
DEPARTMENT OF ECONOMICS AND PUBLIC
POLICY

COURSE CATALOGUE

SEMESTER I & III

2018-19



Central University Of Himachal Pradesh
[ESTABLISHED UNDER THE CENTRAL UNIVERSITIES
ACT 2009]

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EXPLANATORY NOTES

Credit Equivalent: One credit is equivalent to or is defined as given below:

- i. 10 hours of lectures /organized classroom activity /contact hours;
- ii. 5 hours of laboratory work / practical / field work /Tutorial /teacher-led activity;
- iii. 15 hours of other workload such as independent individual/group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.

Credit Requirement

For completing MA degree programme the student is required to accumulate 80 credits. The distribution of credits is as follows:

Course Type		Credit Required
Core courses	Compulsory (50%)	40
	Open (15%)	12
Elective courses	Specialization (20%)	16
	Open Elective (5%)	4
Foundation courses	Human making (5%)	4
	Skill development (5%)	4
Total credit requirement (100%)		80

Attendance Requirements

Students are expected to attend all lectures in order to be able to fully benefit from the course. A minimum of 75% attendance is a must failing which a student may not be permitted to appear in examination.

Evaluation Criteria

1. Mid Term Examination: 25 per cent
2. End Term Examination (External): 50 percent
3. Comprehensive Internal Assessment: 25 percent

SEMESTER WISE COURSES OFFERED

SEMESTER I

Core Compulsory Courses

Course Code	Course Name	Credits	Teacher(s)
ECN: 403	Statistical Methods	4	AKB
ECN: 450	Microeconomics I	4	HRS
ECN: 404	Mathematics for Economists*	4	AKB
	or		
ECN: 523	Mathematical Optimization**	4	IVS
ECN 502	History of Economic Thought	4	KS

*Offered for those students who have not studied mathematics in graduation

**Offered for those students who have studied mathematics in graduation

SEMESTER III

Core Compulsory Courses

Course Code	Course Name	Credits	Teacher(s)
ECN 408	Public Economics	4	KS
ECN 423	International Economics	4	KS
ECN 455	Research Methodology for Social Sciences	4	AKB
ECN 521	Macroeconomics II	4	IVS
ECN 522	Econometrics II	4	IVS

FOUNDATION COURSES

Human Making Course

Course Code	Course Name	Credits	Teacher(s)
ECN 457	Economics of Values and Ethics	2	KS

Skill Development Course

Course Code	Course Name	Credits	Teacher(s)
ECN 456	Basic Statistical and Econometric Techniques	2	AKB

NOTE: HRS- Prof. HR Sharma; AKB- Mr. Amit Kumar Basantaray; KS- Mr. Kamal Singh; IVS- Mr. Indervir Singh

ECN: 403 Statistical Methods

Course Code: ECN 403
Course Name: Statistical Methods
Credits: 4

Course objectives:

- to familiarize students with statistical methods;
- to enable students to apply statistical methods in data analysis.

Course Contents

Unit- I (12 hours)

Introduction of Statistics, Evolution & Scope of Statistics, Frequency distribution, Graphical representation of Frequency Distribution: Histogram, Frequency Polygon; Line graph and Scatter Plot; Measures of Central tendency: Mean, Median, Mode; Measures of Dispersion: Range, Quartile deviations (QD), Mean deviation, standard deviation, Coefficient of variation (CV), Decile, Percentiles; Box Plots

Unit-II (12 hours)

Method of Moments; Measures of Skewness and kurtosis; Correlation: Simple correlation, Partial correlation, Multiple Correlations; Index Numbers: Simple index number, Composite index number, Price Index, Splicing.

Unit- III (12 hours)

Random Variable & Expectation, Rules of Expectation; Probability: Basic concepts of probability, Tree diagram; Probability Distributions: Probability distribution for discrete and continuous variables, Joint probability distribution;

Unit IV (12 hours)

Normal distribution, Binomial distribution, Poisson distribution; Central limit theorem; Inference using normal distribution.

