ROYAL GLOBAL UNIVERSITY
GUWAHATI

Royal School of Humanities and Social Science

RSHSS

Department of Economics

Curriculum Framework for

Post-Graduate programme based on NEP 2020

MA in Economics

w.e.f. AY - 2025-26

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Preamble

Economics is the driving force of the modern world. There is a significant need for highly trained economists and analysts who can anticipate and respond to change, examine and extrapolate trends, and think in terms of an interconnected, globalized society.

Becoming an economist typically requires either a master's degree or a PhD, depending on where the students want to work and the specific type of job you're seeking. A post graduate program in economics will allow the students to specialize in a particular aspect of the field.

A student may choose to concentrate in Microeconomics, the Economics of Health Care, and Environmental Economics, Economic policy, International economics or another niche. *Choice is at the heart of all decision-making.* Individuals, businesses and governments are all faced with making choices in situations where resources are scarce. ***This is where a knowledge of Economics is vital.***

Economics examine topics of obvious importance to human well-being. Employment opportunities are diverse. Economics is applicable in a wide range of fields, such as the following--

Economist, Administration, Financial Analyst, Market Research Analyst, Budget Analyst, Operations Research Analyst, Banks, Finance and investment companies ,Share-brokers, Accounting firms; Business services; Law firms; Major commercial and industrial companies; the Reserve Bank; Treasury; Ministry of Foreign Affairs &Trade; Department of Internal Affairs; Department of Labour; Statistics Dept; Ministry of Commerce; Economic research and consultancy firms; Hospital administration and Health Authorities; Local government and planning authorities; Universities and other educational institutions; Local and national government. Increasingly, policy debate in all areas is being cast in economic terms. Understanding most current issues requires knowledge of Economics.

Economics provides a valuable set of intellectual skills.

It is more than just a subject – it's a way of thinking. It provides a logical way of looking at a variety of issues. The analytical techniques employed in Economics enables the student to develop their-- General literacy; Communication and numeracy skills; Skills of abstraction (balancing simplification against relevance); Skills of logical deduction; Critical thinking;

Studying Economics provides insights into:

The general environment of resource allocation decisions, opportunity costs and trade-offs, project evaluation and government policy. These are crucially important in many areas. Often

these insights are not obvious and can be counter-intuitive to those who don't apply economic reasoning.

In today's working world, transferable skills and flexibility, together with strong personal characteristics, tend to be more important than specific training in a narrow, vocational area. Employers are particularly keen on candidate with good analytical and problem-solving skills. Training in Economics emphasises these skills.

This MA in Economics programme is intended to equip you with the main tools of the professional economist, whether you intend to work in government, central banking, international organisations or private sector firms such as economic consultancies.

The advanced and technically rigorous nature of the programme offered by the Royal Global University also serves as an excellent foundation for PhD programmes and other research-focused roles.

Nature and extent of the MA in Economics degree programme in Economics:

A post graduate degree in Economics is 1/2 years degree programme which is divided into 2/4 semesters. The learning outcomes specify what exactly post-graduates after successfully completing the PG degree programme of study are expected to know, understand and able to practice. This course has been designed to give concepts and ideas, knowledge, skill of problem solving and other attributes relating to post-graduate degree.

- There may be a 2-year programme with the second year devoted entirely to research/coursework with research for those who have completed the 3-year Bachelor's programme;
- For students completing a 4-year Bachelor's programme with Honours/Honours with Research, there could be a 1-year PG programme;
- There may be an integrated 5-year Bachelor's/Master's programme;

In accordance with the NHEQF, the levels for the PG programme are given in the Table.1

S. No.	Qualifications	Level	Credits	Credit Points
2	1-Year PG after a 4-year UG	6.5	40	260
3	2-Year PG after a 3-year UG	6.5	40	260

Curricular Components

For 2-year PG:

Students entering 2-year PG after a 3-year UG programme can choose to do (i) only course work in the third and fourth semester or (ii) course work in the third semester and research in the fourth semester or (iii) only research in the third and fourth semester.

Curricular Components		Two-Year PG Programme (Generic and Professional) Minimum Credits			
		Course Level	Coursework	Research thesis/project/Patent	Total Credits
PG Diploma		400	40	--	40
1st Year (1st & 2nd Semester)		400 500	24 16	--	40
Students who exit at the end of 1st year shall be awarded a Postgraduate Diploma					
2nd Year (3rd & 4th Semester)	Coursework & Research	500	20	20	40
	Coursework	500	40	--	40
	Research	--	--	40	40

1-year PG:

Students entering 1-year PG after a 4-year UG programme can choose to do (i) only coursework or (ii) only research or (iii) coursework and research.

Curricular Components	PG Programme (one year) for 4-yr UG (Hons./Hons. with Research) Minimum Credits			
	Course Level	Coursework	Research thesis/project/Patent	Total Credits
Coursework + Research	500	20	20	40
Coursework	500	40	-	40
Research	-	-	40	40

Aims of PG Degree Programme in Economics:

The overall objectives of the Learning Outcomes-based Curriculum Framework (LOCF) for MA- degree in Economics are-

- To impart the basic knowledge of Economic theories, principles, models and laws of traditional and modern economics.
- To develop the learner into competent and efficient in the field of Economics.
- To empower learners by communication, professional and life skills.

