

Department of Economics
 Noakhali Science and Technology University
 Noakhali-3814
Syllabus heading
 Total Credits: 168

Year-1 Term-I		
Course code	Course Title	Credit hour
ECO 1101	Introductory Microeconomics	4
ECO 1103	Mathematics for Economists-I	4
ECO 1105	Statistics-I	4
ECO 1107	English Language	4
ECO 1109	Introduction to Computer Analysis and Communication-I	4
ECO 1112	Application of Mathematics and Statistics in Economics-I (Lab)	1
Total		21

Year-1 Term-II		
Course code	Course Title	Credit hour
ECO 1201	Introductory Macroeconomics	4
ECO 1203	Mathematics for Economists-II	4
ECO 1205	Statistics-II	4
ECO 1207	Principles of Accounting	4
ECO 1209	Introduction to Computer Analysis and Communication-II	4
ECO 1212	Application of Mathematics and Statistics in Economics-II (Lab)	1
ECO 1214	Viva Voce	1
Total		22

Year-2 Term-I		
Course code	Course Title	Credit hour
ECO 2101	Intermediate Microeconomics-I	4
ECO 2103	Intermediate Macroeconomics-I	4
ECO 2105	Mathematical Economics	4
ECO 2107	Money, Banking and Finance	4
ECO 2109	Political Science	4
Total		20

Year-2 Term-II		
Course code	Course Title	Credit hour
ECO 2201	Intermediate Microeconomics-II	4
ECO 2203	Intermediate Macroeconomics-II	4
ECO 2205	Statistical Methods	4
ECO 2207	Public Economics	4
ECO 2209	Principles of Sociology	4
ECO 2212	Viva Voce	1
Total		21

Year-3 Term-I		
Course code	Course Title	Credit hour
ECO 3101	Microeconomics-I	4
ECO 3103	Macroeconomics-I	4
ECO 3105	Econometrics-I	4
ECO 3106	Econometrics-I (Lab)	1
ECO 3107	Principles of Marketing	4
ECO 3109	Agricultural Economics	4
Total		21

Year-3 Term-II		
Course code	Course Title	Credit hour
ECO 3201	Microeconomics-II	4
ECO 3203	Macroeconomics-II	4
ECO 3205	Econometrics-II	4
ECO 3206	Econometrics-II (Lab)	1
ECO 3207	Environment and Natural Resource Economics	4
ECO 3209	Labor Economics	4
ECO 3212	Viva Voce	1
Total		22

Year-4 Term-I		
Course code	Course Title	Credit hour
ECO 4101	Development Economics-I	4
ECO 4103	Bangladesh Economy-I	4
ECO 4105	International Trade	4
ECO 4107	Research Methodology	4
ECO 4109	Software Applications for Economic Analysis	4
Total		20

Year-4 Term-II		
Course code	Course Title	Credit hour
ECO 4201	Development Economics-II	4
ECO 4203	Bangladesh Economy-II	4
ECO 4205	International Finance	4
ECO 4207	History of Economic Thought	4
ECO 4210	Research Paper (Optional: Only CGPA 3.50 and above may take)	4
ECO 4211	Monetary Economics (Optional)	
ECO 4212	Viva Voce	1
Total		21
Grand Total		168

Content

ECO 1101: Introductory Microeconomics

Topics

1. Introduction

Definition and scope of economics; basic concepts and tools used in economics; economic problem - scarcity of resources; economic method – types of economics; microeconomics vs. macroeconomics; measuring economic variables.

2. Demand, Supply and the Market

Concepts of demand and supply; market equilibrium; laws of demand and supply; shifting demand and supply curves; application of demand and supply; price ceiling and price floor; various elasticities of demand and supply; measurement of elasticity; elasticity and consumer expenditures; application of elasticity concepts.

3. Theory of Consumer Behaviour

Utility analysis of demand; paradox of value; law of diminishing marginal utility; law of equi-marginal principle; cardinal vs. ordinal utility; consumer's preference - law of preference; indifference curve analysis; properties of indifference curves; different shapes of indifference curves; budget constraints; consumer's equilibrium; derivation of demand curve using indifference curves; complements and substitutes; elementary concepts of income and substitution effects of a price change; consumer and producer surplus,

4. Theory of Firm

Production and costs - production function; single variable input; total, average and marginal products; law of diminishing marginal returns; stages of production; several variable inputs; law of variable proportions; short run and long run production, and cost concepts with relevant graphical analysis; iso-quant, iso-cost and producers' equilibrium; returns to scale.

5. Theory of Business Organization

Business firms and the market; why do firms exist; objective(s) of firms; different types of business firms, and their advantages and disadvantages; financing corporate activity,

6. Market

Structure of markets; characteristics of different types of markets; perfect competition and monopoly - price and output determination, monopolistic competition.

References

1. Arnold, R A: *Economics*, South Western Publishing Company, Eighth Edition.
2. Samuelson, Paul A. and William, D. Nordhaus. *Economics*, McGraw-Hill Book Company, NewYork.
3. Mankiw, N.G.; *Principles of Macroeconomics*, 6th Edition, Nelson Education, Ltd.
4. Ruffin, R.J., and Paul R. Gregory, *Principles of Economics*, Scott, Foresman and Company, Illions.
5. W.J. Baumal and A.S. Blinder. *Economics: Principles and Policy*.

ECO 1103: Mathematics for Economists-I

Topics

1. Theory of Set

Definitions (Set, element, finite infinite, null unique, equal, equivalence, subset, comparability, disjoint, family, power, universal) Venn diagram, representation of sets, basic operations (union, difference, intersection), De Morgan's law, idempotent law, identity law, partition numbers and elements of sets etc.).

2. Economic Models

Variables, Constants, Parameters, Equations, Identities, the Real Number System, the Concept of Sets and Operations on Set, Equations, Functions, Types of Functions, Graphs, Slopes and Intercepts.

3. The Derivative

Rules of Differentiation, First Derivative, Second Derivative and convexity, Higher Order Derivatives, Limits, Partial Differentiation, Maxima and Minima.

4. Uses of the derivative in Mathematics and Economics

Increasing and decreasing functions, concavity and convexity, Relative Extrema, Inflection point, Optimization of functions, Successive derivative test for optimization, Marginal concept, Optimizing Economic Variables.

5. Calculus of Multivariable Functions

Functions of Several Variables and Partial Derivatives.

6. Constrained Optimization

First and Second Order Conditions, Lagrange Multiplier, Economic Applications, Constrained Optimization of CES Production Function.

7. Economic Application

Economic Applications, Constrained Optimization of CES Production. Function, Utility Maximization, Cost Minimization, Indirect Utility Functions.

8. Differentials

Total Differential, Rules of Differentials, Total Derivative.

References

1. Dowling, E. T.; *Theory and Problems of Introduction to Mathematical Economics*, Schaum's Outline Series, 3rd Edition, McGraw-Hill.
2. Chiang A C. and K. Wainwright. *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill.
3. Hoy, M., et al. *Mathematics for Economics*, 3rd Edition. The MIT Press, Cambridge, Massachusetts.
4. Simon, C. P. and L. Bloom. *Mathematics for Economists*, W.W. Norton and Company.

Topics

1. Introduction of Statistics

Defining Statistics, Characteristics of Statistics, Uses and Importance of Statistics

2. Variable and Frequency Distribution

Population and Sample, Defining a variable, Frequency Distribution, Graphical Representation of Frequency Distribution

3. Summarizing of Data

Meaning of Data, Types of Data, Summarizing and Presenting Data, Presenting Data by Graphs and Diagrams,

4. Descriptive Statistics I: Central Tendency

Measures of Central Tendency, The Arithmetic Mean, Computing Arithmetic Mean for Grouped Data, Short-cut Method of Computing Mean, Some useful Properties of Arithmetic Mean, The Median, The Mode, The Geometric Mean, The Harmonic Mean. Relationship among Arithmetic Mean, Harmonic Mean and Geometric Mean, Relationship among Arithmetic Mean, Harmonic Mean and Geometric Mean.

5. Descriptive Statistics II: Dispersion

Meaning of Dispersion, Characteristics of an Ideal Measure of Dispersion, Measures of Dispersion, Absolute measure: Standard Deviation, Mean Deviation, Relative measure: Co-efficient of variation, Co-efficient of mean deviation.

6. Simple Random Sampling

Simple random sampling stratified random sampling, cluster sampling, two stage and multi stage sampling.

7. Probability and Probability Distribution

Definition of various term, Definitions of probability: Mathematical or classical or a-priori definition of probability Statistical or empirical or a-posteriori definition of probability, Laws of probability: Additive law of probability (for mutually exclusive events) Additive law of Probability (for not mutually exclusive events), Compound Event, Marginal Probability and conditional probability, Independent and Dependent events, Multiplicative law of Probability (for dependent events), Random variable, probability function, probability density function, Discrete distribution: Binomial distribution, Poisson distribution, Continuous distribution: Nominal distribution.

8. Index Numbers

Price Relatives, Aggregate Price Indices, Consumer & Producer Price Index, Deflating, Splicing, Base Shifting.

References

1. Anderson, D. R., et. al.; *Statistics for Business and Economics*, Cengage Learning.
2. Murry R. Spiegel. *Theory & Problems of Statistics*, Latest Edition.
3. Newbold, P., Carlson, W. L. and B. Thorne; *Statistics for Business and Economics*, Prentice Hall.

ECO 1107: English Language

Topics (Developing Writing, Reading, Listening, and Speaking Skills)

1. Grammar

Subject-verb agreement, Sentence correction, Tense, Basic sentence pattern, Conditional sentence, Causative and problem verbs, Transformation, Passage narration, Phrase and idioms, Voice change, Word Choice – Vocabulary – Antonym, Synonym, Homonym, Homograph, Homophone, Proofreading, Practical usage of English etc.

2. Comprehension

Unseen

3. Writing section

Essay/Story writing, CV/Resume with cover letter, Job application (with or without objectives), Business letter, Sales letter, Claim and adjustment letter etc.

4. Speaking

As instructed by course teacher.

5. Listening

As instructed by course teacher.

References

1. Raymond Murphy, English grammar in use, Latest edition.
2. Standard book of course teacher's choice.

ECO 1109: Introduction to Computer Analysis and Communication-I

Topics

1. Introduction

History & Generation of Computer, Classification of Computer, Components of Computer System and Application of Computer.

2. Number Systems and Logic Gates: Binary, Octal and Hexadecimal Number System, 2's Complement System; Codes: ASCII, BCD, EBCDIC and Unicode, Parity Bit.

3. Input/output

Keyboard, Mouse, Monitor, Printer Types, OMR, OCR, MICR, Scanner and Other Input Output Devices.

4. Computer Hardware

CPU, Motherboard, Expansion Slots and Cards, Main Memory- RAM, ROM; Secondary Memory- Cache Memory, Floppy Disk, Hard Disk, CD ROM.

5. Software

Basic Classification of Software- System Software, Application Software, Operating Systems: MS-DOS, Windows, Linux, Application Packages: MS Word, MS Excel, MS Power Point, MS Access.

