CENTRAL TEXAS COLLEGE
SYLLABUS FOR DSMA 0492
NCBO INTRODUCTORY ALGEBRA

Semester Hours Credit:  4

INSTRUCTOR: ______________________________

OFFICE HOURS: ______________________________

I. INTRODUCTION

NCBO Introductory Algebra is the developmental mathematics co-requisite course designed to be completed with MATH 1332 Contemporary Mathematics concurrently.

This is accomplished through developmental education interventions that use innovative learning approaches that, compared to traditional lecture-only classes, more effectively and efficiently prepare students to advance. This course specifically focuses on the concepts of Developmental Mathematics I & II necessary for the student to complete Contemporary Mathematics concurrently.

The course includes an in-depth study and application of numeracy and the real number system; algebraic concepts, notation, and reasoning; quantitative relationships; mathematical models; and problem solving. Additional topics include order of operations, problem solving with sales tax, commission, discounts, compound interest, and linear equations. This course will assist the student in developing the critical-thinking and problem-solving skills necessary for other developmental or college-level courses.

This course is required for students who have not achieved a passing score on the TSI Assessment. Students must be enrolled in a specific Contemporary Mathematics (MATH 1332) concurrently.

II. LEARNING OUTCOMES

Upon successful completion of this course, NCBO Introductory Algebra, the student will:

A. Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts. (F1, F2, F5, F10)

B. Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts. (F1, F2, F3, F4, F6, F8, F9)
C. Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations. (F2, F4, F8, F9)

D. Apply algebraic reasoning to manipulate expressions and equations to solve real world problems. (F3, F4, F8, F9)

E. Use graphs, tables, and technology to analyze, interpret, and compare data sets. (F2, F3, F5, F8, F10)

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. (F2, F3, F4, F5, F6, F8, F9, F10)

G. Compute basic operations of addition, subtraction, multiplication and division of whole numbers, fractions, decimals and signed numbers. (F1, F3, F4, F5, F8)

H. Demonstrate ability to find length of missing sides of triangle using Pythagorean Theorem and similar triangles. (F1, F3, F4, F5, F8)

I. Analyze and solve problem that pertain to, but not limited to angles, distance, perimeter, area, volume, surface area, and probability. (F1, F3, F4, F5, F8)

J. Solve and graph linear equations and inequalities. (F1, F3, F4, F5, F8, F9, F10, F12)

K. Use electronic and other media, such as the computer and DVD, to reinforce and supplement the learning process. (F1, F2, F3, F6)

L. Demonstrate critical thinking, communication, and empirical and quantitative skills. (F1, F3, F4, F7, F9)

Some learning outcomes are followed by letters and numbers; i.e., C9 or F11. These refer to SCANS foundations skills (F) and workplace competencies (C). View a chart showing these skills at http://www.ctcd.edu/scans. For more on the (Labor) Secretary's Commission on Achieving Necessary Skills, or SCANS, go to the U.S. Department of Labor site at http://wdr.doleta.gov/SCANS/.

III. INSTRUCTIONAL MATERIALS/RESOURCES

To assist in this course, a variety of materials both in and out of the classroom/laboratory will be required and used. The materials that you will need to purchase for this semester are listed at the following URL address:

http://www.ctcd.edu/books

***Required: Set of earphones for personal use in the lab.***

NOTE: A calculator will be used in this course. It is recommended to use the Casio FX-115ES Plus.
IV. COURSE REQUIREMENTS

A. Assignments are given in MyLabs (MML) and are due as scheduled by your instructor. The instructor will monitor students’ progress in completing the assignments.

B. Completion of a required number of hours in the computer lab and completion of all assignments are required for a student to be eligible to take the final examination and to achieve a passing grade in this course. The lab hour requirement will be completed in the computer lab outside of class time.

All lab hours must be completed by the end of the term. If a student fails to complete all the required lab hours, he or she will not be allowed to take the final exam.

