

The logo for Shiv Nadar University, featuring the name in a blue serif font with a decorative horizontal line above it.

**SHIV NADAR UNIVERSITY**

**DEPARTMENT OF ECONOMICS**  
**SCHOOL OF HUMANITIES AND SOCIAL SCIENCES**

**Undergraduate Prospectus 2019**  
**Bachelor of Science (Research)**  
**Economics**

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## Economics at SNU

Modern economics, which has its origins in political economy, has vastly expanded in scope from its core areas of study of markets and the overall economy. With its emphasis on understanding how individuals, groups of individuals and societies decide in face of limited resources in an increasingly inter-dependent world, economics provides for powerful tools for analysing not only economic interactions but also understanding social and cultural phenomena. In designing policies and mechanisms to promote organizational or societal outcomes that are feasible, valuable, sustainable, and efficient, modern economics has made significant contributions in deepening our understanding and framing policies that affect various facets of life and society -- businesses, finance, industry, politics, public policy evaluation and implementation, social issues -- and the economy at large.

The Department of Economics at Shiv Nadar University is one of the premier Economics departments in India. Established in 2012, it has quickly established its reputation as one of the leading centres of Economics education and research. The department is comprised of faculty who have an active research agenda in various sub-disciplines in economics including economic theory, macroeconomics, development economics, environmental economics, international trade, labour economics, health economics, public economics and finance. Currently, the department offers an undergraduate major and an undergraduate minor in Economics.

### The Undergraduate Major in Economics

Our B.Sc. (Research) program is one of its kind in India. The core strength of the program is drawn from the faculty members it will be taught by, who are active researchers in their respective fields. To the extent possible, courses include independent research components in the form of term papers, presentations etc. Our B.Sc. (Research) degree is designed to be comparable to internationally acclaimed programs, and combines rigorous training with flexibility in choice of elective courses. The aim is to produce students who are ready for opportunities in the market: be it jobs in the corporate sector, public sector, non-governmental/social sector or a desire to pursue higher studies in economics or related disciplines.

#### Programme structure:

Economics training at SNU aims to provide students with a thorough understanding of the core areas in economics followed by instruction in sub fields of the student's own choosing in the final years. Students will also have to finish an undergraduate thesis project as part of the programme. The students can choose from a wide range of sub fields including, but not limited to, game theory and industrial organization, development economics, political economy, public economics, environmental economics, macroeconomics, international trade, labour economics, money and banking etc.

To graduate with a Major in Economics, each student needs at least 112 credits in Major courses and 42 credits in UWE (University-wide-elective) and CCC (Common-course-curriculum) courses. Among the Major courses, each student must have **at least** 96

credits in Economics obtained over the course of the undergraduate programme.<sup>1</sup> This includes three courses (i.e. Academic Writing, Logic and Scientific Reasoning, and Modernity: A Critical Exploration) that are required for all students enrolled in SHSS undergraduate programs. In addition, the student must take one course each on Calculus, Probability, Statistics and Computer Programming. Over and above these, the student must take UWE and CCC courses as required by the University. For more details please refer to the UG students' handbook published by the University. A student must complete all requirements for a degree in a **minimum of three years and a maximum of six years**.

### Programme Learning Outcomes:

After completion of the course

1. students will be able to explain the core concepts in economics such as opportunity cost, markets, equilibrium, comparative advantage, inflation and growth;
2. students will have an in-depth understanding of the optimization tools used in economics and will be able to apply these tools to solve problems in economics;
3. students will be able to graphically present data and use statistical and econometric tools for data analysis;
4. students will attain programming skills and knowledge of statistical software packages used in economics;
5. students will attain important research skills by working on an independent research project during the last year of the program. They will be able to formulate a research idea, conduct literature review and carry out the analysis;
6. ability to comprehend and deal with complex societal problems;
7. students will be able to apply their knowledge in economics to evaluate economic policies like public workfare programs, taxation, subsidies, trade protection, sustainability etc.;
8. students will be able to formulate logical arguments in a written form;
9. students will be able to effectively communicate scholarly material in economics through academic presentations.