References

1. Sinha, P. K. (2004). *Computer Fundamentals*, BPB Publications.
2. Norton, P. (2005). *Introduction to Computer*, McGraw-Hill.
3. Kosiur, D. (1997). *Understanding Electronic Commerce*, Microsoft Press, Washington.
4. Bajaj, K. K. and D. Nag (1999). *E Commerce-The Cutting Edge of Business*, TATA McGraw-Hill Publishers.
5. Brook-Hart, Guy (2008). *Complete First Certificate*. Cambridge: Cambridge University Press.

ECO 1112: Application of Mathematics and Statistics in Economics-I (Lab)

Topics

Mathematical tools and theorems; Construction of frequency distribution. Graphical representation. Computation of measures of location, variation, skewness and kurtosis. Graphical location of median, mode and quintals. Fitting binomial, Poisson and nominal distribution. Use of or Selection of samples (Simple random, stratified, cluster, two stage and multi stage) using random number tables.

References

1. Dowling, E. T.; *Theory and Problems of Introduction to Mathematical Economics*, Schaum's Outline Series, 3rd Edition, McGraw-Hill.
2. Chiang A C. and K. Wainwright. *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill.
3. Steel, R.G.D. and J.H. Torrie, *Principles and procedures of Statistics*, McGraw Hill Book Co. Inc. NewYork.
4. Yule, G.U. & M.G.Kendall, *An Introduction to the Theory of Statistics*, Charles Griffin, London.

ECO 1201: Introductory Macroeconomics

Topics

1. Introduction to Macroeconomics

Definition of macroeconomics; macroeconomic performance, objectives and instruments of macroeconomics.

2. Measuring national Product and National income

GNP vs. GDP - concept and measurement; GDP and GNI; NI and personal disposable income; GDP and spending; nominal and real GDP; comparing income levels between different countries.

3. Determination of National Income and Investment

The circular flow; components of aggregate demand and planned spending; aggregate demand; equilibrium output; changes in equilibrium output; the multiplier; investment, the paradox of thrift.

4. Money and Banking

Definition and functions of money; different types of money; banking – from goldsmith banking to modern banking; commercial banks and multiple deposit creation.

5. Central Banking and Monetary System

Functions of central bank, money supply, open market operations, high-powered money and the money stock, money multiplier.

6. Taxes and government expenditure

Principles of taxation; types of taxation, heads of government expenditure.

7. Budget and Fiscal Policy

Government in the circular flow; objectives of fiscal policy.

8. Inflation and Unemployment

Types and causes of Inflation, expected & unexpected inflation: cost of inflation: money supply and the price level: velocity and quantity Equation, types and causes of unemployment, remedial measures, Phillips curves.

9. International Trade

Concepts of absolute and comparative advantage; terms of trade; economics of protection - concepts on tariff and non-tariff barriers, arguments for & against protection.

References

1. Samuelson, Paul A. and William, D. Nordhaus. Economics, McGraw-Hill Book Company, New York, 2005.
2. Barro, R. J., *Macroeconomics*, 5th Edition, the MIT Press.
3. Mankiw, G. N. (2012). *Macroeconomics*, 8th Edition, Worth Publishers, Inc.
4. Brue, McConnell, and Flynn, *Macroeconomics: Principles, Problems, and Policies*, Latest Edition.

ECO 1203: Mathematics for Economists-II

Topics

1. Exponential and Logarithmic Functions

Exponential Functions and Logarithmic Functions.

2. Differentiation of Exponential and Logarithmic Function

Rules of Differentiation.

3. Linear models and Matrix Algebra

Matrices and Vectors, Matrix Operations, Kronecker Products, Commutative, Associative and Distributive Laws, Identity and Null Matrices. Determinants and Non-singularity, Minors and Cofactors, Properties of a Determinant, Properties of Transposes, Inverses and their Properties, Inverse Matrix and Solution of Linear Equation System, Cramer's Rule for Matrix solutions, Economic Applications.

4. Special Determinants and Matrices and their Use in Economics

The Jacobian, the Hessian, Higher-order Hessian, The Bordered Hessian for Constrained Optimization, the Characteristic Root Test.

5. Integral Calculus

The Indefinite Integral- Rules of Integration, Integration by Substitution, Integration by Parts, Economic Applications.

The Definite Integral- The Fundamental Theorem of Calculus, Properties of Definite Integral, Area between Curves, Improper Integrals, Economic Application, Domar Growth Model.

6. Nonlinear Programming

Nature of Nonlinear Programming, Kuhn-Tucker Conditions, Economic Applications.

References

1. Dowling, E. T. (2001). *Theory and Problems of Introduction to Mathematical Economics*, Schaum's Outline Series, 3rd Edition, McGraw-Hill.
2. Chiang A C. and K. Wainwright (2005). *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill.
3. Simon, C. P. and L. Bloom (1994). *Mathematics for Economists*, W.W. Norton and Company.

ECO 1205: Statistics-II

Topics

1. Correlation and regression analysis

Fitting simple linear regression to observed data by the method of least squares. Two variable non-linear models that can be transformed into linear models, Measures of goodness of fit.

2. Sampling distribution

Introduction to χ^2 , t and F distributions. Distribution of sample mean and correlation coefficient when the population distribution is normal. Introduction to the theory of estimation. Properties of estimates: unbiasedness, consistency, efficiency and sufficiency. Difference between standard deviation and standard error. Binomial Distribution, the Limiting Case of Binomial Distribution.

3. Population and sample:

Hypothesis, null and alternative hypothesis, type I error, level of significance. Basic steps for testing hypothesis. Statistical test a population mean is equal to a specified value, equality of two population means (independent and correlated), a population proportion is equal to a specified value, equality of two population proportions, significance of correlation and regression coefficients, independence of attributes.

4. Analysis of variance: One way and two way classification. Basic experimental designs.

5. Experimental Design: Principles of experimental design: analysis of variance, Complete Randomised Design (CRD), Randomised Block Design (RBD) and Latin Square Design (LSD), SAS, SPSS and their applications, merits and demerits.

6. Time Series and Forecasting

Different Types of Pattern, Moving Average and Exponential Smoothing, Seasonality and Trend.

References

1. Anderson, D. R., et. al.; *Statistics for Business and Economics*, Cengage Learning.
2. Murry R. Spiegel. *Theory & Problems of Statistics*, Latest Edition.
3. Newbold, P., Carlson, W. L. and B. Thorne (2006). *Statistics for Business and Economics*, Prentice Hall.

ECO 1207: Principles of Accounting

Topics

1. **Accounting: the Language of Business:** Purpose & Native of Accounting Information – Uses & Users of Accounting Information.
2. **Conceptual Framework for Financial Accounting:** First Level: Basic Objectives; Second Level: Qualitative Characteristics of Accounting Information – Relevance, Reliability Comparability & Consistency; Basic Elements of Financial Statements; Third Level: Operational Guidelines – GAAP, Basic Assumptions, Principles & Constraints.
3. **The Accounting Process:** Double– Entry Recording Process, Accounting Equation – Effects of Transaction on the Accounting Equation.
4. **The Accounting Cycle:** Steps of Accounting Cycle – Identification & Recording of Transactions & Other Events – Journalizing Posting, Preparation of a Trial Balance.
5. **Accounting System & Special Journals:** Control Accounts & Subsidiary Ledger Special Journals, Advantage of Special Journal – General Journals.
6. **Preparation of Worksheet:** Unadjusted Trial Balance; Adjustments Estimated Items; Inventory & Related Accounts, Closing Entries. Post Closing Trial Balance Reversing Entries, Using Worksheet to Prepare Financial Statement.
7. **Financial Statement for Merchandising Operations:** Accounting for Merchandising Operation Inventory Calculation Preparation of Income Statements – Single – Step & Multiple – Step Preparation of Balance Sheet.
8. **Reporting & Analyzing Inventory:** Classifying Inventory Determining Inventory Quantities Inventory costing, Statement Presentation & Analysis.

References

1. Weygandt, J.J, Kimmel, P.D. and D. E. Kieso (2013). *Accounting Principles*, 11th Edition, Wiley.
2. Pyle, W. W. and K. D. Larson (1990). *Fundamentals of Accounting Principles*, 12th Edition, Mc-Graw Hill, Inc.
3. Needles, B. E. Jr, et. al. (2011). *Principles of Accounting*, 11th Edition, Cengage Learning

ECO 1209: Introduction to Computer Analysis and Communication-II

Topics

1. Internet and Networking

LAN, MAN, WAN, Network Devices: Bridge, Router, Hub, Switch, Gateway, Modem, NIC, Transmission Media, Network Topology, Client-Server Technology, OSI Model, TCP/IP Protocol, Internet Application, Email, IRC, FTP, WWW, VOIP, WAP.

2. E-Commerce

E-commerce and E-Business, E-Commerce Types: B2B, B2C, C2B, C2C; E-commerce Security, Encryption, Digital Signature, E-Payments: Debit Card, Credit Card, EFT, E-cash, E-check; Privacy, Intellectual Property Rights, Copyright Law, Trade Mark Law, Patent Law.

3. English Language Communications

The Ability to Use Tools, Programs and Software Designed Specifically for the Study of the English Language and Its Literature. Practical Activities to Learn How to Communicate in English Using Web-based Platforms. Activities in English to Learn How to Look for Information Using the University's Electronic Resources.

References

1. Sinha, P. K. (2004). *Computer Fundamentals*, BPB Publications.
2. Norton, P. (2005). *Introduction to Computer*, McGraw-Hill.
3. Kosiur, D. (1997). *Understanding Electronic Commerce*, Microsoft Press, Washington.
4. Bajaj, K. K. and D. Nag (1999). *E Commerce-The Cutting Edge of Business*, TATA McGraw-Hill Publishers.
5. Brook-Hart, Guy (2008). *Complete First Certificate*. Cambridge: Cambridge University Press.

ECO 1212: Application of Mathematics and Statistics in Economics-II (Lab)

Topics

Mathematical tools and theorems; Simple correlation and regression analysis; Sampling distribution; Population and sample; Analysis of variance.

References

1. Dowling, E. T.; *Theory and Problems of Introduction to Mathematical Economics*, Schaum's Outline Series, 3rd Edition, McGraw-Hill.
2. Chiang A C. and K. Wainwright. *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill.
3. Steel, R.G.D. and J.H. Torrie, *Principles and procedures of Statistics*, McGraw Hill Book Co. Inc. NewYork.
4. Yule, G.U. & M.G.Kendall, *An Introduction to the Theory of Statistics*, Charles Griffin, London.

ECO 2101: Intermediate Microeconomics-I

Topics

1. Introduction

Definition of microeconomics, important and uses of microeconomics, limitations of microeconomics, interdependence between micro and macroeconomics.

2. Budget Constraint

Idea of Budget Constraint, Composite Goods, Properties of the Budget Set, Changes in the Budget Line, the Numeraire, and Applications: Taxes, Subsidies and Rationing, the Food Stamp Program.

3. Utility and Indifference curve

Utility and Choice, Marginal Utility, Diminishing Marginal Utility, Equi-marginal Principle, Indifference Curves and their Properties, Budget Sets, Equilibrium of the Consumer with Indifference Curves and Budget Sets, Income and Substitution Effects, Deriving the Demand Curve from the Indifference Curves and Budget Sets, Complements and Substitutes, Consumer surplus. Consumer Preferences, Assumptions about Preferences, Indifference Curves, Examples of Preferences, Perfect Substitutes, Perfect Complements, Bads, Neutrals, Satiation, Discrete Goods, Well-Behaved Preferences (Include Non-Convex Preferences), the Marginal Rate of Substitution, Other Interpretations of the MRS.