- To prepare socially responsible academicians, researchers, professionals with global vision.
- To provide and adapt curricula that prepare our graduates for employment and further study as economists
- To provide the students with the opportunity to pursue courses that emphasize quantitative and theoretical aspects of Economics
- To provide students with the opportunity to focus on applied and policy issues in Economics
- To provide programmers that allow the students to choose from a wide range of economic specialization

1. Post-Graduate Attributes in Economics:

- **Disciplinary knowledge and Understanding**: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of MA Programme in economics. It will provide advanced knowledge of Micro and Macro economics, use of mathematics in Economics, Solving economic issues through research and concepts and knowledge of other courses relating to core areas of study.
- **Communication Skills**: Ability to express thoughts and ideas effectively in writing and orally is very essential for a student.
- **Critical thinking**: A student will be capable of using analytic thought to a body of knowledge and evaluate evidence, arguments, claims, beliefs based on empirical evidence. Faculty members organize Group Discussion, Power Point presentation, Debate, Quiz, seminars, lecture series etc regularly to develop this quality among the students.

- **Problem solving**: this course is designed to develop capacity to extrapolate from what a student has learned and apply their competencies to solve different kinds of non-familiar problems and apply one's learning to real life situations.

- **Analytical reasoning**: Economics is a subject of reasoning that enhances a student's ability to evaluate the reliability and relevance of evidence and can identify logical flaws in the arguments of others. Moreover, the students can analyse and synthesise data from a variety of sources and can draw valid conclusions and support them with evidence.

- **Research-related skills**: Economics is research-based subject. Students are asked prepare project report regularly which brings about the sense of inquiry and capability for asking relevant/appropriate questions. They can also develop the ability to recognise cause-and-effect relationships and can draw conclusions from data. Students are required to submit dissertations also.

- **Cooperation/Teamwork**: Capable of working effectively in diverse teams in both classroom and field-based situations.

- **Information/digital literacy**: Capable of using computers in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources and use appropriate software for analysis of data.

- **Moral and ethical awareness/reasoning**: Capable of conducting their work with honesty and precision thus avoiding unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarism, and appreciating environmental and sustainability issues.

- **Lifelong learning**: Capable of self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of workplace through knowledge/skill development/re-skilling.

Qualification Descriptors for a PG Degree programme in Economics

The qualification descriptors for a PG Degree programme in Economics may include the following:

- Demonstrate
  - (i) A systematic or coherent understanding of the academic field of Economics, its different learning areas and applications, and its linkages with related disciplinary areas/subjects;
  - (ii) Procedural knowledge that creates different types of professionals related to Economics area of study, including research and development, teaching and government and public service;
  - (iii) Skills in areas related to specialization area relating the subfields and current developments in the academic field of Economics.
- Use knowledge, understanding and skills required for identifying problems and issues relating to Economics.
- Demonstrate subject-related and transferable skills that are relevant to some of the job trades and employment opportunities.
- A keen interest in research and the study of Economic issues
- Meet one's own learning needs, drawing on a range of current research and development work and professional materials.
- Demonstrate subject-related and transferable skills that are relevant to economic related issues our day-to-day activities.
- Develop analytical power and logical approach to problem-solving
- Good oral and written communication abilities

- Able to work independently or with team members

Programme Learning Outcomes of different types of courses for MA in Economics

PLO 1: **Knowledge of Economics**

- Attain domain knowledge for understanding the origin and the developments in Economics.

PLO 2: Problem Solving Skills

- Develop interpretation skill, analytical skill, and research related skills to analyse socio-political, socio-religious and the economic conditions prevail through the ages globally and to adopt the solutions suggested to end up social / economic / political issues.

PLO 3: Analytical and Critical Thinking

- Develop the ability of conceptualizing knowledge gathered through the learning processes.

PLO 4: Creativity

- Create, perform, or think in different and diverseways about the theories and connect them to real life situations.
- Think 'out of the box' and generate solutions by adopting innovative, imaginative, interpersonal skills.

PLO 5: Communication Skills

- Acquire the essential language skills and job skills, to speak flawlessly, to write effectively and to create works of art/texts to get placed in lucrative positions.

PLO 6: Research-related skills

- Economics is research-based subject. Students are asked prepare project report regularly which brings about the sense of inquiry and capability for asking relevant/appropriate questions

PLO 7: Collaboration

- Work effectively and respectfully with diverse streams in the interest of a common cause and work efficiently as a member of a team.

PLO 8: Leadership readiness/qualities

- Plan the tasks of a team or an organization and set direction by formulating an inspiring vision and building a team that can help achieve the vision.

PLO 9: Digital and technological skills

- Use ICT in a variety of learning and work situations.

- Access, evaluate, and use a variety of relevant information sources and use appropriate software for analysis of data.

PLO 10: Environmentalawareness and action

- Mitigate the effects of environmental degradation, climate change, and pollution.
- should develop the technique of effective waste management, conservation of biological diversity, management of biological resources and biodiversity, forest and wildlife conservation, and sustainable development and living.

Programme Specific Outcomes (PSO)

Upon completion of MA in Economics Degree Programme, the students will be able to*:*

PSO1	Apply their knowledge practically to understand the real economic problems.
PSO2	Acquaint with collection, organization, tabulation and analysis of empirical data. Ability to use basic mathematical and statistical tools to solve real economic problems
PSO 3	Acquaint with basic and applied econometric tools and methods used in economics. The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics.
PSO 4	Delineate the developmental policies designed for developed and developing economics.

Teaching and Learning Process

Teaching and learning in this Programme involve classroom lectures followed bytutorials and remedial classes.

- Classroom lecture is executed as per the designed course curriculum. After scheduled lecture hours as per the syllabus, tutorial classes are taken up to allow a closer interaction between the students and the teacher as each student gets individual attention.
- Written assignments and projects submitted by students.
- project-based learning.
- Group discussion.
- Home assignments.
- Quizzes and class tests.
- PPT presentations, Seminars, interactive sessions.
- Socio-economic survey.

