1st Year / 1st Semester

Hum 171: Micro-Economics
3.0 credits; 3 hours/week theory
Introduction: Definition of Economics, concept of microeconomics. Utility, Demand and Supply Analysis: elasticity of demand and supply, consumer's surplus. Indifference Curve Analysis: Price line, consumer's equilibrium, marginal analysis. Theory of Production: Law of returns, rational region of production, profit maximization, small scale production and large scale production, optimization. Cost Analysis and Cost Curve: Short-run and long-run, fixed cost and variable cost. Concept of market and market structure: Classification of markets. Theory of Distribution: Marginal productivity theory, equity in income distribution.

Hum 125: English
2.0 credits: 2 hours/week theory
General Discussion: Introduction, Mastering Various Approaches to Learning English.
Grammatical Problem: Construction of Sentences, Grammatical Problems, Sentence variety and style, Conditionals, Grammar and Usages, Vocabulary and Diction.
English phonetics: The Phonetic systems and correct English Pronunciation.
Reading Skill: Discussing Readability, Scan and Skim Reading, Generating Ideas through Purposive Reading, The reading of Selected Stories.
Writing Skill: Principles of Effective Writing, Organization in writing, Planning and Development, Composition, Precis writing
General Strategies for the Writing Process: Generating Ideas, Identifying Audiences and Purposes, Constructing Arguments, Stating Problems, Drafting and Finalizing.
Approaches to Communication: Communication Today, Business communication, Organization and Organizational Behavior, Developing Intra-personal Interpersonal Relationship, Introducing Dialogue.
Specific Applications of: Tenders and Quotations, Resumes and Job Letters, Journal Articles, Technical and scientific Presentation.

Chem 207: Basic Environmental Chemistry
3.0 Credits; 3 hours/week theory
Introduction to environmental science and its scope.
Radioactivity and radioactive particles; atomic structure. The periodic table; chemical bonds; acids and bases; concentration of solutions.
Organic Compounds, organic families and functional groups.

Introduction to polymers.
Environment, environmental segments, lithosphere, hydrosphere, biosphere and atmosphere. Composition of atmosphere. Chemical species and particulates present in earth. Industrial hazards, air and water pollutants. Sources and different kinds of pollutants. Toxicity of pollutants. Discussion on the properties of water and waste water. Characteristics of waste water, concepts and measurement of DO, BOD, COD, etc. Transformation processes of pollutants.

Math 101: Mathematics - I

2.0 credits; 2 hours/week theory

Algebra and Geometry:
Algebra in system description. Graphs and Coordinate Geometry; linear equations, interpretation of linear inequalities, graphical solution of equations. Functions; definition, implicit and inverse functions, the standard functions, the power function, the logarithmic function, the exponential function, trigonometric function, polynomial and rational functions, the hyperbolic function, the logistic function.
Matrix Algebra:
Definition of a matrix, algebra of matrices, multiplication of matrices, transpose of a matrix and inverse of matrix, rank and elementary transformation of matrices, solution of linear equations.

URP 111: Human Settlements Development

3.0 credits; 3 hours/week theory

The origin and evolution of ancient human settlements and cities, their relation to resources, trade routes, and transportation; city planning in the ancient and medieval and pre-industrial revolution periods; the origins of modern urban planning, the emergence of modern cities and their planning concepts (Garden City, Vertical City, Linear City, Neighborhood concept, Radburn concept). Spatial structure of urban growth (concentric zone theory, sector theory, multiple nuclei theory).
The concept of urbanization and the nature of urbanization with special emphasis on Bangladesh. Physical, social, political, economic, and technological factors of urban growth and development. Models of rural-urban migration. The effects of urbanization and their policy implications. The growth and development of towns and cities in Bangladesh.

URP 106: Basic Design

3.0 credits; 6 hours/week sessional

Forms in nature, their understanding and evolution; two dimensional composition, points, straight lines and curves, and geometric shapes; understanding and use of composition elements like balance, proportion, scale, harmony, movement,

etc.

URP 116: Graphics for Planners

3.0 credits; 6 hours/week sessional

Lettering; mechanical and freehand drawings; use of scale and instruments; sectional and isometric views of solid geometric figures: plan, elevation, and section.

One and two point perspectives; shade and shadow of different projection drawings.