



الكلية التقنية بصلالة

**Salalah College Of Technology**  
**Information Technology Department**  
**COURSE DESCRIPTIONS**

**COURSES OFFERED IN OTHER DEPARTMENTS**

**LIST OF COURSES**

- 1) FPMT 0001 BASIC MATH
- 2) MATH1100 COLLEGE ALGEBRA
- 3) MATH1101 PRE CALCULUS
- 4) MATH1102 PURE MATH
- 5) MATH1103 APPLIED MATH
- 6) MATH1201 MANAGERIAL STATISTICS FOR IT
- 7) BAST 1206 MANAGERIAL STATISTICS FOR BUSINESS
- 8) MATH 1200 CALCULUS 1
- 9) MATH2100N CALCULUS-II
- 10) MATH3103 MATH II
- 11) MATH2200 DISCRETE STRUCTURE
- 12) MATH3120N ENGINEERING MATHEMATICS
- 13) MATH 4130 PROBABILITY AND STATISTICS



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**COURSE DESCRIPTIONS**

**1) FPMT 0001 BASIC MATH**

Real Numbers and their properties , Sets, Integers ,Exponents, Radical and Rational Exponents, Polynomial, Equations and Inequalities, Application of linear equation, linear inequalities ,Quadratic equations. Coordinate Geometry , Trigonometric functions & application.

**2) MATH1100 COLLEGE ALGEBRA**

Solve equation and inequalities, Quadratic equation, Inequality, Graphs, Exponents, Polynomial, Rational expression, Systems of linear equations, Complex Numbers, log and exponent function, Trigonometric functions, identities& application.

**3) MATH1101 PRE CALCULUS**

Trigonometric Functions, Sequences and Series , Mathematical induction, Multiplication Principle, Permutations-combinations, Binomial Formula Trigonometric Functions, Analytical Geometry. Polar coordinates and Graphs, Conic Sections, Translation of Axes, Parametric Equations.

**4) MATH1102 PURE MATH**

Functions and Graphs, exponential functions, logarithmic functions , division algorithm, remainder theorem. Trigonometric functions, trigonometric identities. Sequence & Series ,finite series & infinite series, Descriptive and Inferential Statistics, probability.

**5) MATH1103 APPLIED MATH**

System of Linear Equations, System of Linear Inequalities in two variables:, Functions, Combining functions ,Quadratic equations and Graph, Inverse ,Exponential and logarithmic function, Simple Interest, Promissory Notes and Simple Discount Notes, Compound Interest and Present Value, Descriptive and Inferential Statistics, Stocks, Bonds and Mutual Funds.

**6) MATH1201 MANAGERIAL STATISTICS FOR IT**

The nature of Probability and statistics, Descriptive and Inferential statistics, Random sampling, Random numbers. Frequency Distribution and Graph ,Data Description, Counting Rules and Probability, Addition and multiplication rule, Correlation and Regression, Applications of Normal Distribution. Hypothesis Testing .

**7) BAST 1206 MANAGERIAL STATISTICS FOR BUSINESS**

Descriptive and Inferential statistics, Random sampling, Frequency Distribution and Graph, Data Description- Measures of variation and Dispersion, Probability- Counting rules, Addition and multiplication rules. Correlation and Regression, Area Under Normal Curve and Applications of Normal Distribution. Hypothesis Testing - Statistical Hypothesis.



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**8) MATH 1200 CALCULUS 1**

Limit and continuous functions .Differentiation, Derivatives of Trigonometric functions, Parametric equations, Implicit functions and Transcendental functions , Application of Derivatives ,Velocity & Acceleration ,Tangents & Normal ,Maxima and Minima, Integration, Definite Integral ,Applications of Definite Integral. Polar Co-Ordinates .

**9) MATH2100N CALCULUS-II**

Various techniques of Integration, Application of Integration, Concept of zeros of a function. Area& Length by definite integration. Trapezoidal Rule, Simpson's Rule. The concept of functions of several variables. Partial derivatives of first and second orders. Total differential and approximation. Euler's theorem , multiple Integrals. Infinite series, power series. Improper integrals and indeterminate forms. Differential Equations.

**10) MATH3103 MATH II**

Round-off Error and Computer Arithmetic, Bisection Method, Fixed Point Iteration Method, Newton Raphson Method. Interpolation and Polynomial Approximations. Numerical Differentiation and Integration, Trapezoidal & Simpsons Rule .Introduction to Matrices, Cramer's Rule, Gaussian Elimination, Solving system of equations by Matrix Inversion.

**11) MATH2200 DISCRETE STRUCTURE**

Sets, Computer representation of sets, Integers , The fundamental Theorem of Arithmetic, Congruence and its applications, The Euclidian Algorithm and its Applications, The Chinese Remainder Theorem. The Boolean Product, Recurrence Relations . Equivalence Relations , Introduction to Graphs & Graph Terminology, Concept of Trees and Path .

**12) MATH3120N ENGINEERING MATHEMATICS**

Differential equation, order and degree, Forming and solving the linear and non-linear differential equation. Clairaut's equation , Application of differential equation. Solving Partial differential equation & Application of Partial differential equation. Laplace transformation.

**13) MATH 4130 PROBABILITY AND STATISTICS**

Counting Techniques, Description about the terminologies used in Probability, Probability, Concept of Conditional Probability, Frequency distributions and Graphs, Random Variable, Continuous Random Variable, Probability Distributions, Continuous Probability Distribution, Regression Analysis and Correlation.