4. Revealed Preference

Idea of Revealed Preference, Principle of Revealed Preference, Recovering Preferences, Weak Axiom of Revealed Preference, Checking WARP, Strong Axiom of Revealed Preference, Checking SARP.

5. Demand

Normal and Inferior Goods, Income Offer Curves and Engel Curves, Ordinary Goods and the Giffen Goods, Price Offer Curve and the Demand Curve, Examples of Demand Curves: Perfect Substitutes and Complements, Discrete Good, Substitutes and Complements, Inverse Demand Function.

6. Slutsky Equation

The Substitution Effect, The Income Effect, Sign of the Substitution Effect, Total Change in Demand, The Law of Demand, Slutsky Substitution Effect vs. Hicks Substitution Effect, Compensated Demand Curves.

7. Consumer's Surplus

Constructing Utility from Demand, Interpretation of Consumer's Surplus, Interpreting the Change in Consumer's Surplus, Compensating and Equivalent Variations, Producer's Surplus, Applications: Calculating Benefit-Cost Analysis and Rationing.

References

1. Hal R Varian, *Intermediate Microeconomics*, Third Edition.
2. Koutsoyiannis, A. *Modern Microeconomics*, English Language Book Society/ MacMillan, London, 1998.
3. Hirschleifer, J., Glazer, A. and D. Hirshleifer (2005). *Price Theory and Applications*, 5th Edition, Cambridge University Press.
4. Samuelson, Paul A. and William, D. Nordhaus. *Economics*, McGraw-Hill Book Company, New York, 2005.

ECO 2103: Intermediate Macroeconomics-I

Topics

1. Introduction to Macroeconomics

Definition and objectives of macroeconomics, How do we aggregate?, Macroeconomic transactors, Macroeconomic markets, Macroeconomic issues, Business cycle and phases in economic activities, Choices and macroeconomic tradeoffs, Macroeconomics policies, Economic concept: stock & flow variable, comparative & dynamic statics; Importance and limitations of macroeconomics, Interdependence of micro and macroeconomics.

2. Circular Flow of Income & National Income Accounting

The circular flow of income and expenditure in two, three and four sector economy, Concepts of national income: GNP, GDP, NI, PI & DPI; Detail discussion about GDP: Concept & measurement, GDP vs. GNP, Growth rate of GDP, Nominal vs. real GDP, GDP deflator, Per capita GDP, Fluctuations in GDP, GDP as a measure of welfare, Importance of GDP; Concept of CPI, Measurement procedure of CPI, Problems in measuring cost of living, GDP deflator vs. CPI, Correcting economics variables for the effects of inflation, real and nominal interest rate; Purchasing power parity, Human development index.

3. Determination of National Income - Keynesian Theory

Aggregate demand and its component, Principles of effective demand, Aggregate supply, Equilibrium level of national income in two, three and four sector open economy, Taxes and level of equilibrium income in three sector economy, How to overcome recession?, Concepts of inflationary and deflationary gap.

4. Theory of Multiplier

Concept, assumption, derivation and importance of multiplier theory, Limiting cases of the value of multiplier, Leakages in multiplier process, The paradox of thrift and its process of aversion, The Keynesian explanation of great depression through multiplier theory.

5. Unemployment and Inflation

Concept and measures of unemployment, Explaining the existence of unemployment: Sticky wages, Efficiency wage theory, Imperfect information; Categories of unemployment, The costs of unemployment, Meaning of inflation, Causes of inflation: Demand-pull inflation, Cost-push inflation, Expectations and inflation, Money and inflation; The classical theory of inflation, The Fisher effect, Cost of inflation, The confusion over inflation.

6. Concepts of Consumption, Saving and Investment

Keyne's psychological law of consumption, Propensity to consume: APC & MPC; Determinants of the consumption function, Concept of saving, Motives of saving, Propensity of Save: APS & MPS; Meaning and types of investment, Determinants of investment.

References

1. O'Sullivan, A., et. al. (2014). *Macroeconomics: Principles, Applications, and Tools*. 8th Edition, Pearson Education, Inc. New Jersey, USA.
2. Karl, E.C., et. al. (2012). *Principles of Macroeconomics*, 10th Edition, Pearson Education, Inc. Boston, USA.
3. Mankiw, N.G. (2012). *Principles of Macroeconomics*, 6th Edition, Nelson Education, Ltd.
4. Taslim, M.A. and A. Chowdhury (1995). *Macroeconomic Analysis for Australian Students*, Prentice Hall, Sydney.
5. Parkin, M. and R. Bade (2012). *Macroeconomics, Canada and the Global Environment*, 8th Edition, Pearson Higher Education, Canada.

6. Dornbusch R. and S. Fischer, *Macroeconomics*, Latest edition.
7. Blanchard, O. and D.R. Jhonson (2013). *Macroeconomics*, 6th Edition, Pearson Education, Inc. New Jersey, USA.

ECO 2105: Mathematical Economics

Topics

- 1. Real Analysis:** Functions, Sets and Sequences of real numbers; Functions-definition and proofs; Composite function, Real valued function, One to one function, Maximum/minimum functions, Inverse function, Increasing/decreasing functions, Characteristic function, Even/odd functions, Concave/convex, Quasi-concave/quasi-convex functions; Open/closed sets, Convex sets, Bounded sets, Compact sets, Level sets, Superior/inferior sets- some properties and proofs; Intermediate value theorem of real analysis; Continuity and differentiability of functions; Sequences of real numbers- limit of sequences, Convergent/divergent sequence, Bounded sequence, Monotone sequence, Operations of convergent/divergent sequences, Cauchy sequence.
- 2. Risk and Uncertainty:** Expected Utility Theory; Uncertainty-axioms of choice under uncertainty; Expected utility theorem; Certainty equivalent income, Cost of risk, Risk aversion, Risk neutral and Risk loving choices.
- 3. Mathematical Programming:** Linear Programming, Non-linear Programming; Linear Programming- Simplex Method, Duality; Non-linear Programming- Graphical solution, Kuhn-Tucker Conditions
- 4. Differential equations:** First order differential equations, Second order differential equations; First order differential equations- Exact differential equations, Separable equations; Second order differential equations- Complex roots
- 5. Optimal Control Theory and Phase Diagram:** Static versus dynamic optimization; The maximum principle; Optimization problems involving discounting; Infinite time horizon problems; Free terminal time problems; Phase diagram

References

1. Dowling, E. T. (2001). *Theory and Problems of Introduction to Mathematical Economics*, Schaum's Outline Series, 3rd Edition, McGraw-Hill.
2. Chiang A C. and K. Wainwright (2005). *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill.
3. Hoy, M., et al (2011). *Mathematics for Economics*, 3rd Edition. The MIT Press, Cambridge, Massachusetts.
4. Simon, C. P. and L. Bloom (1994). *Mathematics for Economists*, W.W. Norton and Company.
5. D.C. Sancheti & V.K. Kapoor, Business Mathematics.
6. Dr. Md. Rafiqul Islam & Mohammad Osman Gani, Business Mathematics

ECO 2107: Money, Banking and Finance

Topics

1. Introduction to Corporate Finance

Corporate Finance, the Balance Sheet Model of the Firm, Capital Structure Corporate Securities as Contingent Claims, the Corporate Firm, Agency Cost, Set-of-Contracts Perspectives, Managerial Goals, Separation of Ownership and Management, Financial Markets.

2. Accounting Statements and Cash Flow

The Balance Sheet, the Income Statement, Financial Cash Flow.

3. Value and Capital Budgeting

The Financial Market Economy, Making Consumption Choices Over Time, the Competitive Market, Practicing the Principle of Lending and Borrowing, Investment Decision, Corporate Investment Decision.

4. Net Present Value

Future Value and Compounding, Present Value and Discounting, Compounding Periods, Perpetuity, Growing Perpetuity, Annuity, Growing Annuity.

5. How to Value and Stocks

Pure Discount and Zero Coupon Bonds, Interest Rate and Bond Prices, Yield to Maturity, Present Value of Common Stocks, Dividend vs. Capital Gains, Valuation of Different Types of Stocks, Practice of Capital Budgeting, Estimation of Parameters in the Dividend-Discount model, Growth Opportunities, the Dividend-Growth Model and the NPVGO Model and Price-Earnings Ratio.

6. Some Alternative Investment Rules

Payback Period Rule, Discounted Payback Period Rule, the Average Accounting Return, the Internal Rate of Return, the Profitability Index.

7. Risk and Return

Definition and Measurement Using Probability Distribution, Risk and Return of a Portfolio. The Capital Asset Pricing Model (CAPM).

8. Securities Market

Basic Concepts of Security Issuance-Initial Public offerings (IPO). Classification: Market Participants; Bangladesh Context.

9. Banking Firm & Management of Financial Institutions

Bank Balance Sheet and General Principle of Bank Management; Managing Credit Risk; Off-Balance Sheet Activities; Financial Innovation.

10. Central Banking

Functions of Bangladesh Bank; Credit Control; Instruments of Monetary Management.

11. Commercial Banking

Types of Commercial Banking; Credit Creation; Commercial Banking Operation in Bangladesh.

12. Negotiable Instruments

Cheque; Bill of Exchange; Promissory Note; Endorsement.

13. Economic Analysis of Banking Regulation

Asymmetric Information and Bank Regulation; International Banking Regulation; Banking Sector Reform in Bangladesh.

14. Financial Derivatives

Basic Concepts; Interest Forward Contracts; Financial Futures Markets; Option Contracts; Interest Rate Swaps.

References

1. Stephen, R. A., Westerfield, R. W. and J. Jafee (2002). *Corporate Finance*, 6th Edition, McGraw-Hill.
2. Brigham E. F. and J.F. Liaison (1998). *Fundamentals of Fraternal Management*, the Dryden Press.
3. Mishkin, F. S. (2000). *The Economics of Money Banking, and Financial Markets*, Addison -Wesley.
4. Modigliani, F., P., Frank, J. Jones and F. J. Fabozzi (2009). *Foundations of Financial Markets and Institutions*, Prentice Hall.
5. Brealey, R.A., Myers, S.C. and A.J. Marcus (2007), *Principles of Corporate Finance*, 7th Edition, McGraw-Hill, Inc

ECO 2109: Political Science

Topics

1. **What is Political Science?** : Overview, How Should We Define Politics? What is Power?
2. **Modern State:** What is the Modern State?, How Is It Different from a Nation?, How Does It Differ from Government?, Are States Becoming Obsolete?, Are There Alternatives?, Do We Really Need States?, What Do States Do for Us?
3. **Government:** What Makes a Government Policy Just?, Are There Universal Human Rights?, What Makes a Government Policy Efficient?, What is Democracy?, What is Autocracy? What Are the Characteristics of Military States?, One Party States; Monarchies, Are Democracies Better for All States?, What is Political Authority?, What is Political Legitimacy?, What are the Demands for Democratic Citizenship?, What is Social Capital?, What is Political Culture?, What is Political Socialization?
4. **Elections and Voting:** What Do Elections Do for Us?, What Is a Better Voting System?, Who Votes?, What Influences Voter Choices?, Do We Need Political Parties?, How Do Two-Party Systems Differ from Multi-Party Systems?, What Are Interest Groups?
5. **Types of Government:** Parliamentary Government, Presidential Government, Which System is Better?