Unit- V (12 hours)

Sampling: Sample and population, Random sampling, sampling distribution and standard error; Tests of significance: Hypothesis testing, Z-test, t-test, F-test, Chi square test, Analysis of Variance (ANOVA). Time Series Analysis: Nature of a time Series, Analysis of trends, Moving average.

Prescribed Text Books:

1. Hamilton, Lawrence C. (1990). *Modern Data Analysis: A First Course in Applied Statistics*. Belmont, CA: Brooks/Cole Publication.
2. Nagar, A. L. and R. K. Das. (1976). *Basic Statistics, 2nd edition*. New Delhi: Oxford University Press.
3. Gupta, S.C. and Kapoor, V.K. (2002). *Fundamentals of Mathematical Statistics, 11th Edition*. New Delhi: Sultan Chand & Sons.
4. Koutsoyiannis, A. (1977). *Theory of Econometrics*. New York: Palgrave.

Supplementary Readings:

1. Clark, Megan J. and John A. Randal (2010). *A First Course in Applied Statistics, 2nd edition*. Pearson Education.

2. Dunn, Dana S. (2001). *Statistics and Data Analysis for the Behavioral Sciences*. New York: McGraw-Hill.
3. Hamilton, Lawrence C. (2003). *Statistics with STATA, 8th edition*. Boston: Brooks/Cole, Cengage Learning.
4. Lewis, Margaret (2011) *Applied Statistics for Economists*, Routledge.
5. Marsh, Catherine (2009). *Exploring Data: An Introduction to Data Analysis for Social Scientists. 2nd Edition*. London: Polity Press.
6. Moore, D.S. and McCabe, G.P. (2003). *Introduction to the Practice of Statistics*. New York: W.H. Freeman & Company.
7. Ott, Lyman R and Longnecker, Michael (2008) *An Introduction to Statistical Methods and Data Analysis, 6th Edition*. Belmont, CA: Brooks/Cole Publication.
8. Peck, Roxy, Chris Olsen, Jay L. Devore. (2012). *Introduction to Statistics and Data Analysis, 4th edition*. Boston: Brooks/Cole, Cengage Learning.
9. Rohwer, Götz (2012) *Models in Statistical Social Research*. Routledge.

ECN: 404 Mathematics for Economists

Course Code: ECN 404
Course Name: Mathematics for Economists
Credits: 4

Course objectives:

- to make students capable to understand basic mathematics required for understanding economics.
- to familiarize students with the use of mathematics as a tool to analyze economic phenomena.
- to familiarize students with elementary matrix algebra and its application to econometrics and optimization.
- to understand calculus like optimization of functions of several variables, and be able to apply their knowledge to simple economic problems.

Course Content

Unit- I (12 hours)
Significance of Mathematics in Economics; Real numbers; Set theory; Relations and functions; Economic equilibrium analysis.

Unit- II (12 hours)
Linear models and Matrix Algebra: Matrix operations; Commutative, associative, distributive laws, Transposes, Determinants, Nonsingularity, Laplace expansion, Matrix inversion, Cramer's rule; Applications in Economics: Input-output model.

Unit- III (12 hours)
The derivative: Limit; Continuity; differentiability, Rules of differentiation, Partial differentiation, Total differentials, Total derivatives, Implicit functions.

Unit- IV (12 hours)
Optimization: First and second derivative tests; Derivatives of exponential function and logarithmic function: Applications in Economics: Profit Maximization. Functions of two or more variables: Second order partial derivatives and total differentials; Finding maximum/minimum.

Unit- V (12 hours)
Unconstrained optimization, Quadratic forms, Characteristic roots, Concavity and convexity; Applications in Economics. Constrained optimization: Classical Programming, Lagrange multiplier, Second order condition; Applications in Economics: utility maximization and consumer demand, Homogeneous function. Rules of integration; Indefinite integrals; Definite integrals; Improper Integrals

Prescribed Text Books:

1. Chiang, Alpha C. and Kevin Wainwright (2005) *Fundamental Methods of Mathematical Economics 4th Edition*. New York: McGraw-Hill/Irwin.
2. Sydsaeter, Knut and Peter J. Hammond (1995) *Mathematics for Economic Analysis*. New Delhi: Pearson Education.

