THE UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE, TRINIDAD AND TOBAGO

Course Title: Mathematics for Social Sciences

Course Code: ECON 0001

Course Type: Core

Course Level: I

Semester: I & II

Department: Economics

Faculty: Social Sciences

Credits: 0

Pre-requisites: None

Mode of Delivery: Face-to-Face

Teaching Team	
Course Coordinator	Dr. Benjamin Ramkissoon
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Course Description

The course is designed specifically for students who were unsuccessful in the Mathematics Proficiency Test (MPT). In preparation for ECON 1003, the course aims to refresh students' knowledge of CSEC/O Level mathematics as well as address any deficiencies students may have with the material at this level. In particular the course reviews the areas of CSEC/O Level mathematics that are considered to be pre-requisites for ECON 1003. Using a thematic approach and associated worksheets deficient mathematic skills will be addressed. Upon successful completion of this course, the student is eligible to enroll in ECON 1003.

Course Rationale

A strong background in mathematics is required for success in the University's Economics Programme. Failure to pass the MPT usually indicates math deficiencies associated with the CSEC/0 Level mathematics curriculum. To improve a student's successful completion of all required math courses in the Economics Programme, the University implemented ECON 0001 to strengthen math skills in students who failed the MPT.

Course Learning Outcomes

At the end of this course the successful student will be able to:

1. Apply basic mathematical concepts to practical situations.
2. Solve problems in the area of economics, accounting and management by applying the appropriate mix of mathematical concepts and methods.
3. Manipulate mathematical symbols and terminology.
4. Solve linear, quadratic, polynomial, and power equations.
5. Solve linear inequalities.
6. Solve a system of simultaneous equations in two variables using the elimination method.
7. Interpret the mathematical concepts, symbols and terminology used in economics, accounting and management.
8. Communicate using clear, accurate, concise writing.

Course Content

This course is organized to engage students in the following particular sets of mathematic skills:

1. Algebraic Expressions: directed numbers, simplification, substitution, and cancellation, the application of the four rules to algebraic expressions.
2. Algebraic Fractions: simplification; application of the four rules.
3. Sets: definitions; operation of union, intersection and complement; number of elements in a set.
4. Linear Equations: cross multiplication; changing the subject of the formula.
5. Simple Inequalities: manipulating inequalities; solving inequalities.
6. Simultaneous Equations.
7. Factorisation: common factors, grouping, difference of two squares, perfect squares.
8. Solution of Quadratic Equations: factor, product/sum & quadratic formula methods.
9. Solution of Quadratic Equations: completion of the square.
10. Functions: functional notation, types of functions, power functions, inverse functions.
11. The Straight Line: generic equation; slope/gradient, y-intercept; x-intercept; finding y-value for a specified x-value, finding x-value for a specified y-value.

NB. Worded problems will be incorporated in all of the above.

Required Resources

- Raymond Toolsie, Mathematics: A Complete Course with CXC Questions Volumes One & Two, Third Edition Caribbean Educational Publishers. 2010.

Course Calendar

Session	Activity
1	Registration for Sessions
2	Worksheet #1 - Sets; Algebra - Directed Numbers, Simplification
3	Worksheet #2 - Algebra - the Four Rules applied to Algebraic Expressions
4	Worksheet #3 - Algebra – Substitution and Algebraic Fractions
5	Worksheet #4 - Algebra – Linear Equations, Operations, Inequalities
6	Worksheet #5 - Simultaneous Equations [First Online Exam]
7	Worksheet #6 – Factorization
8	Worksheet #7 - Quadratic Equations
9	Worksheet #8 – Functions [Internal Exam]
10	Worksheet #9 - Power Functions
11	Worksheet #10 - Changing the Subject of a Formula
12	Worksheet #11 - The Straight Line [Second Online Exam]

Teaching Strategies

The course will be delivered by way of problem-based learning activities, demonstrations and co-operative learning activities. These strategies will seek to refresh students' knowledge of the course content as well as build students' confidence in the subject matter. Students will be provided with a minimum of two (2) contact hours weekly.

Course Assessment

Assessment	Learning Outcomes							Weighting %	Assessment Description	Duration
	1	2	3	4	5	6	7			
Online Exams	✓	✓	✓	✓	✓	✓	✓	10%	In-course assessment	2 hours
Participation	✓	✓	✓	✓	✓	✓	✓	10%	In-course assessment	NA
Internal Exam	✓	✓	✓	✓	✓	✓	✓	20%	In-course assessment	1.5 hours
Final Exam	✓	✓	✓	✓	✓	✓	✓	60%	Final Examination	2 hours

EXPECTATIONS

As a student enrolled in Mathematics for Social Sciences, your lecturers expect that you will be fully engaged in the traditional classroom, the cooperative learning activities and all relevant activities. Research has shown that students learn best through collaboration and interaction: accordingly, you are encouraged to participate in and complete all worksheets and classroom activities.

CLASS ATTENDANCE POLICY

Regular class attendance is essential. A student who misses a class will be held responsible for the class content and for securing material distributed. Attendance is the responsibility of the student and consequently nonattendance will be recorded. Students would be reminded of the implications of non-responsible attendance.

EXAMINATION POLICY

Students are required to participate in coursework on the prescribed dates. Absence from in-course tests will only be accommodated in extenuating circumstances based on documented evidence of the circumstances. Such documentation must be presented to the Course Lecturer/Tutor no later than the start of the week following the test. Please review the handbook on
Examination Regulations for First Degrees, Associate Degrees, Diplomas, and Certificates http://sta.uwi.edu/resources/documents/Exam_and_GPA_regulations.pdf

POLICY REGARDING CHEATING

Academic dishonesty including cheating is not permitted. For more information, read Section V(b) Cheating in the *Examination Regulations for First Degrees, Associate Degrees, Diplomas, and Certificates* http://sta.uwi.edu/resources/documents/Exam_and_GPA_regulations.pdf

STATEMENT ON DISABILITY PROCEDURE

Students should refer to the University of the West Indies St Augustine Campus, Student Disability policy https://sta.uwi.edu/resources/policies/Student_Disability.pdf

NOTES TO STUDENTS

- Registration for lecture sessions will be done online via myeLearning. Please see the news forum of myeLearning for the date and time of this activity.
- The Course Lecturers will be available for consultations during specified **Office Hours** and at other times by appointment.
- Participation in class discussion and problem-solving activities is a critical input to the feedback process within a classroom session. The rules of engagement for these discussions will be defined by the Course Lecturer and/or Tutor at the first lecture and first tutorial respectively.
- Under no condition should a student come to a class unprepared to contribute to the class proceedings.
- Overall students should invest a minimum of **seven (7) hours per week** apart from lectures, tutorial classes and office hours to this course. This breaks down to one (1) hour per day.