UG Syllabus for Semester VI of ECONOMICS MAJOR UNDER NEP as approved in the UG Board of Studies Meeting held on 09.12.2025

Department of Economics

West Bengal State University

ECONOMICS MAJOR (DSC)

Semester VI

DS-12: ECODSC612T

INTERNATIONAL ECONOMICS-I

5 Credits (4L+1T)

Total number of lectures hours-75

Course Outcome/Learning Outcome

After completion of this course the student will be able to:

*Understand the meaning and scope of international economics, conceptual background to build up an idea about how the economic activities outside the domestic boundary effects the economy.

*Have an idea about the benefits of taking part in international trade.

*The theories that explain the pattern of trade- the implications of various trade economic variables.

*Comprehend the theories, problems and effects of the trade policies.

*Develop an idea about the balance of trade and balance of payments accounts and foreign exchange reserves. Policies to solve the BoP problem.

1. International Trade – concepts and ideas (15 Lecture hours)
   a) Meaning and scope of international economics.
   b) Equilibrium in international trade- concept of PPF, SIC, concept of the internal equilibrium, equilibrium with trade. Derivation of offer curve.
   c) Concept of TIC and derivation of offer curve using TIC and equilibrium ToT.
   d) Elasticity of the offer curve.
   e) ToT and the real income.
   f) Gains from trade- decomposition of GFT – gains from exchange and gains from production specialization and gains from exchange, substitution possibilities and magnitude of GFT.
   g) Exceptional cases where there is only one gain or no gain.
2. Theories of International Trade (25 lecture hours)

a) Technology and trade – Ricardian Theory of comparative advantage, limitation of Ricardian Theorem.

b) Factor Endowment and Trade : Hecksher –Ohlin Theorem of Trade using price and physical definition. Effect of international trade on income distribution Stolper – Samuelson theory, relation between factor price and commodity price ratio, factor price equalization, factor intensity reversal, factor price equalization and complete specialization.,

c) Leontief Paradox.

3. Trade policy- effects of implementation of instruments of trade policy: (20 lecture hours)

   a) Effect of tariff – partial equilibrium effect and general equilibrium effects in small country and large country, Stolper Samuelson theory on income redistribution after tariff, Metzlers Paradox, effective rate of tariff, optimum rate of tariff.

   b) Quota- quota tariff equivalence.

   c) Effect of voluntary export restraint

   d) Effect of export subsidy in partial equilibrium set up.

4. Balance of payment and exchange rate: (15 lecture hours)

   a) Balance of payment accounts.

   b) Determination of national income in an open economy, foreign trade multiplier with and without repercussion effect.

   c) Fixed and flexible exchange rate, effects of devaluation.

   d) Pegged exchange rate and BoP: Expenditure switching (elasticity approach) and expenditure reducing policy (Absorption Approach).

Suggested reading

1. Soderstein.Bo: International Economics 2nd Edition
2. Caves, Frankel, Jones: world Trade and Payments
3. Krugman and Obstfeld: International Economics Theory and Policy, 8th Edition
4. Rajat Acharyya: International Economics. Oxford University Press

5. Dominik Salvatore: International Economics, Trade and Finance ….11th Edition, wiley Publication

6. Chacholiades. M: International Economics, McGraw-Hill (1990)

ECONOMICS MAJOR (DSC)

Semester VI

DS-13: ECODSC613T

STATISTICAL METHODS FOR ECONOMICS-II

5 Credits(4L+1T)

Total number of lectures hours-75

Course Outcome/Learning Outcome

After the successful completion of the course the student will be able to

*Learn the basic concepts of vital statistics.

*Perceive the characteristics of elementary probability theory using various methods of statistical measurements.

* Understand the concept of random variables and probability distributions.

* Understand the ideas random sampling and jointly distributed random variables

*Learn various important concepts of sampling and introduce the concepts of statistical inference.

1. Vital Statistics: Elementary concepts of vital statistics (10 hours)
2. Elementary Probability Theory (15 hours)
   Random variable, Sample spaces and events; probability axioms and properties; counting techniques; Permutations and Combinations; conditional probability and Bayes' rule.
3. Random Variables and Probability Distributions (15hours)
   Defining random variables; probability distributions; properties of discrete and continuous distributions, expected values of random variables; Concepts of some special distributions (Uniform distribution; Binomial and related Distributions; Poisson, Normal and Bivariate Normal distributions); (Chi-Square, t and F distributions).
4. Random Sampling and Jointly Distributed Random Variables (10hours)
   Properties of distribution functions, mass functions and density functions for jointly distributed random variables; Computation of expected values; covariance and correlation coefficients. Concept of independence.
5. Sampling (10 hours)

(a) Principal steps in a sample survey; methods of sampling; the role of sampling theory;

(b) Distributions of sample mean and sample variance, properties of random samples.

6. Introduction to statistical Inference (15hours)

Point and Interval Estimation, properties of estimators; confidence intervals for population parameters, Estimation of population parameters using methods of moments and maximum likelihood procedures.