Supplementary Readings:

1. Simon, Carl P. and Lawrence E. Blume (1994). *Mathematics for Economists*. New York: W. W. Norton & Company.
2. Sundaram, Rangarajan K. (1996). *A First Course in Optimization Theory*. New York: Cambridge University Press.
3. Intriligator, Michael D. (2013). *Mathematical Optimization and Economic Theory*. Delhi: PHI Learning Private Limited.
4. Sydsaeter, Knut, Peter J. Hammond, Atle Seierstad and Arne Strom (2008) *Further Mathematics for Economic Analysis 2nd Edition*. Prentice Hall.
5. Vohra, Rakesh V. (2005). *Advanced Mathematical Economics*. New York: Routledge.
6. Carter, Michael (2001). *Foundations of Mathematical Economics*. Cambridge: MIT Press.
7. Franklin, Joel N. (2003). *Methods of Mathematical Economics: Linear and Nonlinear Programming, Fixed-Point Theorems*. Delhi: PHI Learning Private Limited.

ECN 408 Public Economics

Course Code: ECN 408
Course Name: Public Economics
Credit: 4

Course Objectives

- familiarize students with basic concepts of public economics.
- enable students to understand different principles and theories of public economics.
- enable students to understand changing scenario of revenue and expenditure.
- enable students to understand changing role of government in the changed economic dispensations.

COURSE CONTENTS

UNIT I (10 hours)

Introduction and Background to public finance; Theoretical Tools of Public Finance; Budget Analysis and Deficit Financing: Government Budgeting, Measuring the Budgetary Position of the Government

UNIT II (10hours)

Externalities: Problems and Solutions: Externality Theory , Private-Sector Solutions to Negative Externalities, Public-Sector Remedies for Externalities; Externalities in Action: Environmental and Health Externalities.

UNIT III (10 hours)

Public Goods: Optimal Provision of Public Goods, Private Provision of Public Goods, Public Provision of Public Goods; Cost-Benefit Analysis: Measuring the Costs of Public Projects, Measuring the Benefits of Public Projects; Unanimous Consent on Public Goods Levels, Mechanisms for Aggregating Individual Preferences, Representative Democracy

UNIT IV (15 hours)

Taxation: Types of Taxation, Measuring the Fairness of Tax Systems, Defining the Income Tax Base; The Equity Implications of Taxation; Tax Inefficiencies and Their Implications for Optimal Taxation, Taxation on savings; Fundamental Tax reform.

UNIT V (15 hours)

Public Expenditure: rationale for the growth of public expenditure; Wagner's law of increasing state activities, Wiseman-Peacock hypothesis; cost benefit analysis, shadow pricing.

Prescribed Text Books:

1. Gruber, Jonathan(2010) Public Finance and Public Policy , New York: Worth Publisher
2. Atkinson, A., and J. Stiglitz (1980) Lectures on Public Economics. New York, NY: McGraw Hill

Supplementary Readings:

1. Cullis, John. And Jones. Philip, Public Finance and Public Choice Analytical Perspectives, Third edition , Oxford university press.
2. Musgrave, R.A. and P.B. Musgrave, Public Finance in Theory and Practice Fifth Edition, Tata- McGraw Hill Education Private Ltd, New Delhi.
3. Amaresh Bagchi, (2005) Readings in Public Finance, Oxford University Press, New Delhi.