V. EXAMINATIONS AND ASSIGNMENTS

A. All assignments can be found in the course management system. Assignments will have specified deadlines to be completed and zeroes will be submitted following the due date.

B. During the co-requisite course, MATH 1332, periodic comprehensive unit examinations will be given during the course in order to evaluate a student's progress. Students may not "retake" any exam. No "early" finals, take-home or open-book examinations will be administered. No examination grades will be dropped.

C. If the student is absent from class or does not accumulate the required computer lab hours as instructed, it is his or her responsibility to contact his or her classmates/instructor to determine missed instruction. Each student must make appropriate arrangements to acquire assignments, announcements, lecture notes, and other pertinent information missed. Material on each class topic is available in the course management system. Students should use these resources to catch up on any missed lectures.

D. Class exams will be returned to students within three class periods after the test is administered.
VI. SEMESTER GRADE COMPUTATIONS

A. Students that are successful in this course will receive a grade of higher than a 70%. The same letter grade will be given in the paired credit bearing course.

B. Students that are not successful in the non-course-based-option will NOT be considered TSI Complete.

Final grades will follow the grade designation for developmental courses below:

- "A" - Weighted average of 90 – 100%
- "B" - Weighted average of 80 – 89%
- "C" - Weighted average of 70 – 79%
- "D" - Weighted average of 60 – 69%
- "F" - Weighted average of 0 – 59%
- "W" - Withdrawal from course (initiated by student)

Students may receive their grades through:

The CTC WebAdvisor (Online) System. Instructions for using the WebAdvisor Online Registrations and Grades by computer are listed in the schedule bulletin.

*Grades will not be posted.*

VII. NOTES AND ADDITIONAL INSTRUCTIONS

A. Withdrawal from Course: It is the student's responsibility to officially withdraw from a class if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file an Application for Withdrawal or Application for Refund. The withdrawal form must be signed by the student.

An Application for Withdrawal will be accepted at any time prior to Friday of the 12th week of classes during the 16 week fall and spring semesters. The deadline for sessions of other lengths is as follows:

- 12 week session - Friday of the 9th week
- 10 week session - Friday of the 7th week
- 8 week session - Friday of the 6th week
- 6 week session - Friday of the 4th week
- 5 week session - Friday of the 3rd week
The equivalent date (75% of the semester) will be used for sessions of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin.

Students who officially withdraw will receive the grade of "W" provided their attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with the college before they may be considered for withdrawal.

Before withdrawing from any developmental course, the student should seek the advice of Guidance and Counseling so that the student does not initiate an action that would inadvertently have negative repercussions on his/her enrollment or Financial Aid.

B. **Cellular Phones and Pagers**: Cellular phones and pagers must be turned off while the student is in the classroom or laboratory.

C. **American’s With Disabilities Act (ADA)**: Disability Support Services provide services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Explore the website at [www.ctcd.edu/disability-support](http://www.ctcd.edu/disability-support) for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.

D. **Civility**: Individuals are expected to be cognizant of what a constructive educational experience is and respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.

E. **Office Hours**: Full-time instructors post their office hours outside their office doors. Part-time instructors may be available by appointment. Please feel free to see your instructor should you find yourself having difficulties with this course.
VIII. COURSE OUTLINE

Within this course we will remediate the necessary concepts of Pre-Algebra and Beginning Algebra for the student to be successful in the credit bearing paired course, Contemporary Mathematics (the student must be enrolled in MATH1332 concurrently). The concepts may include, but not limited to the following:

- Number Systems
- Operations on real numbers
- Order of Operations
- Basic Fraction Operations
- Basic Decimal Operations
- Solve problems involving percents
- Solve problems involving proportions
- Exponent Rules
- Properties of radicals
- Basic graphing
- Inequalities
- Solving linear and radical equations
- Word Problems
- Calculator Usage
- Reading Bar/Line Graphs
- Measurements of central tendencies