| Course Title |  | Basic Mathematics |
| :---: | :---: | :---: |
| Course Code Number |  | MGT 313 |
| Year/Semester |  | I/I |
| Credit Hours |  | 03 |
| Course Objectives: |  |  |
| Main Objective |  | This Course is intended to give students an understanding of and competence in some further aspects of mathematics which are applicable to the real world. The course contains fundamental ideas of algebra and calculus. |
| Enabling Objectives |  | After completion of all the learning units of the course, participants will be able to; <br> - Collect, organize, and represent data sets that have one or more variables <br> - Understand basic statistics (mean, median, mode, and range) and the meaning of probability. <br> - Demonstrate proficiency in the use of mathematics to formulate and solve problems. |
| Learning <br> Unit (LU) | Learning Hours (LH) | Contents |
| LU 1 | LH 10 | Sets and Real Number System <br> Solving of 2 Variable Equations and quadratic Equation, Sets; Introduction Representation, Types, Operations, Number of Elements in a Set and Problems Relating Up to Three Sets, Venn Diagram. <br> Sets of Number: - Natural Numbers Integers, Retinal and Irrational Numbers real Numbers (Introduction and Examples Only) Representation of Real Number on the Real Line. Inequalities and Their Propertied Verification Only, Intervals Modulus of a Real Number and Their Properties, Linear Programming |
| LU 2 | LH 7 | Functions and Graph Mathematics Finance Introduction, Domain Range, Types of Function (Linear Quadratic, Exponential and Logarithmic) and Their Graphs, Problems Involving Cost Revenue, Profit / Loss, Inverses Function, Limit of a Function (Excluding Trigonometric Function) |
| LU 3 | LH 24 | Calculus <br> Derivatives and its Application:- <br> Derivatives of the Function (Including Trigonometric), Second Derivatives, and Their Uses For Optimality Partial Derivatives and its Uses For Optimality of UP to Variables, Marginal Cost / Remove / Profit Elasticity of Demand <br> Integration:- <br> Integration of Algebraic, Logarithmic and Exponential Function |


|  |  | Methods off Integration, Subtraction Integration by Parts, <br> Definite Integrates, Consumers and Produces Purples <br> Martix and Determinant <br> Introduction, Algebra of Martix (Sum and Product), Word <br> Problems Relating to Matrix Operation, Inverse Matrix, <br> Determinations, Introduction, Properties, Problem Related to <br> Properties Determinants, Grammar's Rules, Application For Up <br> to Three Variables Equations, Word Problems |
| :---: | :---: | :--- |
| LU 4 | LH 7 | Mathematics of Finance <br> Laws of Indices, Logarithm Review \& Simple Interest <br> (Introduction, Formula, Simple Problem, Compound Interest, <br> Compound Deprecation Annuities |
| References | 1. Budnick, F. S (1993), Applied Mathematics for Business, <br> Economic and Social Sciences New Delhi MC Graw Hill, <br> INC. <br> 2. Shrestha,K.K and Thagurathi R.K (2008) Applied <br> Mathematics, Second Edition , Buddha Academic <br> Enterprises, Kathmandu. |  |
| 3. Bajracharya, B.C (2063) Business Mathematics, M. K |  |  |
| Publishers and Distributers, Bhotahity, Kathmandu, Nepal. |  |  |

Net Contact Hour is 48 excluding the exams and tests.
evaluation Module: 50 percent will be assessed through the internal evaluation and 50 percent will be assessed through end semester examination