ECN 423 International Economics

Course Code: ECN 423
Course Name: International Economics
Course Credit: 4

Credits Equivalent: 4 Credits (One credit is equivalent to 10 hours of lectures / organised classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/ group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

Course Objectives:

- Familiarize students with basic concepts of international economics
- Enable students understand different principles and theories of international trade
- Enable students understand the impact of different trade policies and their implications towards economic growth
- Enable students analyse issues related to Indian trade both in goods and services

COURSE CONTENT

Unit-I: Introduction and Theories of International Trade (12 hours)

Introduction to International Economics; Trade : Inter– regional and International ; Gains from Trade; The Pure Theory of International Trade: Theories of absolute advantage, Comparative advantage and opportunity costs; Heckscher -Ohlin theory of trade and Leontief paradox; Factor price equalization theorem and Stolper-Samuelson Theorem; The Rybczynski Theorem and Immiserising growth

Unit-II New Approaches to International Trade (12 hours)

News approaches to trade theory the Product cycle and economies of scale theory; Causes of emergence and measurement of intra-industry trade; Economies of scale; imperfect competition and international trade

Unit-III Tariffs, Economic Integration and Custom Union (12 hours)

Theory of Tariffs: Effects of tariffs on balance of payments, terms of trade, national income, consumption, output and income distribution; Emergence of and the political economy of Non-tariff barriers; Optimum and effective rate of tariffs; Forms of economic integration: The Theory of customs union.

Unit-IV Balance of Payment and Exchange Rate (12 hours)

Concepts and components of balance of payments, dis-equilibrium in the balance of payments; The process of adjustment in the Balance of Payments under Gold Standard, fixed exchange rate and flexible exchange rate systems; Elasticity and absorption approaches to balance of payments; Monetary and fiscal measures for adjustment in balance of payments dis-equilibrium ; Monetary approaches to the balance of payments; Foreign trade multiplier with and without foreign repercussions.

Unit-V International Economic Institutions**(12 hours)**

International Monetary system; Role of Multinational corporations in developing countries with special reference to India ; International economic institutions; Functions and achievements WTO , IMF ,ADB and SAARC; Globalization and Anti-Globalization

Text Books

1. Paul, R. Krugman& Maurice Obstfeld (2000), International Economics: Theory and Policy (5th ed.), Addison-Wesley, Longman, Pearson Education.
2. Sodersten, B.O. and Geoffrey Reed (3rded.) (1999), International Economics, The Macmillan Press Ltd. London.
3. Salvatore, D. (1996), International Economics, Prentice Hall, New York

ECN: 450 Microeconomics I

Course Code: ECN 450
Course Name: Microeconomics I
Credits: 4

Course Objectives:

- equip students with comprehensive and rigorous theoretical concepts and methodology;
- enabling students analyzing the behavior of individuals, firms and markets using general, static and partial equilibrium approach.

COURSE CONTENTS

Unit-I (12 hours)

Scope of micro economics, methodology of economics as a positive science, demand analysis, partial vs. general equilibrium, theory of consumer behaviour, cardinal utility theory, ordinal utility theory, and revealed preference hypothesis, applications of ordinal and revealed preference approaches and measurement of consumer surplus

Unit-II (12 Hours)

Production and cost: Technology and production function, cost minimising equilibrium and choice techniques and scale, expansion path and derivation of long run average cost. Homogeneous production function, sources of various economies and diseconomies of scale. Production cost curves and learning curves. Saucer shaped and L shape long run average cost curves, Saucer shaped average variable cost curves. Relationship between short run and long run cost curves and engineering cost curves.

Unit –III (16 Hours)

Market Structures and Pricing Process: Equilibrium of firm and industry under perfect competition; Monopoly; bilateral monopoly; price discrimination, and Monopolistic competition; Excess capacity and imperfect competition.

Unit-IV (10 Hours)

Oligopoly: Definition and meaning, Cournot model, Bertrand model, Stackelberg duopoly model, Kinked demand model, Chamberlin model. Collusive oligopoly: Cartel, Price leadership with dominant firm and low cost firm, Barometric price leadership. Bain's limit price theory. Marginalism versus average cost pricing. Profit maximisation vs Baumal's Sales maximisation hypothesis.

