



COURSE OUTLINE SEM 1, 2011

COURSE NAME: BASIC MATHEMATICS: PUBLIC MANAGEMENT, ENGLISH & COMMUNICATION

COURSE CODE: BMS1100: NQF level 4; 12 NQF credits

COURSE COORDINATOR DETAILS: Mrs. S. Mwewa, Tel. 061-207 2351, Office no. 405, Blue Floor, Lecture Building

SHORT COURSE DESCRIPTION:

This course is a temporary course which is designed to uplift the level of mathematical skills for students who are studying in areas, Public Management, English and communication. The course is structured in such a way that in the end, confidence in handling simple mathematical calculations is enhanced.

COURSE LEARNING OUTCOMES:

By the end of the course, students should be able to

- Demonstrate and strengthened mathematical knowledge to cope with daily use of mathematics.
- Explain Basic mathematical concepts and carry out simple calculations.
- Demonstrate basic competencies in the use of basic mathematical skills.
- Apply mathematical concepts to real business and management situations.

ASSESSMENT STRATEGIES:

The assessment will be based on continuous evaluation and end of semester examination. The continuous evaluation is made up of class tests and/or assignments. These will contribute 40% to the final assessment. The end of semester is one three-hour paper. This will contribute 60% to the final assessment.

SPECIAL RULES APPLICABLE TO THIS COURSE:

1. Two class tests/assignments will be written during the course of the semester. **A candidate scores a Zero in a test or assignment not done on schedule.** (See point 2 below)
2. A supplementary test may be arranged for candidates who, for whatever reason, missed a class test. No candidate will be allowed more than one supplementary test.
3. To gain entry to the semester examination, a candidate must have obtained a continuous assessment average of NOT less than 50%.
4. The semester examination will consist of one three-hour written paper.
5. The pass mark for the course is 50% with a sub-minimum of 40% in the semester examination.
6. Class tests will be written on the exact dates as will be announced at least one week in advance by the Lecturer(s) concerned.

SYLLABUS CONTENT:

1. **Arithmetic Operations (Weeks 1 & 2)**
 - 1.1 Fundamental operations on whole numbers
 - 1.2 Natural Numbers – Primes and Composites
 - 1.3 Common Divisors and Multiples (HCD and LCM)
 - 1.4 Fractions (Vulgar and Decimals)
2. **Powers and Roots. Real Numbers(Week 3)**
 - 2.1 Natural-Number Exponents and Roots
 - 2.2 The Irrational Number and Real Numbers

- 2.3 Integral Exponents
- 2.4 Arithmetic nth Root
- 2.5 Rational-Number Exponents

3. Basic Algebraic Expressions and operations (week 4)

- 3.1 Addition, Subtraction, Multiplication and Division
- 3.2 Symbols of grouping
- 3.3 Numeric and Algebraic Expressions
- 3.4 Monomials and Polynomials

4. Linear Equations (Weeks 5 & 6)

- 4.1 Linear Equations in One Unknown (including fractional coefficients)
- 4.2 Applications of Linear Equations in One Unknown

TEST 1: 19 March 2011, TIME: 16:00-18:00, VENUE: Engineering Basement, Sections A, B, C.

5. Elementary Set Theory (week 7)

- 5.1 Elements of a set
- 5.2 Methods of describing a Set
- 5.3 Set Operations
- 5.4 Venn Diagrams and Applications

6. Matrix Algebra (not exceeding 2 x 2) (Week 8 & 9)

- 6.1 Row and Column Vectors
- 6.2 Addition, Subtraction and Multiplication of Vectors
- 6.3 Addition, Subtraction and Multiplication of Matrices
- 6.4 Determinant of a matrix

TEST 2: 16 April 2011, TIME: 17:00-19:00 VENUE: Engineering Basement, Sections ABC.

7. Basic Financial Mathematics (Weeks 15, 16 & 17)

- 7.1 Ratio, Proportions and Percentage
- 7.2 Simple Interest and Simple Discount
- 7.3 Basic Concepts of Compound Interest

TEST 3: 7 May 2011, TIME: 13:00-15:00 VENUE: Engineering Basement, Sections ABC.

READING LIST:

▪ **Prescribed Textbook:**

Extended Mathematics for IGCSE
David Rayner
Oxford University Press
ISBN 0199147868

Recommended Textbook

Foundation Mathematics
John Wiley & Sons Ltd. Chichester, 1998
L.R Mustoe & M.D.J Barry
ISBN 0-471-970421