References

1. Downs, A. (1957). *An Economic Theory of Democracy*, N. Y. Harper, New York.
2. Heilbroner, R. L. (1999). *The Worldly Philosophers. The Lives, Times, and Ideas of the Great Economic Thinkers*, Simon and Schuster, New York.
3. Weber, M. (2003). *The Protestant Ethic and the Spirit of Capitalism*, Minoela, Dover Publications, New York.
4. Shively, W. P. (2008). *Power and Choice*, 11th Edition, McGraw-Hill.

ECO 2201: Intermediate Microeconomics-II

Topics

1. Theory of Production

The Production function, Stages of production, technological constraint, isocost, isoquant, the Least Cost Combination, Equating Marginal Revenue with Marginal Cost.

2. Theory of Firm

Cobb - Douglas and CES production functions; elasticity of substitution; Euler's theorem and its properties; input demand functions, duality in production, cost functions in short run and long run, envelope theorem.

3. Theory of Cost

Concept of Cost Minimization, Revealed Cost Minimization, Returns to Scale and the Cost Function, Long-run and Short-run Costs, Fixed/Quasi-fixed Costs and Sunk Costs, Average Costs, Marginal Costs, Relationship Between Marginal Costs and Variable Costs, Marginal Cost Curves for Multiple Plants, Long-run Costs, Discrete Levels of Plant Size, Long-run Marginal Costs.

4. Market Structure

Perfect competition

The Supply decision of a competitive firm: Long run and short run view. Profits and producer's surplus; Industry equilibrium in the Long run and short run.

Monopoly

Monopoly Profit-maximizing Price and Output, Linear Demand Curve and Monopoly, Markup Pricing, Inefficiency of Monopoly, Deadweight Loss of Monopoly, Natural Monopoly, Causes of Monopoly, Monopoly Behavior: Price Discrimination, First-Degree Price Discrimination, Second-Degree Price Discrimination, Third-Degree Price Discrimination, Bundling, Two-part Tariffs, Monopolistic Competition, Location Model of Product Differentiation.

Oligopoly

Strategy Choices, Cournot Model, Bertrand Model, Stackelberg Model, Upstream and Downstream Monopolies, Price Leadership Model, Many Firms in Cournot Model, Collusion, Punishment Strategies, Product Differentiation Models, Contestable Markets Model, Comparison of Solutions.

5. Game Theory

Payoff Matrix of a Game, Nash Equilibrium, Mixed Strategies, The Prisoners' Dilemma, Repeated Games, Tit-for-Tat Strategy vs. Trigger Strategy, Sequential Games, Game of Entry Deterrence, Mixed Strategies, Games of Coordination, Battle of the Sexes, Prisoner's Dilemma, Assurance Games, Games of Competition, Games of Coexistence, Games of Commitment.

References

1. Hal R. Varian, *Intermediate Micro Economics*,
2. Rich H. Leftwich, *The Price system and Resource Allocation*, Latest Edition.
3. James M. Henderson, Richard E. Quandt. *Micro Economic Theory: A Mathematical Approach*, Latest Edition.
4. A Koutsoyiannis, *Modern Micro Economics*, Latest Edition.
5. Pindyck, R. S. and D. L. Rubinfeld (2012). *Microeconomics*, 8th Edition, Pearson Education.
6. Nicholson, W. and C. Snyder (2009), *Intermediate Microeconomics and Its Application*, 11th Edition, Cengage Learning.

ECO 2203: Intermediate Macroeconomics-II

Topics

1. Productivity and The Labor Market

Determinants of aggregate production: Cobb-Douglas production function and its shape, Changes in production function; Supply shocks, Determination of factor prices, Basic concepts of labor market, Classical view of the labor market, The demand for labor, The supply of labor, Labor market equilibrium.

2. Short-run Trade-off between Inflation and Unemployment

The Phillips curve, Shifts in the Phillips curve: The role of expectations; Shifts in the Phillips curve: The role of supply shocks; The cost of reducing inflation: The sacrifice ratio, The Greenspan era, The Phillips curves during the financial crisis.

3. Demand for Money and Supply of Money

Meaning, types and functions of money, Quantity theory of money: Fisher's transaction approach, The Cambridge cash balance approach; Determinants of money supply, The money multiplier, Keynesian theories of money demand: Transaction motive, Precautionary motive, Speculative motive; Portfolio theories of money demand, The money market and interest rate.

4. Aggregate Demand and Aggregate Supply

Three key facts about economic fluctuations, Explaining short-run economic fluctuations, Concepts of aggregate demand and aggregate supply curve, Shifts in aggregate demand curve, How the multiplier makes the shifts bigger?, Shifts in short-run and long-run aggregate supply curve, Equilibrium in aggregate demand and supply analysis, Changes in equilibrium: Aggregate demand shocks, Aggregate supply (price) shocks.

5. The Influence of Monetary and Fiscal Policy on Aggregate Demand

Monetary policy and aggregate demand: The theory of liquidity preference, Changes in the money supply; Fiscal policy and aggregate demand: Changes in government purchase, The multiplier effect, The crowding-out effect, Changes in taxes.

6. Fiscal Policy and the Government Budget

The government budget: Government spending, Revenue, Budget deficits and surpluses, Government budget constraint; Fiscal policy and the economy in the long-run: Why government debt is a burden?; Fiscal policy and the economy in the short-run: Aggregate demand and fiscal policy, Expenditure and tax multipliers; Budget deficits and inflation, Budget deficits and Ricardian equivalence.

7. Government Revenue and Taxation

Definition, Types of taxes: Tax, Fee, Price, Special assessment; Principles of taxation, Characteristics of a good tax system, Theories of taxation, Specific and Ad valorem taxes, Progressive and proportional taxes, Direct tax vs. indirect taxes, Diffusion theory of taxation, Incidence of taxation.

8. The IS-LM Model: Goods and Money Market Equilibrium

Planned expenditure, The components of expenditure, Derivation of IS curve, Shift of the IS curve, Real money, income and the interest rate, Deriving the LM curve, Shift of the LM curve, Equilibrium of the IS and the LM curve, Fiscal policy, activity and interest rate, Monetary policy, activity and interest rate.

References

1. Frederic, S.M. (2012). *Macroeconomics: Policy and Practice*, Pearson Education, Inc. Boston, USA.
2. O'Sullivan, A., et. al. (2014). *Macroeconomics: Principles, Applications, and Tools*. 8th Edition, Pearson Education, Inc. New Jersey, USA.
3. Karl, E.C., et. al. (2012). *Principles of Macroeconomics*, 10th Edition, Pearson Education, Inc. Boston, USA.
4. Mankiw, N.G. (2012). *Principles of Macroeconomics*, 6th Edition, Nelson Education, Ltd.
5. Blanchard, O. and D.R. Jhonson (2013). *Macroeconomics*, 6th Edition, Pearson Education, Inc. New Jersey, USA.
6. Abel, A.B., et. al. (2011). *Macroeconomics*, 7th Edition, Pearson Education, Inc. Boston, USA.

ECO 2205: Statistical Methods

Topics

1. **Asymptotic Theory:** Convergence in Probability, Convergence in Distribution, Law of Large Numbers, Central Limit Theorem, Law of Iterated Expectation.
2. **Introduction to Statistical inference:** Basic Concepts, Nature of Statistical Inference, Sampling Distributions, Properties of Sampling Distribution, Derivation of Sampling Distributions.
3. **Theoretical Derivation of Sampling Distribution:** Sampling Distribution of Sample Proportion of Successes, Poisson Distribution, Normal Distribution, Sampling Distribution of Sample Mean.
4. **Hypothesis Testing:** Design and Evaluation of Tests, Test Criterion, Type I and Type II Errors, Power of a Test, Quality of a Test.
5. **Distribution of Selected Test Statistics:** Tests for the Equality of Two Means, Estimation of the Population Variance, Chi-Square Distribution, t Distribution, Tests Concerning the Mean and Variance of a Non-normal Distribution, The F Distribution, Goodness of Fit Test.
6. **Properties of Estimators:** Small Sample Properties, Asymptotic/Large Sample Properties.
7. **Methods of Estimation:** Least Square Estimation, Maximum Likelihood Estimation, Best Linear Unbiased Estimation, Confidence Interval.

References

1. Kmenta, J.; *Elements of Econometrics*, 2nd Edition, Macmillan, New York.
2. Anderson, D. R., et. al.; *Statistics for Business and Economics*, Cengage Learning.
3. Newbold, P., Carlson, W. L. and B. Thorne; *Statistics for Business and Economics*, Prentice Hall.
4. Wooldridge, J. M.; *Introductory Econometrics: A Modern Approach*, 3rd Edition, South-Western College Pub.

ECO 2207: Public Economics

Topics

1. Introduction to Public Economics

The role of government in making a free market possible, Why free market works well for consumers? Taxes, Subsidies, Regulations and inefficiency; Problems for the free market, Problems for the government.

2. Public Goods and Externality

Concept & characteristics of public goods, Pure and impure public goods, Public goods and market failures, The free-rider problem, Who should produce a public goods? Property rights, excludability and externalities; Publicly provided private goods, Efficiency conditions for public goods, Pareto efficiency and income distribution, Types of externalities and inefficiency, Externalities and Coase theorem, Other types of market failure.

3. Principles of Expenditure Analysis

Allocative and distributive effects, Non-marketed goods, Fixed quantity subsidy vs. excise subsidy.

4. Cost-Benefit Analysis

Private and social cost-benefit analysis, Measuring non-monetized cost and benefits, Shadow prices and market prices, Discount rate for social cost-benefit analysis, Cost effectiveness.

5. Principles of Tax Analysis

The forms of taxation, Desirable characteristics of any tax system, Tax incidence in competitive market, The incidence of govt. benefits, Tax incidence in oligopolies, Ad valorem tax vs. specific tax, Income tax and value added tax, Tax incidence under partial and general equilibrium, Different bases for taxation.

6. Taxation and Economic Efficiency

Effects of taxes borne by consumers: Substitution and income effect, Measuring deadweight loss using indifference curve and demand curve; effects of taxes borne by producers, Taxation of savings, Taxation of labor income, Measuring the effects of taxes on labor supplied.

7. Deficit Finance

Deficits and debt, Incidence of deficit finance, How deficits affect future generations? Choice between tax and borrowing; Govt. borrowing, interest rate and the crowding out of investment.

8. Public Finance - Bangladesh Perspective

Recent trend of revenue and expenditure, Analysis of budget.

References

1. Stiglitz, J.E. (2000). *Economics of Public Sector*, 3rd Edition, Norton & company.
2. Seidman, L.S. (2011). *Public Finance*, 1st Edition, McGraw-Hill Companies, Inc.
3. Tresch, R.W. (2015). *Public Finance: A Normative Theory*, 3rd Edition, American Press.
4. Gruber, J. (2005). *Public finance and Public Policy*. Worth Publishers, New York.
5. Rosen, H. (2005). *Public Finance*, McGraw-Hill Companies, Inc.