Unit- V (10 Hours)

Factor Pricing: The Marginal Productivity Theory of Distribution. The adding up Problem and Euler's theorem. Modern theory of distribution. Theory of Rent: Ricardian and Modern. Theories of Interest: Classical, Theories of Wages: Wage determination under perfect and imperfect competition; wage determination under trade unionism.

Prescribed Text Books:

1. Koutsoyiannis, A. (1985), *Modern Microeconomics*, Macmillan, London.
2. Varian Hal R (1995), *Intermediate Micro Economics: A Modern Approach*, W.W Norton, New York
3. Pindyck, Robert S. and Rubinfeld, Daniel L. (2009), *Micro Economics (7th Edition)*, Pearson Education, New Delhi.

Supplementary Readings:

1. Ferguson, C.E. (1968), *Microeconomic Theory*, Cambridge University Press, London.
2. Stigler, G.J.(1996), *The Theory of Price (4th Edition)*, Premier Hall, New Delhi
3. Baumol W. J. (1982), *Economic Theory and Operations Analysis, 4th Ed*, Prentice Hall of India, New Delhi.
4. विलास.ए. विलास व्यष्टि अर्थशास्त्र, हरियाणा ग्रन्थ अकादमी, पंचकूला

ECN 455 Research Methodology for Social Sciences

Course Code: ECN 455
Course Name: Research Methodology for Social Sciences
Course Credit: 4

Credit Equivalent: 4 Credits (One credit is equivalent to 10 hours of lectures / organised classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

COURSE CONTENT

Unit-I (10 Hours)

Science and Social Research (Introduction, Foundations of Social Science, Some Dialectics of Social Research; Scientific Research (Characteristics, Types, and Methods); Concepts, Constructs, Variables, and Types of Measurement Scale

Unit-II (15 Hours)

Formulation of Research Problem (Reviewing Literature, Identification of Research Gap, Research Problem); Hypothesis (Types, Characteristics, Sources, Functions, Testing, and Criticisms); Logic of Inquiry

Unit-III (15 Hours)

Selection of Research Topic (Sources, Focus, Operationalizing Concepts, and Formulating Research Questions); Research Design (Meaning, Goals, Phases, and Types); Research Proposal; Sampling (Meaning, Purpose, and Types)

Unit-IV (10 Hours)

Techniques of Data Collection (Questionnaire, Interview Schedule, Interview, Observation, Case Study, Content Analysis, and Projective Techniques)

Unit-V (10 Hours)

Data Processing; Tabulation; Diagrammatic Representation and Analysis; Measurement and Scaling Techniques; Theory Building (Models, Paradigms and Theories); Statistical Techniques.

Prescribed Text Books:

1. Babbie, Earl (2014). The Practice of Social Research, 13th Edition. Rawat Publications, Jaipur.
2. Ahuja, Ram (2001). Research Methods, Rawat Publications, Jaipur.
3. Kumar, Ranjit (2014). Research Methodology: Step-by-Step Guide for Beginners. Sage Publication India Pvt Ltd.

Supplementary Readings:

1. Neuman, Lawrence W. (2006) Social Research Methods: Quantitative and Qualitative Approaches, Sixth edition. New Delhi: Pearson Education.

2. Field, Andy (2014). *Discovering Statistics Using IBM SPSS Statistics*, 4th Editions. Sage Publications India Pvt Ltd, New Delhi.

ECN 456 Basic Statistical and Econometric Techniques

Course Code: ECN 456
Course Name: Basic Statistical and Econometric Techniques
Course Credit: 2

Credits Equivalent: 2 Credits (One credit is equivalent to 10 hours of lectures / organised classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/ group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

Course objectives:

- To familiarize students with basic statistical and econometric methods;
- To enable students to apply statistical and econometric methods in data analysis.

Course Content

Unit- I (08 hours)
Introduction of Statistics, Evolution & Scope of Statistics, Frequency distribution, and Graphical representation of Frequency Distribution: Histogram, Frequency Polygon; Line graph and Scatter Plot; Measures of Central tendency: Mean, Median, Mode.