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<sup>1</sup> These requirements are applicable only to students being enrolled to the programme in 2018-19 academic year and later.

## Major in Economics | Coursework and Credits Overview

Courses	Typical timeline	Credits
<b>Academic Writing</b> <i>A course for all students in the School of Humanities and Social Sciences</i>	Semester 1	4 Credits
<b>Logic and Scientific Reasoning</b> <i>A course on quantitative methods specially designed for students in the School of Humanities and Social Sciences</i>	Semester 1	4 Credits
<b>Understanding Modernity</b> <i>A course taught by the SHSS faculty across the disciplines</i>	Semester 2	4 credits
<b>Calculus</b> <i>Generally Offered by Department of Mathematics</i>	Semester 1	4 Credits
<b>Probability</b> <i>Generally Offered by Department of Mathematics or Economics</i>	Semester 2	4 Credits
<b>Probability and Statistics</b> <i>Generally Offered by Department of Mathematics or Economics</i>	Semester 3	4 Credits
<b>Introduction to Computing and Programming/Computing</b> <i>Generally Offered by Department of Mathematics or CSE</i>	Semester 4	3 or 4 Credits
<b>Core Courses in Economics: Foundation Courses</b> <i>Intensive courses in Economics that builds basic understanding and theoretical foundation.</i>	Semester 1 to 6	10 x 4 = 40 Credits
<b>8 Departmental Elective Courses</b> <i>Selected from a range of course offerings covering diverse areas and sub-fields</i>  <i>Students may propose to take up to 1 elective as Independent Study in a specific area of interest with the approval of the Department and under the instruction of a faculty member.</i>	Semester 5 to 8	8 x 4 = 32 Credits
<b>Research Workshop and Undergraduate Thesis</b> <i>Students will conduct supervised research on a topic of their choice and prepare a thesis for submission in their final year</i>	Semester 7 and 8	4+8 = 12 Credits

**Major in Economics | An Example of a Semester-wise Schedule**

<b>1<sup>st</sup> Year</b>	<b>Semester 1</b>  <ol style="list-style-type: none"> <li>1. Academic Writing</li> <li>2. Logic &amp; Scientific Reasoning</li> <li>3. Principles of Microeconomics</li> <li>4. Calculus</li> <li>5. CCC credits – 3</li> </ol>	<b>Semester 2</b>  <ol style="list-style-type: none"> <li>1. Modernity: An Interdisciplinary Exploration</li> <li>2. Principles of Macroeconomics</li> <li>3. Intermediate Microeconomics</li> <li>4. Probability</li> <li>5. CCC credits – 3</li> </ol>
<b>2<sup>nd</sup> Year</b>	<b>Semester 3</b>  <ol style="list-style-type: none"> <li>1. Probability and Statistics</li> <li>2. Game Theory</li> <li>3. Intermediate Macroeconomics</li> <li>4. UWE credits – 4</li> <li>5. CCC credits – 3</li> </ol>	<b>Semester 4</b>  <ol style="list-style-type: none"> <li>1. Advanced Microeconomics</li> <li>2. International Economics</li> <li>3. Introductory Econometrics</li> <li>4. Introduction to computer programming</li> <li>5. UWE credits – 4</li> <li>6. CCC credits – 3</li> </ol>
<b>3<sup>rd</sup> Year</b>	<b>Semester 5</b>  <ol style="list-style-type: none"> <li>6. Development Economics</li> <li>7. Departmental Elective I</li> <li>8. Departmental Elective II</li> <li>9. Departmental Elective III</li> <li>10. UWE credits – 4</li> <li>11. CCC credits – 3</li> </ol>	<b>Semester 6</b>  <ol style="list-style-type: none"> <li>1. Departmental Elective IV</li> <li>2. Departmental Elective V</li> <li>3. Departmental Elective VI</li> <li>4. UWE credits – 4</li> <li>5. UWE credits – 4</li> <li>6. CCC credits – 3</li> </ol>
<b>4<sup>th</sup> Year</b>	<b>Semester 7</b>  <ol style="list-style-type: none"> <li>1. RESEARCH PROJECT (4 credits)</li> <li>2. Departmental Elective VII</li> <li>3. UWE credits – 4</li> </ol>	<b>Semester 8</b>  <ol style="list-style-type: none"> <li>1. RESEARCH PROJECT (8 credits)</li> <li>2. Departmental Elective VIII</li> </ol>