- Co-curricular activity etc.
- Industrial Tour or Field visit

Assessment Methods:

Methods	**Weightage**
Semester End Examination	50%
Internal Assessment	50%
Total	**100%**

Components of Internal assessment

	Components ofEvaluation	**Weightage(%)**
A	**Continuous Evaluation**	
i	Analysis/Class Test	35%
ii	Home Assignments	
iii	Project/field Study	
iv	Seminar	
v	Viva-voce/Presentation	
vi	Mid SemesterExamination	10%
vii	Attendance	5%
B	**Semester EndExamination**	50%
	Total	**100%**

STRUCTURE OF THE SYLLABUS FOR 2 YEAR PG PROGRAMME

SCHOOL NAME -RSHSS

DEPARTMENT NAME -ECONOMICS

PROGRAMME NAME - MASTER OF ARTS IN ECONOMICS

1st SEMESTER				
COURSE CODE	**COURSE TITLE**	**LEVEL**	**CREDIT**	**L-T-P**
EC0184C101	Advanced Microeconomics-I	400	4	3-1-0
EC0184C102	Advanced Macroeconomics-I	400	4	3-1-0
EC0184C103	Quantitative Methods for Economics	400	4	3-1-0
EC0184C104	Computer Application in Economics	400	4	2-1-2
EC0184C105	Development Economics-Theory and Practice	400	4	3-1-0
SWAYAM Course			3/4	
	TOTAL CREDIT FOR 1st SEMESTER		**20+3/4**	
2nd SEMESTER				
COURSE CODE	**COURSE TITLE**	**LEVEL**	**CREDIT**	**L-T-P**
EC0184C201	Advanced Microeconomics-II	400	4	3-1-0
EC0184C202	Advanced Macroeconomics-II	400	4	3-1-0
EC0184C203	Statistical Method and Introductory Econometrics	500	4	3-1-0
EC0184C204	Public Economics	500	4	3-1-0
EC0184C205	Environmental Economics	500	4	3-1-0
SWAYAM Course			3/4	
	TOTAL CREDIT FOR 2nd SEMESTER		**20+3/4**	
TOTAL CREDIT FOR 1st YEAR = 40+				
3rd SEMESTER (Only Course Work)				
COURSE CODE	**COURSE TITLE**	**LEVEL**	**CREDIT**	**L-T-P**
EC0184C321	Internship	500	4	0-0-8
ECO184C302	Indian Economy: Post Independence Evolution and Present Perspective	500	4	3-1-0
Three Subjects from the Following				
ECO184D301	Industrial Economics	500	4	3-1-0
ECO184D302	Economics of Health and Education	500	4	3-1-0
ECO184D303	Welfare Economics	500	4	3-1-0
ECO184D304	Demography	500	4	3-1-0
ECO184D305	Agricultural Economics	500	4	3-1-0
ECO184D306	Gender Economics	500	4	3-1-0
ECO184D307	Financial Economics	500	4	3-1-0
	TOTAL CREDIT FOR 3rd SEMESTER		**20**	
OR 3rd SEMESTER (Course Work + Research)				
COURSE CODE	**Name of the subjects**	**Level**	**Credit**	**L-T-P**
ECO184C302	Indian Economy: Post Independence Evolution and Present Perspective	500	4	3-1-0
ECO184C303	Economics of Health and Education	500	4	3-1-0
ECO184C304	Demography	500	4	3-1-0
ECO184C324	Minor Project	500	8	0-1-3
	Total credit		**20**	
OR 3rd SEMESTER (Research)				
COURSE CODE	**Names of subjects**	**Level**	**Credit**	**L-T-P**
ECO184C326	Dissertation-I	500	20	0-0-40
	Total Credit		**20**	

4th SEMESTER (Only Coursework)				
COURSE CODE	**COURSE TITLE**	**LEVEL**	**CREDIT**	**L-T-P**
ECO184C401	International Economics	500	4	3-1-0
ECO184C402	Applied Econometrics	500	4	3-1-0
Three Subjects from the Following				
ECO184D401	Indian Economy in the Global Context	500	4	3-1-0
ECO184D402	Model Building and Simulation in Economics	500	4	3-1-0
ECO184D403	Urban Economics	500	4	3-1-0
ECO184D404	Economics of Insurance	500	4	3-1-0
ECO184D405	Economics and Laws	500	4	3-1-0
ECO184D406	History of Modern Economic Analysis	500	4	3-1-0
ECO184D407	Behavioural Finance	500	4	3-1-0
	Total Credit		**20**	
OR 4th SEMESTER (Course Work + Research)				
ECO184C401	International Economics	500	4	3-1-0
ECO184C402	Applied Econometrics	500	4	3-1-0
ECO184C423	Major Project	500	12	0-0-24
	Total Credit		**20**	
OR 4th SEMESTER (Research)				
ECO184C425	Dissertation-II	500	20	0-0-40
	Total Credit		**20**	
TOTAL CREDIT FOR 2nd YEAR = 40				

*** Evaluation of Dissertation–I will be based on-**

- Research Problem identification
- Review of literature
- Research design formulation

(Students will be evaluated based on above mentioned outcomes)

**** Evaluation of Dissertation–II will be based on-**

- Final phase of experimentation/ fieldwork
- Project Report
- Presentation and Viva-voce

Detailed Syllabus

1st Semester
Paper I/Subject Name: Advanced Microeconomics-I **Subject Code: ECO184C101** **Level of Study: 400** **L-T-P-C – 3-1-0-4** **Credit Units: 4** **Scheme of Evaluation: Theory** **Semester End Examination = 50%** **Continuous Evaluation = 50%**

Course Objectives:

The purpose of a course in Microeconomics is to give students a thorough understanding of the principles of economics that apply to the decisions of individuals--both consumers and producers--within the larger economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and the role of government in promoting greater efficiency and equity in the economy.