Unit-II (06 hours)
Measures of Dispersion: Range, Quartile deviations (QD), Mean deviation, standard deviation, Coefficient of variation (CV), Decile, Percentiles; Method of Moments; Box Plots.

Unit- III (06 hours)
Measures of Skewness and kurtosis; Correlation: Simple correlation, Partial correlation, Multiple Correlations; Regression analysis: Two-variable regression, Test of significance, Goodness of fit.

Unit-IV (05 hours)
Random Variable & Expectation, Rules of Expectation; Probability: Basic concepts of probability, Tree diagram; Probability Distributions: Probability distribution for discrete and continuous variables

Unit-V (05 hours)
Tests of significance: Hypothesis testing, Z-test, t-test, F-test, Chi square test, Analysis of Variance (ANOVA).

Prescribed Text Books:

1. Hamilton, Lawrence C. (1990). *Modern Data Analysis: A First Course in Applied Statistics*. Belmont, CA: Brooks/Cole Publication.
2. Jain, T.R. and Aggarwal, S.C. (2011-12). *Advanced Statistics*. New Delhi: VK Global Publications Pvt. Ltd.
3. Koutsoyiannis, A. (1977). *Theory of Econometrics*. New York: Palgrave.
4. Nagar, A. L. and R. K. Das. (1976). *Basic Statistics, 2nd edition*. New Delhi: Oxford University Press.

ECN 457 Economics of Values and Ethics

Course Code: ECN 457
Course Name: Economics of Values and Ethics
Course Credit: 2

Credits Equivalent: 2 Credits (One credit is equivalent to 10 hours of lectures / organised classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

Unit I

Introduction to Ethics; Morality of Market Mechanism

Unit II

Trust and Economic Growth

Unit III

The impact of ethics of the firm and Corporate Social Responsibility (CSR) activities on profitability, job satisfaction and productivity of labour, and innovation

Unit IV

Ethics, Trust and Alliances in Business

Unit V

CSR in Indian: Recent Trends, Some successful examples and Legal Provisions

Suggested Reading

1. Storr, Virgil Henry (2009) Why the Market?: Markets as Social and Moral Spaces
Journal of Markets & Morality, 12(2): 277–296
2. Rafael LaPorta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W Vishny
(1997) Trust in Large Organizations, American Economic Review Papers and
Proceedings, 87(2): 333-338 <http://scholar.harvard.edu/shleifer/publications/trust-large-organizations>
3. European Commission (2008) European Competitiveness Report 2008, The European
Commission, p. 106-121
<http://ec.europa.eu/DocsRoom/documents/3399/attachments/1/translations/en/renditions/native>
4. Friedman, Milton, (1970) The Social Responsibility of Business is to Increase its
Profits, *The New York Times Magazine*, September 13.
5. Argandoña, Antonio (1999) Sharing out in Alliances: Trust and Ethics, Journal of
Business Ethics, 21(2/3): 217-228.
6. Joseph, Amita V. (2009) Successful Examples of Corporate Social Responsibility,
Indian Journal of Industrial Relations, 44(3): 402-409.
7. Bansal, Sangeeta and Shachi Rai (2014) An Analysis of Corporate Social Responsibility
Expenditure in India, 49 (50) (Web

Exclusives)<http://www.epw.in/journal/2014/50/web-exclusives/analysis-corporate-social-responsibility-expenditure-india.html>

8. Maira, Arun, (2013) India's 2% CSR Law: The First Country to Go Backwards, *Economic and Political Weekly*, 46 (38): 23-25.
9. Venkatesan, Rashmi (2013) Ordering Corporate Responsibility: A Misplaced Faith?, *Economic and Political Weekly*, 46(38): 26-28.
10. Ministry of Law and Justice (2013) The Companies Act 2013, Ministry of Law and Justice, Government of India, New Delhi (**section on provisions and rules of the mandatory CSR**)

ECN 521 Macroeconomics II

Course Code: ECN 521
Course Name: Macroeconomics II
Course Credit: 4

Credits Equivalent: 4 Credits (One credit is equivalent to 10 hours of lectures / organised classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

Course Content

Unit – I (10 Hours)

Business Cycles I:- Samuelson's Model, Hicks and Goodwin's Model, Austrian Business Cycle Theory.

