## The Islamia University of Bahawalpur

## University College of Veternary and Animal Sciences

**B.S in Animal Sciences 1st Semester (Spring 2020-2024)**

**Course Title: Elementary Mathematics 1**

**Couse Code: Math-01106**

**Course Instructor: Syeda Seenam Fatima**

**Objectives:** Enable the students to apply the algebraic concepts and techniques in their respective disciplines.

**Assessment Criteria**

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| **Exam/Assessment** | **Marks** |
| Mid Term | 30 |
| Final Term | 50 |
| Assignments, Quiz, Presentations | 15 |
| Class Participation & Attendance | 05 |
| **Total** | **100** |

**Course Description / Outlines**

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| **Sr. No.** | **Title** | **Description** |
| 1-6 | Real Number System | Complex Numbers  Introduction to sets  Set operations  Functions  Types of functions |
| 7-13 | Matrices | Introduction to matrices  Types of Matrices  Matrix Inverse  Determinants  System of Linear equations  Cramer’s rule |
| 14-19 | Quadratic Equations | Solution to Quadratic Equations  Qualitative Analysis of Roots of Quadratic Equations  Equations reducible to Quadratic Equations  Cube roots of unity  Relation between roots and Coefficients of quadratic equations |
| 20 | Sequence and Series | Arithmetic Progression  Harmonic Progression  Geometric Progression |
| 21-24 | Binomial Theorem | Introduction to mathematical induction  Binomial theorem with rational and irrational indices |
| 25 | Trigonometry | Fundamentals of Trigonometry  Trigonometric identities |

**Recommended Books**

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| **Sr. No.** | **Name of Author** | **Name of Book** |
| 1 | Dolciani,M.P.,Wooton ,E.F.Beckenback,S.Sharron,1985 | Algebra2 and Trigonometry,Houghton and Mifflin  USA. |
| 2 | Kaufmann J.E,.1987 | College Algebra and Trigonometry,PWS –Kent Company ,Boston ,USA |
| 3 | Swokowski,E.W.,1986 | Fundamentals of Algebra and Geometry (6th edition ),PWS-Kent Company ,Boston ,USA |