- To make the students acquaint with the advanced microeconomic principles.
- To familiarize the students with Consumer Behaviour, Production Functions and Allocation of Scare Resources.
- To provide them a proper understanding of financial accounting.

Course Outcomes:
On completion of this course students will be expected to:

COs	Contents	BT Level
CO_1	**Recall** certain advanced concepts like- CES production function	BT level 1
CO_2	**Explain** consumer behaviour, convert desire into demand, create supply and strike equilibrium between the two	BT level 2
CO_3	**Solve** issues of scare resources, their optimal use in different market conditions, price and output determinations especially-oligopoly and duopoly markets.	BT level 3
CO_4	**Develop** certain behavioural knowledge of utilizing scarce resources in their day-to-day life.	BT level 4

Detailed Syllabus:

Module	Topics	Course Content	Maximum number of classes
I		Production function and related concepts – Isoquants and Substitution between Factors – Elasticity of Substitution – Returns to Scale and Returns to a Factor – Technical Progress	15

	Theory of Production and Cost	and Production Function – Forms of Production Function; Cobb-Douglas, CES and Fixed coefficient Type – the Ideas of Partial and Total Factor Productivity - Single Decision of a Firm; Choice of Optimal Factor Combination – Expansion Path – Derivation of Cost Function from Production Function – Multi-product Firm: production Efficiency Locus, Production Possibility Frontier and Choice of Optimal Combination of Output of Products	
II	**Analysis of Consumer's Choice**	A Review of Indifference Curve and Revealed Preference Approach – Violation of the Premises of Indifference curve Approach: Satiation and Lexicographical Ordering – Indirect Utility Function – Dual Properties of Utility and Expenditure Functions, Ray's Identity-ordinary and compensated demand curves and measures of welfare change – Linear Expenditure System	15
III	**Market Structure and Pricing of Products**	A Review of Perfect Competition Equilibrium – Monopoly and its Regulation – Monopolistic Competition: Price-Output Equilibrium – Duopoly Models of Cournot, Bertrand and Stackelberg – Kinked Demand Curve Model of Oligopoly – Collusive Oligopoly: Price Leadership Models. - Contestable Markets.	15
IV	**Business Accounts and Managerial Theories of the Firm**	Profit and Loss Account, Balance Sheet and Cash Flow Statements of a Firm, Break Even Analysis; A critique of the Traditional Theories of Firm –Contributions of Baumol, Morris and Williamson to Managerial Theories of the Firm	15

Text-books:

- *Microeconomics: Theory and Applications;* Madalla and Miller; 2nd edition;1989;McGraw Hill; Berkely

Reference Books:

- Pindyck, R. &Rubinfield, D.L.; *Microeconomics;* 9th edition;2017;Pearson; London
- Koutsoyiannis, A; *Modern Microeconomics*; 1st edition; 1975; Macmillan; London
- Hal R Varian, *Intermediate Micro Economics; 8th edition, 1998; Macmillan; London*

Note:

Notional hours are an estimate of how much time a student needs to spend to complete a course or unit of study. They include time spent on lectures, assignments, studying, and other learning activities-

Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours

		• Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours

1st Semester

Paper I/Subject Name: Advanced Macroeconomics-I
Subject Code: ECO184C102
Level of Study: 400
L-T-P-C – 3-1-0-4
Credit Units: 4
Scheme of Evaluation: Theory
Semester End Examination = 50%
Continuous Evaluation = 50%

Course Objective:

1. To introduce students to the basics of domestic and national income and also to the sectoral composition of national income.
2. To inculcate the knowledge of full employment and multiplier.
3. To acquaint students with the consumption and investment functions and also various consumption hypothesis.
4. To enhance understanding of the technical terms of supply of money and its various components.
5. To acquaint students with the theories of demand for money.

Course Outcomes:
On completion of this course students will be expected to:

COs	Contents	BT Level
CO_1	**Recall** basics of domestic and national income and to the sectoral composition of national income; also correlate national income with welfare	BT level 1
CO_2	**Explain** factors affecting consumption function and decision-making issues.	BT level 2
CO_3	**Identify** the knowledge of components of money supply	BT level 3
CO_4	**Develop** the understanding of money demand, money supply, institutional regulators	BT level 4

Detailed Syllabus:

Module	Topics	Maximum

		number of classes
I	**A Review of Aggregate Income and its Determination** The Ideas of Income, Domestic Income and National Income; GDP as a Production Total and its sectoral composition, the Circular Flow and GDP as an Expenditure Total; GVA; Green GDP; Introduction to Equilibrium and disequilibrium in the Macro-economy; Classical Model of Full Employment; Keynes Criticism of Classical theory, The Simple Keynesian Framework and the Multiplier	15
II	**Theories of consumption function** Absolute Income Hypothesis, Relative Income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis, Consumption function and underdeveloped country **Investment function** MEC and MEI- Relationship between MEC and Rate of interest,, the Accelerator, the super multiplier	15
III	**Supply of Money** Financial intermediation — a mechanistic model of bank deposit determination; A behavioural model of money supply determination, a demand determined money supply process; RBI approach to money supply; High powered money and money multiplier; In-side and Out-side Money	15
IV	**Demand for Money** Modern Quantity theory of money-Friedman, Tobin and Baumol theory of demand for money.	15

Text-books:

- *Principles of Macroeconomics;*SoumenSikdar; 2nd edition;2011; Oxford University Press; London

Reference Books:

- Mankiw, Gregory; *Principles of MacroEconomics;* 4th edition; 2006; South-Western; London
- Dornbusch Rudiger, Fisher and Stertz; *Macroeconomics;* 11th edition; 2017; McGraw Hill; London

Note:

Notional hours are an estimate of how much time a student needs to spend to complete a course or unit of study. They include time spent on lectures, assignments, studying, and other learning activities-

Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours

		• Viva-voce – 2 Hours • Class test – 4 Hours

1st Semester
Paper I/Subject Name: Quantitative Methods for Economics **Subject Code: ECO184C103** **Level of Study: 400** **L-T-P-C – 3-1-0-4** **Credit Units: 4** **Scheme of Evaluation: Theory** **Semester End Examination = 50%** **Continuous Evaluation = 50%**

Course Objective

This course is designed to provide a good grounding and an in depth understanding of the theory and application of differential calculus, and other techniques widely used in Economics. Topics of study include functions, univariate optimization, elasticity, financial mathematics, multivariate optimization, unconstrained optimization, matrices, integration etc.