ECO 2209: Principles of Sociology

Topics

1. Introduction

Definition, History, Father of sociology, Creating as a separate discipline, Theoretical perspectives: Functionalism, Conflict theory, Symbolic interactionism theory; Major areas of research in sociology, Importance of sociology.

2. Sociological Research

Approaches to sociological research, Steps of scientific method, Interpretive framework, Research Methods: Surveys, Field research and its types, Experiments, Secondary data analysis.

3. Culture

Definition, Features of culture, Values, Belief, Norms, Mores, Folkways, Symbols and language, Pop-culture and subculture, High culture, Counter culture, Cultural change due to discovery and invention, Diffusion and globalization.

4. Society and Social Interaction

Types of societies: Preindustrial, Industrial, Post –industrial societies; Roles and status, Ascribed and achieved status and its bases.

5. Socialization

Concept of socialization, Agents of socialization, Theories of socialization, Stages of socialization, Importance of socialization.

6. Personality

Meaning and approaches to the study of personality, Determinants of personality, Personality disorganization and its causes, Culture and personality disorganization, Personality reorganization.

7. Social Groups and Organization

Definition, Characteristics and importance of social groups, Types of social groups, Organization and its types.

8. Social control

Meaning and importance of social control, Means of social control.

9. Social Stratification and Differentiation: Meaning, characteristics and causes of stratification, Functions of stratification.

10. Caste and Class

Meaning and characteristics of caste system, Nature and characteristics of social class, Caste and class: Differences.

11. Social Mobility

Meaning and types of social mobility, Determinants of social mobility.

References

1. Brinkerhoff, D.B., et. al. (2011). *Essentials of Sociology*, 8th Edition, Nelson Education, Ltd. Canada.
2. Macionis, J.M. (2004). *Sociology*. Pearson, Toronto.
3. Giddens, A. (2009). *Sociology*. Polity Press, Cambridge.
4. Andersen, M.L. and H.F. Taylor (2013). *Sociology: The Essentials*, 7th Edition, Nelson Education, Ltd. Canada.
5. Rao, C.N. Shanker. (2001). *Sociology: Primary Principles*, S. Chand & Company Limited, New Delhi.

ECO 3101: Microeconomics-I

Topics

- 1. Utility maximization:** Consumer Preferences, Consumer Behavior, Indirect Utility Function, Roy's Identity, Money Metric Utility Function, Cobb-Douglas Utility Function, CES Utility Function.
- 2. Choice:** Comparative Statics, the Slutsky Equation, the Cobb-Douglas Slutsky Equation, Properties of the Demand Function, Comparative Statics Using the First-Order Conditions, Duality in Consumption, Revealed Preference, Generalized Axiom of Revealed Preference, Sufficient Conditions for Maximization, Comparative Statics using Revealed Preference, the Discrete Version of the Slutsky Equation, Recoverability.
- 3. Demand:** Homothetic Utility Functions, Aggregating Across Goods, Hicksian Separability, Aggregating Across Consumers, Inverse Demand Functions, Continuity of Demand Functions.
- 4. Uncertainty:** Expected Utility, Uniqueness of Expected Utility Function, Arrow-Pratt Measure of Risk Aversion, Global Risk Aversion, Jensen's Inequality, Relative Risk Aversion, Mean-Variance Utility, State Dependent Utility, Subjective Probability Theory.
- 5. Market Structure**
Monopolistic Competition: Determination of Monopolistically Competitive Industry Price and Output in the Short Run and in the Long Run, Product Differentiation.
- 6. Game Theory**
Description of a Game, Economic Modeling of Strategic Choices, Solution Concepts, Nash Equilibrium, Mixed Strategies, Repeated Games, Refinements of Nash Equilibrium, Sequential Games, Sub-game Perfection, Games with Incomplete Information.
- 7. General Equilibrium Analysis**
Exchange: Edgeworth Box, Pareto Efficient Allocations, Walras' Law, The Existence of Equilibrium, Equilibrium and Efficiency, First Welfare Theorem, Second Welfare Theorem.
Production: The Robinson Crusoe Economy, Production and the First Welfare Theorem, Production and the Second Welfare Theorem, Production Possibilities, Comparative Advantage, Pareto Efficiency, Decentralized Resource Allocations.
- 8. Welfare**
Aggregation of Preferences, Arrow's Impossibility Theorem, Social Welfare Functions, Welfare Maximization, Bergson-Samuelson Welfare Functions, Fair Allocations, Envy and Equity.
- 9. Externalities**

References

1. Varian, H. (1992). *Microeconomic Analysis*, 3rd Edition, W. W. Norton & Company, New York
2. Mas-Colell, A., M. Whinston and J. Green (1995). *Microeconomic Theory*, Oxford University Press.
3. Gravelle, H. and R. Reese (2004), *Microeconomics*, 3rd Edition, Prentice Hall Financial Times.
4. Jehle, G. and P. J. Reny (2011), *Advanced Microeconomic Theory*, 3rd Edition, Prentice Hall.
5. Nicholson, W. and C. Snyder (2012). *Microeconomic Theory: Basic Principles and Extensions*, 11th Edition, South-Western Cengage Learning.

ECO 3102: Macroeconomics-I

Topics

1. Aggregate Supply, Wages, Prices and Employment

The Phillips curve, The dynamic aggregate supply curve and its properties, Inflation expectations and the ASC, The modified Phillips curve, The expected augmented Phillips curve, The Shapiro-Stiglitz model, Contracting models.

2. Saving and Investment in Closed and Open Economies

Relationship between saving and wealth; Saving, investment and goods market equilibrium in a closed economy; Saving, investment and goods market equilibrium in an open economy; The neoclassical theory of investment, Inventory investment, Tobin's q and investment.

3. Consumption

The relationship between consumption and saving, Intertemporal choice and consumption, The intertemporal choice model in practice: Income and wealth, Interest rate; The Keynesian Theory of consumption, Consumption function puzzle, The relative income hypothesis, The life cycle hypothesis, The permanent income hypothesis, The random walk hypothesis, The Behavioral Economics and consumption.

4. Growth Models

Harrod-Domar model and Solow model

Some basic facts about economic growth, Assumptions, The dynamics of the model, The impact of a change in the saving rate, The environment and economic growth problem.

Infinite-Horizon and Overlapping-Generation model

The Ramsey-Cass-Koopmans model: Assumptions, The behavior of households and firms, Welfare, The balanced growth path; The diamond model: Assumptions, Household behavior, The dynamics of the economy, Government in the dynamic model problems.

Endogenous Growth

Framework and assumptions, The model without capital, The general case, The nature of knowledge and the determinants of the allocation of resources to R & D, The Romer model.

7. The Open Macro economy

The open economy and the goods market, The Mundell-Fleming model, The role of price in an open economy, Automatic adjustment, The crawling peg exchange rate, The J curve effect, The IMF approach to macroeconomic stabilization.

References

1. Romer, D. (2012). *Advanced Macroeconomics*, 4th Edition, McGraw-Hill Companies, Inc.
2. Blanchard, O. and D.R. Johnson (2013). *Macroeconomics*, 6th Edition, Pearson Education, Inc. New Jersey, USA.
3. Rode, S.J. (2012). *Advanced Macroeconomics*.
4. Frederic, S.M. (2012). *Macroeconomics: Policy and Practice*, Pearson Education, Inc. Boston, USA.

ECO 3105: Econometrics-I

Topics

- 1. Review of Mathematical Tools, Probability Distributions and Statistical Inference**
Basic Mathematical Tools, Probability Distributions, Point and Interval Estimation, Properties of Estimators, Hypothesis Testing and Confidence Intervals.
- 2. Nature of Econometrics and Economic Data**
What is Econometrics? Why a Separate Discipline? Methodology of Econometrics, Economic Data.
- 3. Two-Variable Regression Analysis**
Introduction, the Concept of Population Regression Function (PRF), Stochastic Specification of PRF, the Significance of the Stochastic Disturbance Term, Sample Regression Function (SRF).
- 4. Two-Variable Regression Model**
The Method of Ordinary Least Squares (OLS), Classical Linear Regression Model, Standard Errors of Least-Squares Estimates, Properties of Least Squares Estimators, The Gauss-Markov Theorem, The Coefficient of Determination.
- 5. The Normality Assumption: Classical Normal Linear Regression Model (CNLRM)**
The Probability Distribution of Disturbance u_i , The Normality Assumption, Properties of OLS Estimators Under the Normality Assumption, Probability Distributions Related to the Normal Distribution: The t, Chi-square, and F Distribution.
- 6. Two-Variable Regression: Interval Estimation and Hypothesis Testing**
Interval Estimation, Confidence Intervals for Regression Coefficients, Hypothesis Testing, The Problem of Prediction, Reporting and Evaluating the Results of Regression Analysis.
- 7. Extensions of the Two-Variable Linear Regression Model**
Regression through the Origin, Scaling and Units of Measurement, Functional Forms of Regression Models, Log-Linear Regression Models, Semi-Log and Reciprocal Models.
- 8. Multiple Regression Analysis**
K-Variable Linear Regression Model (in Matrix form), OLS Estimation, Coefficient of Determination and Adjusted R Square, Testing of Hypothesis.

References

1. Wooldridge, J. M. (2005). *Introductory Econometrics: A Modern Approach*, 3rd Edition, South-Western College Pub.
2. Judge, G. G., et. al. (1980). *Theory and Practice of Econometrics*, John Wiley and Sons, Inc.
3. Kmenta, J. (1986). *Elements of Econometrics*, 2nd Edition, Macmillan, New York.

ECO 3106: Econometrics-I (Lab)

Topics

All problems & exercises with STATA, E-Views, SPSS and other related software.

References

1. Wooldridge, J. M. (2005). *Introductory Econometrics: A Modern Approach*, 3rd Edition, South-Western College Pub.
2. Judge, G. G., et. al. (1980). *Theory and Practice of Econometrics*, John Wiley and Sons, Inc.
3. Kmenta, J. (1986). *Elements of Econometrics*, 2nd Edition, Macmillan, New York.

ECO 3107: Principles of Marketing

Topics

1. Defining Marketing for 21st Century

Meaning and dimensions of market, Components and types of market, What is marketing? What is marketed? Who marketed? Importance of marketing, Scope of marketing, Core marketing concepts: Needs, wants and demand; Target markets, positioning and segmentation; Offerings and brands; Products, services and experiences; Customer's value, satisfaction and quality; Exchange, transaction and relationship; Marketing channel, Supply chain, Competition, Marketing environment. The new marketing realities, Marketing utilities Approaches to study the marketing.

2. Company Orientation toward the Market Place

The production concept, The product concept, The selling concept, The marketing concept, The holistic marketing concept; Selling concept vs. marketing concept, Relationship marketing, Integrated marketing, Internal marketing, Performance marketing, The tasks of marketing management.

3. Marketing System and Marketing Functions

Concept and the components of marketing system, Exchange function, Physical function, Facilitative function; Marketing institution: Merchant middlemen, Agent middlemen, Speculative middlemen, Processors and Facilitative organizations.

4. Marketing Channel

Supply chain and value delivery network, Nature and importance of marketing channel, Factors affecting the selection of marketing channel, Merits and demerits of direct channel, Channel behavior and organization, Channel design decisions, Channel management decisions, Public policy and distribution decisions, Marketing logistics and supply chain management; Channel conflict, cooperation and competition.