## The Undergraduate Minor in Economics

In order for a student to earn a Minor in Economics he/she needs to complete a minimum of 24 credits from the basket of UWE courses in Economics which are offered. Of these 24 credits, the students are required to bring credits from four core Economics courses<sup>2</sup> listed below and any two elective courses in Economics (provided they meet the prerequisites for these electives). These elective courses may also be chosen from the Economics courses which are offered as core courses to the students of the Major-in-Economics programme.<sup>3</sup>

1. ECO 101: Principles of Microeconomics
2. ECO 102: Principles of Macroeconomics
3. ECO 213: Basic Data Analysis and Econometrics
4. ECO 301: Intermediate Microeconomics
5. Elective
6. Elective

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<sup>2</sup> Economics courses have Mathematics courses as prerequisites. Please refer to the course descriptions for information on these prerequisites.

<sup>3</sup> Barring ECO101, ECO102, ECO213 and ECO301.

## **COURSE DESCRIPTIONS**

Each course is conducted through lecture, tutorial and practical hours indicated as (L:T:P) at the end of the course descriptions below.

### *GENERAL COURSES*

#### **ENG 104: Academic Writing**

This is a course in critical reading, critical thinking and critical writing. You will read a selection of essays and learn to write a 5-page academic paper that makes an argument by constructing evidence from the readings discussed in class. This is a writing intensive class. You will write 5 papers in 2 drafts each, so 10 papers in all. Expect to be either writing or revising a draft every single week of the semester. This is a workshop style course where the course will run on your constant class participation in discussions, peer reviews and group work. The readings will include among others, essays by: Ruth Vanita “Was Sita Mrs. Ram?”; Sunil Kumar “Naming”; Derek Jenson “Silence”, Alain de Botton “Transmission Engineering”; Emily Martin “The Egg and Sperm”. **(3:1:0)**

#### **SOC 102: Understanding Modernity**

Modernity has become a defining feature in contemporary societies. It marks the coming together over the centuries of philosophical principles and technological developments, the two trends strengthening each other. Through those means the modern human aims at freeing itself from the previous bounds of former beliefs in which human actions were defined and limited.

Modernity defines itself as a point of departure from pre-existing societies and locates its genesis in the Renaissance and 18th century scientific investigative mind embodied by the encyclopedists. From the 19th century onwards, modernity has defined the core principles of policy making and philosophical debates or at least acted as the reference to define them.

Stemming from modernity are notions such as the traditional, the folk, the backward, the classic, the pre-modern and the post-modern. It accompanies the building up of nation states and imposes a vision of society and humanity as well as a set of values. As such, it has driven societal choices but has also been the object of critique and questioning from the 19th to the 21st century.

Modernity will be looked at both as a phenomenon and as a notion through multiples angles and perspectives with lectures by faculty from Sociology, Literature, History and Fine Arts departments.

How does one locate him/herself in regard to modernity? Have humans defined themselves as master of their own destiny only in the modern period? Has modernity allowed humans to achieve their goals to free themselves from the bounds of beliefs? The notion won't be looked at as only a western and recent concept. Other historical and cultural influences constitutive of modernity will also be considered. **(3:1:0)**

#### **ECO 108: Logic and Scientific Reasoning**

This is an introduction to mathematical logic and scientific methods that provides an analytical foundation. The course begins with an introduction to elements of logic and deductive method and will mostly emphasize on theory of sentential calculus, identity, relations and deductive methods. Finally, applications of logic are presented towards a construction of mathematical theory. **(3:1:0)**