Course Outcomes:

Students are expected to-

COs	Contents	BT Level
CO_1	**Recall** mathematical tools in explaining and understanding the behaviour of economic variables.	BT level 1
CO_2	**Explain** optimization techniques.	BT level 2
CO_3	**Solve** the problems relating to changing behaviour of economic variables under static as well as dynamic equilibrium.	BT level 3
CO_4	**Analyse** the art of logical inference and decision making.	BT level 4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	**Optimization with Equality Constraint** Optimization with equality constraints, Lagrange's multiplier method – application to consumer's equilibrium and producer's equilibrium in factor market	15
II	**Calculus for Dynamic Analysis** First and second order differential equation and its solutions – application to dynamic stability of market and simple growth process (Harrod-Domar),	15

	First order difference equation and its solution application of difference equation – lagged market model (Cobweb) and Domar model of growth; Optimal Control Theory- Basic Idea– Procedure – A few illustrative examples	
III	**Optimization with inequality constraint** Liner programming, General formulation Transportation problem, diet problem and production problem – Simplex method of solution for well-behaved and ill-behaved functions (two variables, two constraints only) – Concept of duality, Formulation of dual equations.	15
IV	**Game Theory** An overview of game theory, Nash equilibrium-economic application, Prisoner's dilemma economic application, Repeated games, Finitely repeated Prisoner's Dilemma and Infinitely repeated Prisoner's Dilemma. Co-operative and non-cooperative games.	15

Text Books:

- *Fundamental Methods of Mathematical Economics* , Chiang, A.C. & Wainwright, K.; 4th ;2012; McGraw Hill Education; New Delhi

Reference Books:

- *Basic Mathematics and its Economic Applications*; Barua, S.:4th edition; 2017; Macmilan India Limited ; Kolkata
- Henderson, J M and Quandt, R E; *Micro-Economic Theory- a Mathematical Treatment*; 3rd Edn; 2003; McGraw Hill education; New delhi

Note:

Notional hours are an estimate of how much time a student needs to spend to complete a course or unit of study. They include time spent on lectures, assignments, studying, and other learning activities-

Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours

1st Semester

Paper I/Subject Name Development Economics-Theory and Practice

Subject Code: ECO184C104
Level of Study: 400
L-T-P-C – 3-1-0-4
Credit Units: 4
Scheme of Evaluation: Theory
Semester End Examination = 50%
Continuous Evaluation = 50%

Course Objective:

The objectives of the course are to introduce students the indicators of economic development, theories of growth and development. Economic development is a process of targeted activities and programs that work to improve the economic wellbeing and quality of life of a community. This course is designed to introduce the theories of economic growth and development.

Course Outcomes:
On completion of this course students will be expected to

COs	Contents	BT Level
CO_1	**Recall** the growth theories of an economy	BT level 1
CO_2	**Understand** the complex relations among the economic variables.	BT level 2
CO_3	**Identify** issues relating to growth and development.	BT level 3
CO_4	**Compare** different growth theories	BT level 4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	**Development and its Measurement** Problems in Defining Economic Development, Per Capita Income as an Index of Development, Alternative Measures of Development Gap: HDI, GDI and related indices-HDI, HPI, MDI etc. **Poverty and Inequality** Poverty: Concepts and Measurement, Income Inequality: Axioms, Index and Measures, Redistribution with Growth **Classical Development Theories** Theories of Evolution of a Capitalist Economy: Classical, Marx and Schumpeter, Theories of Persistence of nderdevelopment: The Vicious Circle Theory, The Stages of Growth: Rostow	15
II	**Development Strategies** Big Push: Rosenstein-Rodan, Balanced Growth: Nurkse, Unbalanced	15

	Growth: Hirschman, Critical Minimum Efforts: Leibenstein. **Dualistic Pattern of Development** Unlimited Supply of Labour and the Dual Economy - Models of Arthur Lewis, Core-Periphery Models - The Process ofCumulative Causation: Myrdal, Neo-Colonial Dependence Model and Fei-Renis, Rural-Urban Migration: The Harris–Todaro Model,	
III	**Development Planning** The Concept and Types of Planning, Rationale for Planning in a Developing Economy, ThePlanning Process: Projection of Macro Variables, Input-Output Models and Sectoral Projections,Project Evaluation and Social Cost-Benefit Analysis, Plan Failures, Market Versus Planning,Planning in a Market Oriented Economy, NITI Aayog	15
IV	**Trade and Development** Trade as an Engine of Growth, Gains from Trade, Terms of Trade and LDCs: Prebisch, Singer and Myrdal's Thesis.	15

Text Books:

- *Economic Development*; Todaro and Smith; 8th edition; Pearson Education; New delhi

Reference Books:

- Ahuja, H. L.; *Development Economics*, 6th edition; 2014; S. Chand Publishing; New Delhi
- Ray, Debraj; *Development Economics;* 4th edition; 2012; Oxford University Press; New Delhi
- Misra&Puri; *Economics of Development and Planning;* 5th edition;2015*;* Himalaya Publishing House; New Delhi

Note:

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Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours

1st Semester

Paper I/Subject Name: Computer Application in Economics
Subject Code: ECO184C105
Level of Study: 400
L-T-P-C – 3-1-0-4
Credit Units: 4
Scheme of Evaluation: Theory
Semester End Examination = 50%
Continuous Evaluation = 50%

Course Objective:

The objective of the course is to introduce students to basics of computer applications relevant of economic analysis.