5. Managing Marketing Information

Components of a modern marketing information system (MIS), Feature and importance of MIS, Assessing marketing information needs; Developing marketing information: Internal records, marketing intelligence; Concept of marketing research, The marketing research process, analyzing and using marketing information.

6. Developing Marketing Strategies and Plan

Marketing and customer value, Steps in strategic planning, The Boston consulting group approach, Corporate and division strategic planning; Business unit strategic planning: The business mission, SWOT analysis, Goal formulation, Strategic formulation, Program formulation, Implementation, Feedback and control; Growth strategies: Market penetration, Market development, product development, Diversification; Marketing strategy and marketing mix, 4Ps, 4Cs, The new 4Ps, Steps in marketing plan.

7. New Product development strategies

Definition of products and services, Classification of products and services, Product and service decisions, Why do firms create new products? Diffusion of innovation: Innovators, Early adopters, Early majority, Late majority, Laggards; New product development process: Idea generation, Idea screening, Concept development and testing, Marketing strategy development, Business analysis, Product development, Test marketing, and, Commercialization.

8. Price and Pricing Strategies

What is price? Five Cs of pricing, Consumer psychology and pricing, Macro influence on pricing, Major pricing strategies, Setting the price, New product pricing strategies: Market skimming pricing, Market penetration pricing; Product mix pricing strategies: Product line pricing, Optional product pricing, captive product pricing, By-product pricing, Product bundle pricing; Price adjustment strategies, Initiating and responding to price changes, Legal and ethical aspect of pricing.

9. Personal Selling and Sales Promotion

The scope and nature of personal selling, the role of the sales force, Managing the sales force, The personal selling process: The six steps; Relationship marketing, Ethical and legal issues in personal selling, The rapid growth of sales promotion, Sales promotion objectives, Major sales promotion tools, Promotion vs. advertising, Advertisement policy, Direct and online marketing.

References

1. Kotler, P. and G. Armstrong (2014). *Principles of Marketing*, 15th Edition, Pearson Education Limited, UK.
2. Armstrong, G. and P. Kotler (2015). *Marketing: An Introduction*, 12th Edition, Pearson Education Limited, UK.
3. Kotler, P. and K.L. Keller (2012). *Marketing Management*, 14th Edition, Pearson Education, Inc. New Jersey, USA.
4. Grewal, D. and M. Levy (2014). *Marketing*, 4th Edition, McGraw-Hill Companies, Inc.
5. Ferrell, O.C. and M.D. Hartline (2011). *Marketing Strategy*, 5th Edition, Nelson Education, Ltd.

ECO 3109: Agricultural Economics

Topics

1. Agricultural Economics

Application of the theory of economics in agriculture. Structure and characteristics of agriculture in LDCS, contribution of agriculture to economic development-product, market, factor and foreign exchange contributions,

2. Economics of Agricultural Production

Review of the factor product the factor-factor and the product-product relationships; technical, allocative and economic efficiency of resource use; efficiency of peasant agriculture-farm size and factor productivity.

3. Land Tenure and Land Reform

Meaning; types of tenurial arrangements, productivity and efficiency of different tenure groups, economic analysis of share cropping, objectives, forms, costs and benefits of land reform; agrarian reform; experience of land reform in developing countries.

4. Production and Consumption Activities within Agricultural Households.

5. Agricultural Marketing and Price Policy

Cobweb model perverse supply response in backward agriculture; concept of agricultural surplus; marketing of agricultural products; structure and functions of agricultural markets, marketing margin and farm prices; role of government in marketing agricultural products.

6. Agricultural Credit

Credit in agriculture, sources of credit: agricultural credit institutions, access of small farmers to institutional credit.

7. Food and Agricultural Policy

Nature and principles of policy-the elements, classification of instruments, and rules of policy; analyzing the effects of policy instruments-production subsidy, input subsidy and food subsidy, classifying the effects of agricultural policy.

References

1. Brammer, Hugh (1997): *Agricultural Development Possibilities in Bangladesh*, University Press Ltd, First edition
2. Brown, J G, et al (1994): *Agricultural Investment and Operations*, the World Bank, First edition
3. Colman, David and T Young (1989): *Principles of Agricultural Economics*, Cambridge University Press
4. Ghatak, S and K Ingersent (1984): *Agricultural and Economic Development*, John Hopkins University Press
5. Frank, Ellis (1988): *Peasant Economics*, Cambridge University Press
6. Eicher, C K and J M Staatz, eds. (1998): *International Agriculture Development*, Johns Hopkins University Press, Third edition
7. Hill, B E and K Ingersent (1982): *An Economic Analysis of Agriculture*, Heinemann Educational Books, Second edition.

ECO 3201: Microeconomics-II

Topics

1. Game Theory

Review from previous section, Static games of imperfect competition, Dynamic games of imperfect competition.

2. Equilibrium Analysis

The Core of an Exchange Economy, Convexity, Uniqueness of Equilibrium, General Equilibrium Dynamics, Tatonnement Processes, Nontatonnement Processes.

3. Information

The Principle-Agent Problem, Full Information: Monopoly Solution, Full Information: Competitive Solution, Hidden Action: Monopoly Solution, Hidden Action: Competitive Solution, Hidden Information: Monopoly, Hidden Information: Competitive Solution, Adverse Selection, Lemons Market, Signaling: Educational Signaling.

4. Moral Hazard and Principal-Agent Problems

The Basic Moral Hazard Problem, Contract Design with Observable Effort, Contract Design with Unobservable Effort, Shape of the Optimal Compensation Scheme, Optimal Effort.

5. Holstrom and Milgrom's Linear Scheme

Risk Neutrality and Observability, Risk neutrality and unobservability, Assumptions behind the Simple Results, Contracting with Agent Risk Aversion, Contracting with Effort Observability, and Contract Design with Unobservable Effort.

6. Lemon Market

Discrete and Continuous case.

7. Adverse Selection, Signaling, and Screening

Incentives in Agency Problems, Job Market Signaling, Screening, Pooling and Separating Equilibria.

8. Auction Theory

Auction Classification and Private-Value Strategies, Comparing Auction Rules, Risk and Uncertainty over Values, Common-value Auctions and Winner's Curse, Information in Common Value Auctions.

References

1. Varian, H. (1992). *Microeconomic Analysis*, 3rd Edition, W. W. Norton & Company, New York.
2. Nicholson, W. and C. Snyder (2012). *Microeconomic Theory: Basic Principles and Extensions*, 11th Edition, South-Western Cengage Learning.
3. Mas-Colell, A., M. Whinston and J. Green (1995). *Microeconomic Theory*, Oxford University Press.
4. Gravelle, H. and R. Reese (2004), *Microeconomics*, 3rd Edition, Prentice Hall Financial Times.
5. Jehle, G. and P. J. Reny (2011), *Advanced Microeconomic Theory*, 3rd Edition, Prentice Hall.

ECO 3203: Macroeconomics-II

Topics

1. Unemployment

Introduction: Theories of Unemployment, A Generic Efficiency-Wage Model, A More General Version, The Shapiro–Stiglitz Model, Contracting Models, Search and Matching Models, Implications.

2. Inflation and Monetary Policy

Inflation, Money Growth, and Interest Rates, Monetary Policy and the Term Structure of Interest Rates, The Microeconomic Foundations of Stabilization Policy, Optimal Monetary Policy in a Simple Backward- Looking Model, Optimal Monetary Policy in a Simple Forward- Looking Model, Additional Issues in the Conduct of Monetary Policy, The Dynamic Inconsistency of Low-Inflation Monetary Policy.

3. Budget deficit and fiscal policy

The Government Budget Constraint, The Ricardian Equivalence Result, Ricardian Equivalence in Practice, Tax-Smoothing, Political-Economy Theories of Budget Deficits, Strategic Debt Accumulation, Delayed Stabilization, Empirical Application: Politics and Deficits in Industrialized Countries, The Costs of Deficits, A Model of Debt Crises

References

1. Romer, D. (2012). *Advanced Macroeconomics*, 4th Edition, McGraw-Hill Companies, Inc.
2. Blanchard, O. and D.R. Jhonson (2013). *Macroeconomics*, 6th Edition, Pearson Education, Inc. New Jersey, USA.
3. Rode, S.J. (2012). *Advanced Macroeconomics*.
4. Frederic, S.M. (2012). *Macroeconomics: Policy and Practice*, Pearson Education, Inc. Boston, USA.

ECO 3205: Econometrics-II

Topics

1. Multicollinearity

The Nature of Multicollinearity, Estimation in the Presence of Perfect Multicollinearity, Estimation in the Presence of High but Imperfect Multicollinearity, Consequences of Multicollinearity, Detection of Multicollinearity, Remedial Measures.

2. Heteroskedasticity

The Nature of Heteroskedasticity, OLS Estimation in the Presence of Heteroskedasticity, The Method of Generalized Least Squares (GLS), Consequences of Heteroskedasticity, Detection of Heteroskedasticity, Remedial Measures.

3. Autocorrelation

Introduction, Estimation in the Presence of Autocorrelation, Properties of OLS Estimators in the Presence of Autocorrelation, Detecting Autocorrelation, Remedial Measures.

4. Dummy Variable Regression Models

Nature of Dummy Variables, Model with a Single Dummy Variable, Regression with a Mixture of Quantitative and Qualitative Regressions: the ANCOVA Models, Some Illustrative Examples of Regressions on Dummy Variables, The Structural Stability of Regression Models/ Comparing two Regressions with Dummy Variable Approach, Interaction Effects Using Dummy Variables, Use of Dummy Variables in Seasonal Analysis.

5. Specification Errors

Model Specification Criteria, Types of Specification Errors, Consequences of Model Specification Errors, Tests of Specification Errors.

ECO 3206: Econometrics-II (Lab)

Topics

All problems & exercises with STATA, E-Views, SPSS and other related softwares.

References

1. Wooldridge, J. M. (2005). *Introductory Econometrics: A Modern Approach*, 3rd Edition, South-Western College Pub.
2. Judge, G. G., et. al. (1980). *Theory and Practice of Econometrics*, John Wiley and Sons, Inc.
3. Hamilton, L. C. (2012). *Statistics with STATA: Version 12*, 8th Edition, Cengage Learning.