[Note: Values in parentheses indicate number of Lecture hours for the corresponding unit]

Suggested Readings:

1. John E. Freund's Mathematical Statistics with Applications (7th Edition), Irwin Miller (Author), Marylees Miller (Author), Prentice Hall (2003).
2. Kenny and Keeping: Mathematical Statistics, Part 1 &Part II
3. R.G.Hogg and A.T.Craig : Introduction to Mathematical Statistics, Pearson Education (Indian Edition)
4. V. K. Rohatgi and A. K. M. E. Saleh, An Introduction to Probability and Statistics, 2nd Edition, Wiley (2000).
5. Jay L. Devore, Probability and Statistics for Engineers, Cengage Learning, 2010.
6. John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
7. Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics

ECONOMICS MAJOR (DSC)

Semester VI

DS-14: ECODSC614T
INTRODUCTORY ECONOMETRICS
5 Credits (4L+1T)

Total number of lectures hours-75

Course Outcome/Learning Outcome

After the successful completion of the course the student will be able to

*Learn the basic concepts of hypothesis.

*Perceive the elementary concepts of ANOVA.

* Understand the concept of linear regression.

* Understand the problems of OLS method.

*Learn various important concepts of qualitative information with specification problems.

1. Classical Statistical Inference: (15 hours)

Testing of Hypothesis- p-values- Type-I and Type-I errors- Simple applications of tests for the mean and variance of Univariate Normal Population. Non-parametric tests.

2. ANOVA Tables (concepts only) (5 hours)

3. Linear Regression: (15 hours)

Specifications of the model- Assumptions- Ordinary Least Squares (OLS) Estimation- Gauss Markov Theorem- Estimation of the Error Variance- Statistical Inference in the Linear Regression Model- Confidence Intervals for the Estimated Parameters and the Testing of Hypotheses- Coefficient of Determination- Prediction with the Simple Regression model.

4. Problems in OLS Method: (20 hours)

Violation of assumptions and simple least-squares methods in two variable linear regression models: Analysis of Residuals and consequences of applying OLS under autocorrelation, heteroscedasticity, test of autocorrelation and heteroscedasticity, multicollinearity problem, consequences and testing

5. Multiple Regression with qualitative information: (15hours)

Describing qualitative information, single and multiple dummy independent variable, interaction of dummy independent variables, A binary Dependent variable: the linear probability model.

6. Specification Analysis: (5hours)

Omission of a relevant variable; inclusion of irrelevant variable; tests of specification errors.

[Note: Values in parentheses indicate number of Lecture hours for the corresponding unit]

Suggested Readings

1. G.S.Maddala, Introduction to Econometrics, 3rd edition, John Wiley & Sons Ltd (2005).

2. Jan Kmenta, Elements of Econometrics, Macmillan Publishing company (1991)

3. D. Gujrati, Basic Econometrics, McGrawhill Higher Education (2003)

4. Greene W.H.: Econometric Analysis, 4th edition, Pearson Education (2000)

ECONOMICS MAJOR (DSC)

Semester VI

DS-15: ECODSC615T

PUBLIC FINANCE

5 Credits (4L+1T)
Total number of lectures hours-75

Course Outcome/Learning Outcome

After the successful completion of the course the student will be able to

*Learn the basic concepts of public economics.

*Perceive the elementary concepts of public goods.

* Understand the concept of taxation.

*Learn various important concepts of public expenditure and public debt.

1. Nature and Scope of Public Economics (15 hours)

   Definition and Scope of Public Economics; Externalities, Market Failure and Government Intervention; Coase Theorem; Fiscal functions: an overview.

2. Theory of Public Good (20 hours)

   Definition of Public Good; Characteristics of Pure Public Good; Distinction between Pure Public Good, impure public good and Private Good; Free riding problem; Market Failure in case of Pure Public Good; Optimal provision of Public Goods; Private Provision and Public Provision of Public Goods; Lindahl Equilibrium.

3. Taxation (20 hours)

   Classification of Taxes; Canons of Taxation; Benefit Principle; Equal Sacrifice Principle; Ability to Pay Principle; Incidence and Burden of Taxes; Effects of taxation on income distribution, work efforts, and on savings; dead weight loss and distortion, efficiency and equity considerations, tax incidence, optimal taxation; the Laffer curve.

4. Public Expenditure and Public Debt (20 hours)

Meaning and Classification of Public Expenditure; government budget and its types; government expenditure and tax multipliers, balanced budget multiplier; Fiscal Federalism in India; Sources of income and heads of expenditure of union and state governments; Meaning of Public Debt; Sources of Public Borrowings: internal and external borrowing; Effects of Public Debt.

[Note: Values in parentheses indicate number of Lecture hours for the corresponding unit]

Suggested Readings:

1. J. Hindriks, G. Myles: Intermediate Public Economics, MIT Press, 2006.
2. H. Rosen, T. Gayer: Public Finance, 9th ed., McGraw-Hill/Irwin, 2009.
3. J. E. Stiglitz, Economics of the Public Sector, W.W. Norton & Company, 3rd edition, 2000. 4. R.A. Musgrave and P.B. Musgrave, Public Finance in Theory &Practice, McGraw Hill Publications, 5th edition, 1989.
5. Mahesh Purohit, Value Added Tax: Experiences of India and Other Countries,2007.
6. M.M. Sury, Government Budgeting in India, 1990.
7. A.B.Atkinson and J.E.Stiglitz,Lectures on Public Economics, McGraw-Hill Inc.,US, 1980.
8. J. F. Due and A. F. Friedlander. Government Finance-Economics of Public Sector, AITBS Publishers and Distributors, 1994
9. Amaresh Bagchi (ed), Readings in Public Finance, OUP
10. R.J. Chelliah (ed), Towards Sustainable Growth, OUP, 2009
11. A Ghosh and C. Ghosh, Public Finance, Prentice Hall India Learning Private Limited; 2nd Revised edition (2014)