Course Outcomes:
On completion of this course students will be expected to

COs	Contents	BT Level
CO_1	**Recall** the basics of representation of data	BT level 1
CO_2	**Understand** how to process and analyse data with the help of computer.	BT level 2
CO_3	**Experiment with** statistical analysis.	BT level 3
CO_4	**Analyse** complex data for growth and planning	BT level 4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	Diagrammatic Presentation- One dimensional –single, subdivided, multiple deviation; Two dimensional- histogram, pie diagram; Three dimensional- rectangular, cube; Pictograms and cartograms, scatter, line and radar diagrams; Tabular Presentation -Single; Double, Multiple	15
II	The Nature and Source of Data (Economic and Financial), Data Processing, Techniques. Concept of data, record and file; Types of data (Time Series, Cross Sectional and Polled) Structures, data analysis and accuracy of data. File Handling and operations like opening, appending and cascading, closing and attribute control; Data Storage and retrieval; Data operations; Algorithms like sorting, merging, joining and bifurcation; Data base concepts and operation on database; DBMS and RDBMS	15
III	Statistical Processing Techniques and Methods-Series, Arithmetic	15

	Progression and Geometric Progression and Divergent and Convergent Series. Time and frequency series, regression methods and techniques; Regression analysis; Data Validation; Trends and cycle city forecasting and	
IV	Trend Analysis –Economic Applications of growth and planning. System equation: Specification; Error and correction strategies, Statistical modeling and descriptive statistics with test of significance; Distribution functions, Regression statistics. Use of SPSS and STATA	15

Reference books:

Kahate, A. (2008) Information Technology, 3rd Edition, Me Graw Hill, New Delhi. 2. Sinha, P.K & P. Sinha (2004) Computer Fundamentals, 6th Edition, BPB Publications, New Delhi.

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Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours

2nd Semester

Paper I/Subject Name: Advanced Microeconomics-I
Subject Code: ECO184C201
Level of Study: 400
L-T-P-C – 3-1-0-4
Credit Units: 4
Scheme of Evaluation: Theory
Semester End Examination = 50%
Continuous Evaluation = 50%

Course Objectives:

The purpose of a course in Microeconomics is to give students a thorough understanding of the principles of economics that apply to the decisions of individuals--both consumers and producers--within the larger economic system. It places primary emphasis on the nature and functions of

product markets, and includes the study of factor markets and the role of government in promoting greater efficiency and equity in the economy.

- To make the students acquaint with the advanced microeconomic principles.
- To familiarize the students with Consumer Behaviour, Production Functions and Allocation of Scare Resources.
- To provide them a proper understanding of financial accounting.

Course Outcomes:

On completion of this course students will be expected to

COs	Contents	BT Level
CO_1	**Recall** the advanced theories of microeconomics	BT level 1
CO_2	**Understand** the complex relations among the economic variables.	BT level 2
CO_3	**Apply** these concepts in decision making in their day to day life	BT level 3
CO_4	**Compare** different theories of microeconomics	BT level 4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	Discounting and Present Value – Inter-temporal Consumption Decision – Inter-temporal Production Decision – Evaluation of Investment Projects – Determination of the Rate of Interest; Attitude towards Risk – Expected Utility – Measures of Risk Aversion – Certainty Equivalence and the Cost of Risk	15
II	Economics of Insurance – Asymmetric Information and Adverse Selection – Moral Hazard – Signaling and Screening - the Principal Agent Problem	15
III	Pricing of Factors under Perfect Competition – Factor Share and Technical Progress – Backward Bending Supply Curve of Labour – Monopsony	15
IV	Partial Versus General Equilibrium Approaches –Walrasian General Equilibrium System: Existence, Stability and Uniqueness of the equilibrium - Tatonnement and Non–tatonnement Process–Arrow and Debreu re-specification of the Walrasian Economy – Idea of Fixed Point Theorems and their Application to Existence Proof – Uncertainty and the Contingent Markets – Ideas of Computable General Equilibrium	15

Text-books:

- *Microeconomics: Theory and Applications;* Madalla and Miller; 2nd edition;1989;McGraw Hill; Berkely

Reference Books:

- Pindyck, R. &Rubinfield, D.L.; *Microeconomics;* 9th edition;2017;Pearson; London
- Koutsoyiannis, A; *Modern Microeconomics*; 1st edition; 1975; Macmillan; London

Note:
Notional hours are an estimate of how much time a student needs to spend to complete a course or unit of study. They include time spent on lectures, assignments, studying, and other learning activities-

Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours

2nd Semester

Paper I/Subject Name: Advanced Macroeconomics-II
Subject Code: ECO184C202
Level of Study: 400
L-T-P-C – 3-1-0-4
Credit Units: 4
Scheme of Evaluation: Theory
Semester End Examination = 50%
Continuous Evaluation = 50%

Course Objective:

1. To introduce students to the goods and money markets equilibrium, IS-LM model and its extension.
2. To enhance understanding of the technical terms of inflation and unemployment trade off.
3. To acquaint them with the balance of payments disequilibrium and uses of fiscal and monetary policies as corrective measures to the BOP disequilibria.
4. To inculcate the knowledge of advance theories of business cycle.