ECO 3207: Environment and Natural Resource Economics

Topics

- 1. Analytical Foundation of Environmental and Resource Scarcity**
Defining Environmental and Resource Economics, the Concept of Resources and Resource Scarcity: The Neoclassical Economic Perspective.
- 2. The Concept of Natural Resources**
An Ecological Perspective: Ecology: The Economics of Nature, the Ecosystem: Structure and Function, Ecodynamics: Succession, Equilibrium, Stability, Resilience, Complexity, the Laws of Matter and Energy, The Basic Lessons of Ecology.
- 3. Natural Resource Scarcity and the Limits to Economic Growth**
The Malthusian Growth Doctrine, the Neoclassical Growth Paradigm, the Ecological Economics School Perspective, and the Sustainable Economic Development.
- 4. The Origins of the Sustainability Problem**
Scoping and Defining Sustainability and Intergenerational Equity, Economic Growth with Depletable Resources and/or Pollution, Measurement of Sustainability and Income: Theory and Empirics, Environmental and Sustainability Policies, National Sustainability Policies in Practice.
- 5. Ethics and Environment**
Ethical Foundations for Environmental Economics, Principles of Discounting.
- 6. Fundamentals of the Economics of Environmental Resources**
The Economic Process and the Assimilative Capacity of the Natural Environment, Common Property Resources, Externalities and Market Failure, Internalizing the Externalities.
- 7. The Economic Theory of Pollution and Its Control**
The Determinants of the Optimal Level of Pollution and their Implications, Alternative Pollution Control Policy Measures and their implications for growth and equity.
- 8. Materials Policy: Materials, and Solid Waste**
Solid Waste and Waste Disposal, Waste and Recycling, a Comprehensive Materials Policy.
- 9. Valuing the Environment**
Environmental Demand Theory, Measuring the Costs of Provision, Total Economic Value, Benefits of Improving an Environmental Amenity, Methods: Productivity Loss, Defensive, Mitigating, Travel Cost, Hedonic Pricing and Contingent Valuation, Valuation and Policy Relevance.
- 10. Economics of Climate Change**
Kyoto Protocol, Compensation, Discounting and Uncertainty, Cost Assessment, Pricing (Taxes), Tradable Allowances (Cap and Trade), Distributional Considerations, Emissions Instruments vs. Technology Instruments, Flexibility of Policies, Sequestration, International Policy Initiatives and Coordination.

References

1. Field, B. C. and Field, M. K. (2006). *Environmental Economics*. McGraw-Hill/Irwin.
2. Kolstad, C. D. (2010). *Environmental Economics*. Oxford University Press.
3. Pearce, D. & Turner, R.K. (1990). *Economics of Natural Resources and the Environment*. Harvester Wheatsheaf.
4. Perman, R., et. al. (2011). *Natural Resource and Environmental Economics*, 4th Edition, Addison Wesley.
5. Tietenberg, T. and L. Lewis (2012). *Environmental & Natural Resource Economics*, 9th Edition, Addison Wesley.

ECO 3209: Labor Economics

Topics

1. Introduction to Labor Economics

Meaning, facts and trends of the labor market, The actors in the labor market, Some basic concepts: Positive economics, The models and predictions of positive economics, Normative economics, Normative economics and government policy, Efficiency vs. Equity.

2. The Demand for Labor

Profit maximization and labor demand, The short-run demand for labor when both product and labor markets are competitive, Labor demand in the competitive markets when other inputs can be changed, Labor demand when the product market is not competitive, Labor market effects of employee payroll taxes and wage subsidies, Marshall's rules of derived demand, Labor demand elasticities.

3. Labor Supply

Basic facts about labor supply, Analysis of the labor/leisure choice, The budget constraint, The labor supply curve, Labor supply elasticity, Labor supply of women, Life cycle aspects of labor supply.

4. Labor Market Equilibrium

Equilibrium in a single competitive market, Competitive equilibrium across labor market, The labor market impact of immigration, The economic benefits from immigration, The cobweb model, Noncompetitive labor market: Monopsony and monopoly.

5. Investments in Human Capital: Education and Training

Education and earnings, Estimation of the rate of return to schooling, Education is a signaling device, Demand for higher education, Is education and training a good social investment?

6. The Wage Structure and Inequality in Earnings

The earnings distribution, Measuring inequality, Causes of inequality, Lorenz curves and Gini coefficients.

7. Labor Mobility

The determinants of worker mobility, Geographic mobility: Direction of migratory flows, Personal characteristics of movers, The role of distance, The returns to international and domestic migration, Family migration; Employee Turnover: Wage effects, Effects of employer size, Gender differences, Employer location, Cyclical effects.

8. Labor Market Discrimination

Race & gender in the labor market; Theories of market discrimination: Employer, employee, customer, statistical discrimination; Measuring discrimination.

9. Unions and Collective Bargaining

Union structure and membership, Determinants of union membership, The activities and tools of collective bargaining, Efficient bargaining, Strikes Union wage effects, Nonwage effects of union.

10. Unemployment

Sources of unemployment, Types of unemployment: Frictional, Structural, Cyclical and Seasonal unemployment; natural rate of unemployment, unemployment and demographic characteristics.

References

1. Borjas, G.J. (2013). *Labor Economics*, 6th Edition, McGraw-Hill Companies, Inc.
2. Ehrenberg, R.G. and R.S. Smith (2012). *Modern Labor Economics: Theory and Public Policy*, 11th Edition, Pearson Education, Inc. Boston, USA.
3. Cahue, P. and A. Zylberberg (2004). *Labor Economics*, MIT Press.

ECO 4101: Development Economics-I

Topics

1. Nature of Development and Underdevelopment

Conceptualization of development and underdevelopment, Development indicators and statistical systems, Concept of economic development as economic growth plus institutional change, The modernization school of development, The basic needs approach, Human development, Development as freedom, Millennium development goals (MDG).

2. Growth, Poverty and Income Distribution (Except Balanced vs. Unbalanced Growth)

3. Review of Some Major Theories of the Modernization School of Development

A. Theories of Dualism

a. Economic Dualism

1. The Lewis Model; 2. The Fei-Ranis Model

b. Social Dualism – Boeke

c. Financial Dualism – Hla Myint

d. Technological Dualism – B. Higgins

B. Rostow's Stages of Growth

C. Theory of Big Push

D. Leibenstein's Critical Millennium Effort Hypothesis

E. Theory of Balance Growth

F. Theory of Unbalanced Growth

4. Comparative Economic Growth

Basic indicators of development – Real income, health, and Education: Purchasing power parity (PPP), Indicators of health and education; Holistic measures of Living Levels and capabilities: The traditional human development index, The new human development index; Characteristics of the developing world: Diversity within commonality.

5. Poverty, Inequality, and Development

Measuring inequality and poverty: Measuring inequality, Measuring absolute poverty; Poverty, inequality, and social welfare: What's so bad about extreme inequality? Dualistic development and shifting Lorenz curve, Kuznets's inverted-U hypothesis, growth and inequality; Absolute poverty: Extent and magnitude; Economic characteristics of high-poverty groups: Rural poverty, Women and poverty, Ethnic minorities and poverty.

6. Migration and Development

References

1. Todaro, M.P. and S.C. Smith. *Economic Development*. 11th Edition, Addison-Wesley.
2. Ray, D. (1998). *Development Economics*, Oxford University Press.
3. Bardhan, P. and Udry, C. (1999). *Development Microeconomics*, Oxford University Press.
4. Ghatak, S. (2005). *Introduction to Development Economics*. 3rd Edition, Routledge.
5. Meier, G. M. and J. E. Rauch (2005). *Leading issues in economic development*, 8th Edition, Oxford University Press.

ECO 4103: Bangladesh Economy-I

Topics

1. Economic History

Economic History of Pre-British Period, Economic History of British Period, Economic History of Pakistan Period, Economic Performance of Bangladesh under Different Political Regimes.

2. Macroeconomic performance of Bangladesh

- (i) GDP, saving and investment
- (ii) Prices, wages and employment
- (iii) Fiscal policy and fiscal management
- (iv) Monetary management and financial market development
- (v) External sector

3. Agriculture Sector

Definition, Structure and Growth of Agriculture and its Importance in the National Economy, The Resource Base and the Production Organization, Factors Behind Growth, Agricultural Asset Distribution, Agricultural Credit Performance, Co-Operative Strategies for Development, Changes in Agricultural Policies.

4. Industry

Definition, Structure and Growth of Industries, Categories of Industries: Large, Small and Cottage Industries, A Comparison of Different Industries, The Public and Private Sectors, Experiences with Nationalization, Denationalization and Privatization, The Liberalization Regime, Foreign Exchange Regimes and Industrial Growth, Problems and Prospects of Foreign Direct Investment (FDI).

5. Food Security and Sustainable Development Goal (SDG), Capital Market.

References

1. Khan, A.R. and M. Hossain, eds. (1989), *The Strategy of Development in Bangladesh*, Macmillan, London.
2. Van Schendel: Economic history of Bangladesh
3. M.M. Akash, *Bangladesh: Otit, Bortoman o Bhobishyot*, Latest edition.
4. Islam, S., eds. (1992). *History of Bangladesh: 1704-1971, Vol. 2, (Economic History)*, Asiatic Society of Bangladesh, Dhaka.
5. Abdullah, A., eds. (2001). *Bangladesh Economy 2000: Selected Issues*, BIDS, Dhaka.
6. Bayes, A. and A.Muhammad, eds. (1998). *Bangladesh at 25: An Analytical Discourse on Development*, University Press Ltd., Dhaka.
7. Book of Mofakhkharul Islam.

ECO 4105: International Trade

Topics

1. The International Economy and Globalization

Globalization of economic activity, Waves of globalization, Importance of globalization, Challenge in globalization, Meaning and subject matter of international economics, Common fallacies of international trade.

2. Theory of Comparative Advantage

The mercantilist's views on trade, Absolute advantage theory, Comparative advantage theory, The gains from trade, The case of no comparative advantage, Comparative advantage with money, The opportunity cost theory, The production possibility frontier under constant costs, Comparative advantage with more than two nations and two commodities, Sources of comparative advantage.

3. Demand and Supply, Offer Curves and the Terms of Trade

Partial equilibrium analysis, Derivation and the shape of the offer curves, General equilibrium analysis, Relation between partial and general equilibrium analysis, Definition and measurement of the terms of trade.

4. The Heckscher-Ohlin Model

Assumptions and its meaning, The Heckscher-Ohlin theorem, Factor-price equalization and income distribution, The specific-factors model, The Leontief paradox, The Rybczynski theorem, The Stolper-Samuelson theorem and Krugman's model.

5. Tariff and Non-tariff Barriers to Trade

Concept and types of tariff, Effective rate of protection, Tariff escalation, Consumer and producer surplus, Price and welfare effects of tariff for small and large countries, Optimum tariff and retaliation, Other instrument of trade policy: Export subsidy, Import quota, Voluntary export and import restraints, International cartels, Dumping.

6. Different International and Regional Trade Organization: GATT, WTO, OPEC, NAFTA, SAPTA.

References

1. Carbaugh, R.J. (2011). *International Economics*, 13th Edition, Nelson Education, Ltd. Canada.
2. Krugman, P.R., et. al. (2012). *International Economics: Theory & Policy*, 9th Edition, Pearson Education, Inc. Boston, USA.
3. Salvatore, D. (2013). *International economics*, 11th edition, John Wiley & Sons, Inc. New York.
4. Sodersten, B. and G. Reed (1994). *International Economics*, 3rd Edition, Palgrave MacMillan.
5. Markusen, J.R., et. al (1995). *International Trade: Theory and Evidence*, 1st Edition, McGraw-Hill Companies, Inc.
6. Love, P. and R. Lattimore (2009). *International Trade: Free, Fair and Open?* OECD Insights.

ECO 4107: Research Methodology

Topics

1. Introduction to Research Methodology

Meaning and objectives of research, Types of research, Significance of research, Research methods vs. methodology, Research and scientific method, Research process, Criteria of a good research.

2. Research Problem

Meaning, Selection of research problem, Techniques involved in selecting the problem.

3. Research Design

Features of a good design, Important concept relating to research design, Types of research design, Basic principles of experimental design.

