annuities, sinking Funds, and Retirement Investments
Ch. 12—Probability	12.1 The Nature of Probability 12.2 Theoretical Probability 12.3 Odds 12.4 Expected Value (Expectation) 12.5 Tree Diagrams 12.6 OR and AND Problems 12.7 Conditional Probability
Ch. 13—Statistics	13.3 Frequency Distributions and Statistical Graphs 13.4 Measures of Central Tendency 13.5 Measures of Dispersion 13.6 The Normal Curve 13.7 Linear Correlation and Regression

Disclaimer: Schedule and content is subject to change at the instructor's discretion.

Last Modified/Reviewed: August 23, 2019