Unit-II (10 Hours)

Business Cycles II:- Monetarists Interpretation of Business Cycles; Real Business Cycle Theory: A Baseline Real Business Cycle Model, Household Behavior, A Special Case of the Model, Solving the Model in the General Case, Empirical Applications of Real Business Cycle Model

Unit-III (12 Hours)

Nominal Rigidity:- Exogenous Nominal Rigidity: A Baseline Case: Fixed Prices; Price and Wage Rigidity; Departures from Perfect Competition in the Goods and Labour Markets; Usable Model with Exogenous Nominal Rigidity

Unit-IV (15 Hours)

Microeconomic Foundations of Incomplete Nominal Adjustment: Model of Imperfect Competition and Price Setting; Real Rigidity; Coordination Failure Models and Real Non-Walrasian Theories; Taylor model; Lucas Imperfect Information Model, policy ineffective theorem; Caplin-Spulber Model.

Unit-V (12 Hours)

Dynamic Stochastic General-Equilibrium Models of Fluctuations:- Dynamic New Keynesian Models; Predetermined Prices: The Fischer Model; Fixed Prices: The Taylor Model; The Calvo Model and the New Keynesian Phillips Curve; State-Dependent Pricing; Models of Staggered Price Adjustment with Inflation Inertia.

Prescribed Text Books:

1. Romer, David. 2011. *Advanced Macroeconomics*, 4th edition, McGraw-Hill Higher Education.
2. Blanchard, Olivier Jean, Fischer Stanley. 1989. *Lectures on Macroeconomics*, MIT Press, London
3. Knoop, Todd A. 2010. *Recessions and Depressions: Understanding Business Cycles*, 2nd edition, Praeger, Westport, CT
4. Hayek, F. A. 1933. *Monetary Theory and the Trade Cycle*. Sentry Press, New York. [URL: <https://mises.org/library/monetary-theory-and-trade-cycle-0>]

Supplementary Readings

1. Alvarez, F., and R. Shimer. 2011. "Search and Rest Unemployment." *Econometrica*, 79(1) p. 75–122.
2. Bernanke, B., and M. Gertler, 1989, "Agency costs, net worth, and business fluctuations." *American Economic Review*, 79, p. 14-31.
3. Burnside, C., Eichenbaum, M., and S. Rebelo, 1993. "Labor Hoarding and the Business Cycle." *Journal of Political Economy*, 101, p. 245-273.
4. Faig, M., and Z. Li, 2009. "The Welfare Costs of Expected and Unexpected Inflation." *Journal of Monetary Economics*, 56(7), p. 1004-1013.
5. Greenwald, B. and J. Stiglitz, 1993. "Financial market imperfections and business cycles." *Quarterly Journal of Economics*, 108, p. 77-114.
6. Greenwood, J., Hercowitz, Z. and G. W. Huffman, 1988. "Investment, Capacity Utilization, and the Real Business Cycle." *American Economic Review*, 78: 402-417.
7. Hall, R. 2005. "Employment Fluctuations with Equilibrium Wage Stickiness." *American Economic Review*, 95(1) p. 50–65.
8. Hansen, G. D., 1985. "Indivisible Labor and the Business Cycle." *Journal of Monetary Economics*, 16, p. 309-327.
9. Kiyotaki, Nobuhiro. and John H. Moore, 1997. "Credit cycles." *Journal of Political Economy*, 105, p. 211-248.
10. Kydland, F. E. and E. C. Prescott, 1982. "Time to Build and Aggregate Fluctuations." *Econometrica*, 50, p. 1345-1370.
11. Lagos Ricardo, and Randall Wright, 2005. "A Unified Framework for Monetary Theory and Policy Analysis," *Journal of Political Economy*, 113(3): 463-484.
12. Ljungqvist, Lars and Thomas J. Sargent, 2004. *Recursive Macroeconomic Theory*, MIT
13. Long, J. B. and C. I. Plosser, 1983. "Real Business Cycles." *Journal of Political Economy*, 91, p. 39-69.