4. Sampling Design

Steps in sampling design, Characteristics of a good sample design, Types of sample design, Selection of sample, Complex random sampling design.

5. Measurement and Scaling

Measurement scales, Sources of errors in measurement, tests of sound measurement, Meaning of scale, Bases of scale classification, Scaling techniques, Scale construction techniques.

6. Methods of Data Collection

Collection of primary data, Observation and survey method, Some other methods of data collection, Collection of secondary data, Case study method.

7. Processing and Analysis of Data

Processing operations, Problems in processing, Statistics in research, Measures of central tendency, dispersion, skewness and relationship; Simple and multiple regression analysis, Other measures.

8. Interpretation and Report Writing

Meaning and importance of interpretation, Techniques of interpretation, Significance of report writing, Steps in report writing, types of reports, Oral presentation.

References

1. Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*, 2nd Edition, New Age International Publishers, Ltd. New Delhi.
2. Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach*, 4th Edition, John Wiley & Sons, Inc. New York.
3. Zikmund, W.G. and B.J. Babin (2010). *Essentials of Marketing Research*, 4th Edition, Nelson Education, Ltd. Canada.
4. Walliman, N. (2011). *Research Methods: The Basics*, 1st Edition, Routledge, New York.
5. Shukla, P. (2008). *Marketing Research*, 1st Edition.
6. Greener, S. and J. Martelli (2015). *An Introduction to Business research Methods*, 2nd Edition.

ECO 4109: Software Applications for Economic Analysis

Topics

1. Section 1: SPSS

- Introduction to SPSS
- Data Storage, Analysis and Program Writing in SPSS.
- Regression and Other Analysis in SPSS.
- **Laboratory Work with SPSS.**

2. Section 2: STATA

- Introduction to STATA
- Data Storage, Analysis and Program Writing in STATA
- Regression and Other Analysis in STATA.
- **Laboratory Work with STATA.**

3. Section 3 : E-Views

- Introduction to **E-Views**.
- Problem Solving in **E-Views**.
- **Laboratory Work with E-Views.**

4. Section 4: MATLAB

- Introduction to MATLAB.
- Problem Solving in MATLAB.
- **Laboratory Work with MATLAB.**

References

1. SPSS Handouts.
2. STATA Handouts.
3. E-Views Handouts.
4. MATLAB Handouts.

ECO 4201: Development Economics-II

Topics

1. What Do We mean by Development?

Traditional economic measures, The new economic view of development, Amartya Sen's "Capability" approach, Development and happiness, Three core values of development, The central role of women, The three objectives and development.

2. Political Economy of Underdevelopment and the World System Analysis

A. Marxist theories of imperialism: Marx, Luxemburg, Hilferding, Bukharin, and Lenin.
B. A historical review of the process of development and underdevelopment.

3. Dependency Theory and the World System Analysis

Paul Baran, A.G. Frank, Emmanuel, Samir Amin, Hamza Alavi & Anupam Sen, I. Wlaaerstein and the world system analysis.

4. Trade and Development

Neo-Richardian, unequal exchange, Critique of new-Richardianism and unequal exchange, Analysis and interpretation of new international economic order, Washington consensus and open market economy.

5. Poverty and Inequality: Poverty as a Systematic Concept

6. Globalization and Bangladesh

Open market economy: Structural adjustment program; Socialist market economy.

7. Selected Issues in Development

- i. Regional Economic Cooperation.
- ii. State Vs. Market.
- iii. Rural-urban Migration and Overseas Migration.
- iv. Environmental and Sustainable Development.

References

1. M.P. Todaro and S.C. Smith. *Economic Development*. 11th Edition, Addison-Wesley.
2. C.K. Wilber (Ed.). *The Political Economy of Development and Underdevelopment*.
3. Nancy Baster (Ed.). *Measuring Development*.
4. W.L. Johnson and D.R. Mamersohen (Ed.). *Reading in Economic Development*.
5. David Coleman and Frederick Nixon. *Economics of Changes in Less Developed Countries*.
6. Gunner Myrdal. *Asian Drama*
7. B. Okun and R.W. Fichardson (Ed.). *Studies in Economic Development*.
8. Samir Amin. *Accumulation on a World Scale*.

ECO 4203: Bangladesh Economy-II

Topics

- 1. State owned enterprises and private sector development**
- 2. Power and energy**
- 3. Transport and communication**
- 4. Human development**
- 5. Poverty alleviation**
- 6. Environment and development**

References

1. BER, MoF, Government of Bangladesh
2. BEA: Bangladesh Journal of Political Economy, Bangladesh Economic Association (BEA), various issues.
3. BIDS: Bangladesh Development Studies, Bangladesh Institute of Development Studies (BIDS), various issues
4. Hossain, Mosharraf (1992): Agriculture in Bangladesh, Problems, Policies & Prospects, University Press Limited, Dhaka
5. Khan, A R (1973): The Economy of Bangladesh, Macmillan.
6. Rashid, Selim (1995): Bangladesh Economy, University Press Limited, Dhaka.

ECO 4205: International Finance

Topics

1. International Finance Theory

National Income Accounting and Balance of Payment

NI accounting for open economy: Consumption, investment, Government purchase, Hypothetical open economy; The BOP accounts: The current account, The capital account, The financial account, net errors and omissions.

Foreign Exchange Markets and Exchange Rates

Exchange rates and international transactions, The foreign exchange market: Types, characteristics, Foreign exchange swaps, Forward and future markets; Risk and liquidity, Interest rate, Exchange rate, Equilibrium in the foreign exchange market, expectations and equilibrium.

Money

Definition of money, Demand for money by individuals, Aggregate money demand, The equilibrium interest rate, Money supply and exchange rate in short-run; Money, price level and exchange rate.

2. International Financial Policy

International Monetary System, Macroeconomic Policy and Co-ordination under Floating Exchange Rate, Optimum Currency Area and the European Experience, The Global Capital Market, performance and policy problems, International Investments, Financial Crisis in Developing Countries.

3. International Finance: Bangladesh Context

Assessing Investment Climate in Bangladesh.

References

1. Krugman, P., Obstfeld, M. and M. Melitz (2011). *International Economics: Theory and Policy*, 9th Edition, Addison-Wesley.
2. Caves, R. E., J. A. Frankel and R. W. Jones (2006). *World Trade and Payments - An Introduction*, 10th Edition, Addison-Wesley.
3. Dornbusch, R. (1980), *Open Economy Macroeconomics*, Cambridge University Press.
4. Melvin, M. and S. Norrbin (2012). *International Money and Finance*, 8th Edition, Academic Press
5. Sodersten, B. and G. Reed (1994). *International Economics*, 3rd Edition, Palgrave MacMillan.

ECO 4207: History of Economic Thought

Topics

1. Pre-classical Economic Thought

This section will briefly cover Ancient-oriental and occidental and medieval economic thought such as those of the Koutilya, Greek philosophers, Mercantilists and the Physiocrats.

2. The Classical School

Adam Smith: Division of labour, Theory of wages, Profit and interest, Principles of taxation.

David Ricardo: Theory of rent, Taxation and principle of comparative advantage.

Malthus: Population doctrine and its criticism, Concept of utilitarianism, Economic ideas of John Stuart Mill.

3. Socialist Alternatives to Classical Theory

Historical school of Hegel and Marx's scientific socialism, Theory of surplus value, Falling rate of profit, Destruction of capitalism, Communist manifesto, Schumpeter and capitalism, Developments in Soviet economy, Chinese communism and the ideas of the Fabian society

4. The Marginal Revolution and Neoclassical Foundations

The marginal concept and notions of optimization as found in Jevons, Menger, Wicksteed; Neo-classical foundations of microeconomics laid down by Marshal, The general equilibrium theories of Walrus, Pareto and Leontief; Veblen and the development of institutional economics

5. Modern Paradigms

Keyne's General Theory, The Keynesian-Monetarist debate and resurgence of neoclassical ideas including the supply-side economics, New Classical and New Keynesian School

References

1. Spiegel, Henry William. *The Growth of Economic Thought*, Duke University Press, Durban, North Carolina, latest edition.
2. Roll, Eric. *A History of Economic Thought*, Prentice-Hall, Third edition
3. Ekelund, R B and R F Hebert. *A History of Economic Theory and Method*, McGraw-Hill, latest edition.
4. Koutilya (1992). *Arthashastra*, Edited by L N Rangaranjan, Penguin Publishing, New Delhi, India, Sixth edition
5. Freedman, Robert (ed). *Marx on Economics*, Pelican Books
6. Giddens, Anthony (1971). *Capitalism and Modern Social Theory-An Analysis of the Writings of Karl Marx, Durkheim and Max Weber*; Cambridge University Press, UK.
7. Hausman D M: *The Philosophy of Economics: an Anthology*, Second Edition

ECO 4210: Research Paper (Only CGPA 3.50 and above may take)

Topics

- Individual student has to prepare appropriate research proposal on topic related to Economics under the supervision of departmental teachers.
- Individual student is required to present his/her research paper in departmental seminar. All students have to face an oral examination by the teachers of the department.

ECO 4211: Monetary Economics

Topics

- 1. Introducing the Macro economy**
Aggregate Markets, IS-LM model, Aggregate Demand and Supply, Policy Neutrality vs. Policy Effectiveness, Synthesis.
- 2. Money and the Monetary System**
Definition and Functions of Money, Measures of Money, the Banking system.
- 3. The Demand for Money**
The Demand for Money, Transaction Demand, Speculative Demand, Precautionary Demand, Quantity Theory.
- 4. Supply of Money: the Role of the Central Bank, Central Bank and Commercial Banks' Interaction, Creation and Destruction of Money.**
- 5. Costs of Inflation**
Anticipated and Unanticipated Inflation, Seigniorage, Inflation Tax and Welfare Costs.
- 6. Monetary Policy and Tools of Monetary Policy**
Goals of Monetary Policy, Use of Targets: Intermediate and Operating Targets, Supply and Demand for Reserves, Reserve Requirements, Open Market Operations, Discount Window, Moral Suasion.
- 7. The Role of Nominal Anchor: Monetary Targeting, Exchange Rate Targeting, Inflation Targeting, Taylor's Rule.**
- 8. Transmission Mechanism of Monetary Policy**
Interest Rate Channels, Asset Price Channels, Credit View.
- 9. Exchange Rate Regime**
Fixed, Flexible and Managed Float, Role of Central Bank in Fixed and Managed Exchange Rate Regimes, Reserve Currencies, Exchange Market Intervention and the Money Supply, Sterilized and Unsterilized Intervention, Capital Flows.
- 10. Effectiveness of Monetary Policy and Exchange Rate Regimes**
Trilemma: Fixed Rate, Flexible Rate, Capital Flows.
- 11. Exchange Rate and Price Level**
The Law of One Price, Purchasing Power Parity, Evidence.
- 12. Monetary Policy of Bangladesh.**

References

1. Lewis, M. K. and P. D. Mizen (2000). *Monetary Economics*, Oxford University Press.
2. Mishkin, F. S. (2000). *The Economics of Money Banking, and Financial Markets*, Addison -Wesley.
3. Walsh, C. E. (2010). *Monetary Theory and Policy*, 3rd Edition, the MIT Press.