Course Outcomes:
On completion of this course students will be expected to:

COs	Contents	BT Level
CO_1	**Recall** advanced theories of macroeconomics	BT level 1
CO_2	**Understand** roles of macroeconomic variables towards economic growth, development and stability	BT level 2

CO_3	**Identify** issues relating to monetary and fiscal policies.	BT level 3
CO_4	**Compare** different theories of real business cycle theory.	BT level 4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	**Neo-classical and Keynesian views on interest**; The IS-LM model; Extension of IS-LM model with government sector; Relative effectiveness of monetary and fiscal policies; Extension of IS-LM models with labour market and flexible prices. Neo-Classical Synthesis.	15
II	**Money, Inflation and Unemployment** Inventory and Portfolio Balance Approaches to Demand for Money; Inflation-Unemployment Trade-off: the Philips Curve Analysis. Monetarists' Criticism of the Trade-off, Natural Rate of Unemployment and the Long Run Philip Curve; Adaptive versus Rational Expectations, New Classical School and the Policy Ineffectiveness Hypothesis	15
III	**IS-LM Model** IS-LM model to external sector, BP Curve, Mundell and Fleming Model	15
IV	**Advances in Business Cycle Theory** Theory of Real Business Cycles, Interpretation of the Labour Market, Importance of Technology Shocks, Neutrality of Money; New Keynesian Economics: Manu Cost Model, Recessions as Coordination Failure	15

Text-books:

- *Principles of Macroeconomics;* Soumen Sikdar; 2nd edition;2011; Oxford University Press; London

Reference Books:

- Mankiw, Gregory; *Principles of Macroeconomics;* 4th edition; 2006; South-Western; London
- Dornbusch Rudiger; *Macroeconomics;* 11th edition; 2017; McGraw Hill; London

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Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours

		• Class test – 4 Hours

2nd Semester

Paper I/Subject Name: Statistical Method and Elementary Econometrics
Subject Code: ECO184C203
Level of Study: 500
L-T-P-C – 3-1-0-4
Credit Units: 4
Scheme of Evaluation: Theory
Semester End Examination = 50%
Continuous Evaluation = 50%

Course Objective:

Econometrics is the use of statistical techniques to understand economic issues and test theories. Without evidence, economic theories are abstract and might have no bearing on reality. Econometrics is a set of tools we can use to confront theory with real-world data. It provides the tools to enable the students to extract useful information about important economic policy issues from available data.

This paper is a combination of probability theory and elementary econometrics

Course Outcomes:
On completion of this course students will be expected to:

COs	Contents	BT Level
CO_1	**Define** the basic concepts of relating to estimation of parameters and testing of hypotheses	BT level 1
CO_2	**Illustrate** methods regression analysis of economic data.	BT level 2
CO_3	**Develop** elementary procedures for model validation in the single equation context.	BT level 3
CO_4	**Make use of** econometric tools in problem solving.	BT level 4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	**Probability: Basic Ideas** Axiomatic Definition and derivation of Basic Probability Rules – Conditional Probability, Random variable – Mathematical Expectation and Moments relating to Discrete random variables **Theoretical Probability Distributions** Binomial, Poisson and Normal Distributions with Properties – Moment Generating Function – The Central Limit Theory (without Proof).	15

II	**Sample survey:** Population, Sample, Parameter, Types of Sampling- Probability and Non-Probability Sampling- Random Sampling, Stratified Random and Systematic Sampling. **Testing of Hypothesis**: Level of significance, Type I and Type II Errors, One-tailed and Two-tailed Tests – Test based on Standard Normal, t and Chi-Square Distributions.	15
III	**The General Linear Regression Model** – Quantitative and Qualitative Explanatory Factors –Least Square Assumptions – OLS Estimators and their Properties – The Coefficient of Determination – Some Results of Two and Three Variable Regression Models - Test of Hypothesis about Regression Coefficients – Prediction with the Linear Regression Equation	15
IV	**Further Topics in Linear Regression** Consequences of Omission of Relevant Regressors and Inclusion of Irrelevant Regressors; Multi-collinearity: Effects, Detection and Remedies, Heteroscadasticity: Consequences, Tests and Remedy, Auto-correlated Disturbances: Consequences, Detection and Remedy, Dummy Variable Trap;	15

Text Books:

- *Statistical Method*; Gupta, S P; 28th edition;2016; Sultan Chand and Sons; New Delhi
- *Econometrics by Example;* Damodar Gujarati, 4th edition; 2011; Palgrave Macmillan.

References:

- Hazarika, P L; *Essentials for Economics and Business Studies;* 5th edition;2015; Akansha Publishing House; Guwahati
- Gupta, S C and Kapoor; *Fundamentals of applied Statistics;* V K; 4th edition; 2016; Sultan Chand and sons; New Delhi
- Jeffrey M. Wooldridge, *Econometrics*, CENGAGE learning, India Edition, 2009.
- Dimitrios Asteriou and Stephen Hall, *Applied Econometrics: A Modern Approach*, Palgrave Macmillan, 2007.
- Kmenta, Jan; *Elements of Econometrics; 2nd edition, 2017;* University of Michigan Press; London

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Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours

2nd Semester

Paper I/Subject Name: Public finance
Subject Code: ECO184C204
Level of Study: 500
L-T-P-C – 3-1-0-4
Credit Units: 4
Scheme of Evaluation: Theory
Semester End Examination = 50%
Continuous Evaluation = 50%

Course Objectives:
The objective of the course is to introduce students to about government finance with special reference to India. It looks into different components of government finance- like public revenue and public expenditure. It aims at imparting knowledge of theories of taxation, govt budgeting, centre-state financial relations etc.