14. Lucas, R. E. Jr., 1972. "Expectations and the Neutrality of Money." *Journal of Economic Theory*, 4, p. 103-124.
15. Lucas, R. E. Jr., 1973. "Some International Evidence on Output-Inflation Tradeoffs." *American Economic Review*, 63, p. 326-334.
16. Lucas, R.E., 1978. "Asset prices in an exchange economy." *Econometrica*, 46, p. 1429-1445.
17. Mehra, R. and E.C. Prescott, 1985. "The equity premium: a puzzle," *Journal of Monetary Economics*, 15, p. 145-161
18. Shimer, R. 2012. "Reassessing the Ins and Outs of Unemployment." *Review of Economic Dynamics* 15(2) p. 127–48.
19. Stockey, Nancy und Lucas, Robert E., with E. Prescott, 1989. *Recursive Methods in Economic Dynamics*, Harvard University Press, Cambridge MA, London
20. Thomas F. Cooley (ed.), 1997. *Frontiers of Business Cycle Research*, Princeton University Press

ECN 522 Econometrics II

Course Code: ECN 522
Course Name: Econometrics II
Course Credit: 4

Credit Equivalent: 4 Credits (One credit is equivalent to 10 hours of lectures / organized classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

Course objectives:

- to familiarize students with the econometrics theory;
- to enable students to understand applications of econometric methods.

Course Content

UNIT-I (10 Hours)
Qualitative Response Regression Models: Nature of Qualitative Response Regression Models. Description and Estimation of Linear Probability, Logit, Probit.

UNIT-II (15 Hours)
Simultaneous Equations Models (SEM): Nature of SEM's Simultaneous Equation Bias, Identifications Problem. Rank and Order Conditions. Testing Identification of Economic Models. Estimation of SEM'S : Instrumental Variable (IV) Method, ILS, 2SLS Methods.

UNIT-III (15 Hours)
Time Series Analysis: Testing Casuality in Economics: Granger Causality Test. Stationary, Test of Stationary, Spurious Regression, Unit Roots, Dickey-Fuller Test, Cointegration, Engle Granger Test.
Forecasting: AR, MA and ARIMA processes, Box Jenking Methodology.
Vector Auto Regression (VAR) Model, Introduction, Formulation and Estimation. Impulse Response function, Variance Decomposition.

UNIT-IV (10 Hours)
Panel Data Models: Introduction: Advantages and Issues Involved in Utilizing Panel Data. Simple Panel Data Models: Fixed Effects Models, Random Effects Models. Hausman Test. Dynamic Panel Model: Random, Coefficient Model.

UNIT-V [For assignment only] (10 Hours)
Estimation and Interpretation of Qualitative response, Simultaneous equation models, Time Series and Panel data models using Standard Statistical/Econometric Packages [SPSS/E-Views/STATA/Gretl].

Prescribed Text Books:

1. Bhaumik, Sankar Kumar (2015) Principles of Econometrics: A Modern Approach Using E-Views, Oxford University Press, New Delhi.

2. Dougherty, Christopher (2011) Introduction to Econometrics 4th Edition. New York: Oxford University Press.
3. Enders, W. (2013), Applied Econometric Time Series, 3rd edition, John Wiley and Sons, New Delhi.
4. Wooldridge, Jeffrey M. (2010) Econometric Analysis of Cross Section and Panel Data 2nd Edition. MIT Press.
5. Greene, W.H. (2003), Econometric Analysis, fifth edition, Pearson Education Inc.

Supplementary Readings:

1. Hamilton, J. D. (1994), Time Series Analysis, Princeton University Press,
2. Goldberger, A. S. (1998). Introductory Econometrics. Cambridge: Harvard University Press.
3. Hsiao, Cheng (2002). Analysis of Panel Data. Cambridge University Press.