On completion of this course students are expected to-

SL	Course Outcomes	BT Level
CO_1	**Recall** Historical Development of Public Finance, iTs various Definitions, Its Subject matter and Its Role in Underdeveloped and developing Economies.	BT-1
CO_2	**Explain** Distinction Between Revenue and Non- Revenue Receipts, Its different sources with examples, methodology of Taxation and merits and demerits of Direct and indirect Taxes	BT-2
CO_3	**Identify** the reasons for growing increment of Public Expenditure and its effects on Production, Distribution and Economic Growth	BT-3
CO_4	**Discover** why public debt id undertaken, What are its types, burden of External Debt and can a country become bankrupt because of public debt?	BT-4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	**Role of the State in the Economy** The role of the government in the economy -allocation, distribution, and stabilization functions. Criteria for policy evaluation – equity, economic efficiency, paternalism and individual freedom and their tradeoff. The welfare cost of inefficient output. **The Provision of Public Goods** The nature of Public goods. Public Goods and market failure. The efficient provision of public goods. The Theory of Clubs, Inter-local competition and	15

	Tiebout Hypothesis Inefficiency from externalities and its correction.	
II	**The Theory of Public Choice** Preferred political outcome of a voter and Downs' Rational Voter Hypothesis. Majority Rule and the Median Voter Model. Cyclical Majority Phenomenon and Arrows Impossibility Theorem. Political Positioning and the Median Voter. Voting on multiple issues: Logrolling. **Public Expenditure** Public Project Appraisal: Cost-Benefit Analysis. Public expenditure on Health Care, Education and Retirement Security: Rationale and Emerging Issues.	15
III	**Public Revenue** Concepts of Tax Ratio, Buoyancy, and Elasticity of taxation, Tax Credit, Exemption and Deduction, and Taxable Capacity. Excess burden- Lumpsum The welfare cost of taxation, Goods and Services Tax (GST) and the Indian experience.	15
IV	**The Public Budget and Deficit Financing** Structure of a public budget. Concepts of Budget Deficits Burden of Deficit Finance- Ricardian Equivalence Theorem. Deficit financing and the Capital market: *The Crowding Out Effect*. The Welfare Cost of Deficit Finance. Rationale and methods of reducing deficits. **Fiscal Federalism** Principles of division of financial resources. Instruments of inter-government resource transfer. Horizontal and Vertical fiscal balance. Finance Commission-Role, Functions and Recommendation of current Finance Commission	15

Text Books:

- *Public Finance and Fiscal Policy;*Choudhury, R. K. & Chakraborty, R. C.:4th edition; 2017; Kalyani Publishers ; New Delhi

Reference Boooks:

- Andley K.K &Sundharam, K.P.M; *Public Economics and Public Finance*;4th edition; 2012 Rattan PrakashanMandir; New Delhi
- Tyagi, B. P.: *Public Finance*; 12th edition; 2016; Jai PrakashNath& Co; New Delhi

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Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours

2nd Semester
Paper I/Subject Name: Environmental Economics **Subject Code: ECO184C205** **Level of Study: 500** **L-T-P-C – 3-1-0-4** **Credit Units: 4** **Scheme of Evaluation: Theory** **Semester End Examination = 50%** **Continuous Evaluation = 50%**

Course objectives:

Environmental economics is a subset of economics concerned with the efficient utilization of resources. Because the environment provides both direct value and the raw material intended for economic activity, the environment and the economy are interdependent. For that reason, the way the economy is managed can have an impact on the environment that, in turn, may affect both welfare and the performance of the economy. The objective of the course is to introduce students to concepts, methods and policy options in managing the environment using tools of economic analysis.

Course Outcomes:
On completion of this course students will be expected to-

COs	Contents	BT Level
CO_1	**Relate** relationship between economics and issues of the environment.	BT level 1
CO_2	**Understand** the concept of sustainable development, its issues and policy measures relating to it.	BT level 2
CO_3	**Explain** impacts of economic development on environment.	BT level 3
CO_4	**Compare** relationship between economic development and issues of the environment of different countries	BT level 4

Detailed Syllabus:

Module	Topics	Maximum number of classes
I	**Introduction to Environmental Economics**	15

	Economics of Environment; Systems approach; Thermo- dynamic principles and environment; externalities and market inefficiency – externalities as missing market links; property rights and externalities; Problem of Social cost. Global environmental externalities; Climate change – Economic an d Social Impacts; environmental Pollution and impacts	
II	Economics of Natural Resource Management Economics of Natural Resources Theories of Optimal Use of exhaustible and renewable resources; Common property resources– Tragedy of Commons;	15
III	Economic Valuation of Environment Total Economic Value – Use value, Option value, and non-use values; Valuation methods – direct and Indirect methods of Valuation (Contingent valuation method, Travel Cost method, Hedonic price method)	15
IV	Environmental Policy Instruments Internalizing Environmental externalities – Pigouvian taxes and subsidies; Coase's bargaining solution and collective action; Tradable pollution permits and international carbon tax, Environmental institutions.	15

Text-books:

- The Theory of Environmental Policy, Baumol, W.J. and W. E. Oates ,2nd Edition, 1998, Cambridge University Press, Cambridge.

Reference Books:

- Bromely, D.W.(Ed), Handbook of Environmental Economics, 1935, Blackwell, London.
- Common Micheal and Silgrid Stagl, Ecological Economics, 2nd edition; 2005 Cambridge University Press, Cambridge, U.K.

Note:

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Credit Distribution		
Lecture/Tutorial	**Practicum**	**Experiential Learning**
60 Hours	-	**60 Hours** • Group Discussion- 10 Hours • Home Assignment – 30 Hours • Project/Field study – 10 Hours • Seminar presentation –4 Hours • Viva-voce – 2 Hours • Class test – 4 Hours