**MAT 101: Calculus I**

This course covers one variable calculus and applications. It forms the base for subsequent courses in advanced vector calculus and real analysis as well as for applications in probability, differential equations, optimization, etc. One of the themes of the course is to bring more rigour to the formulas and techniques students may have learned in school. **(3:1:0)**

**This course is a pre-requisite for: ECO 221, ECO 301**

**MAT 284: Probability and Statistics**

Probability is the means by which we model the inherent randomness of natural phenomena. This course introduces you to a range of techniques for understanding randomness and variability, and for understanding relationships between quantities. This course is a prerequisite for later courses in Statistics, Stochastic Processes and Mathematical Finance. **(3:1:0)**

**This course is a pre-requisite for: ECO 203**

**CSD 101/MAT 110: Introduction to Computing and Programming/Computing:**

This course aims to empower the students in data abstraction, algorithm design and performance estimation. In the process they shall learn the art of programming – a pretty useful skill to have! Programming in C and Matlab will be taught. **(3:0:1)**

*ECONOMICS CORE COURSES***ECO 101: Principles of Microeconomics**

This course is an introductory undergraduate course that teaches the fundamentals of microeconomics. It is designed to provide a foundation for economic analysis and a broad understanding of the economic issues at micro level. This course begins with a discussion of supply and demand and the basic forces that determine an equilibrium in a market economy. Next, it introduces a framework for learning about consumer behavior and analyzing consumer decisions. We then turn our attention to firms and their decisions about optimal production, and the impact of different market structures on firms' behavior. The final section of the course provides an introduction to some of the more advanced topics like the notion of efficiency and optimality from a society's point of view and a brief discussion of welfare theorems. **(3:1:0)**

**Pre-requisites for this course: None**

**This course is a pre-requisite for: ECO 102, ECO 203, ECO 241, ECO 301, ECO 422**

**ECO 102: Principles of Macroeconomics**

This course introduces the main theories explaining the aggregate (or macro) behaviour of the economy. The course starts by discussing how key macro variables are measured before turning to theories that explain the behaviour of the economy in the short and long run. Using this foundation, we discuss the main tools of macroeconomic policy (monetary and fiscal policy) and their role in stabilising the economy. We conclude by exploring the uses of macro policy in economies with international trade and turbulent financial markets. **(3:1:0)**

**Pre-requisites for this course: ECO 101/MEC 102**

**This course is a pre-requisite for: ECO 243, ECO 302, ECO 304**

**ECO 203: Introductory Econometrics**

This course introduces the basics of the practice of modern econometric techniques. A detailed discussion of the linear regression model will be presented. The topics included in the course are: the simple regression model, multiple regression models, classical assumptions about disturbances, hypothesis testing, violation of classical assumptions, multicollinearity, heteroskedasticity, omitted variable bias, functional forms, dummy variables, outliers, goodness of fit and instrumental variables. To complete some assignments and the project the students will also be introduced to STATA, statistical analysis software. **(3:1:0)**

**Pre-requisites for this course: ECO 101/MEC 102, MAT 284**

**This course is a pre-requisite for: ECO 303, ECO 314, ECO 367, ECO 375, ECO 414, ECO 415, ECO 424**

**ECO 213: Basic Data Analysis and Econometrics**

This course is meant to familiarize students with the data-handling techniques used in Economics discipline and covers preliminary concepts of statistics like random variables, probability distributions, estimation and hypothesis testing; and goes on to introduce the students to basic regression analyses. This is a core course for students geared towards earning a Minor in Economics and is not open to Economics Major students.

**Prerequisites for this course: ECO 101/MEC 102, MAT 084/MAT 184/MAT 205/MAT 283/MAT 284/CSD 209/DOM 103**

**This course is a pre-requisite for: ECO 303, ECO 314, ECO 367, ECO 375, ECO414, ECO 415, ECO 424**

**ECO 221: Game Theory**

This course is an introduction to non-cooperative game theory – static and dynamic games of complete and incomplete information. The aim of the course is to provide students with a critical understanding of the scenarios wherein the tools and techniques of game theory may be used. We will study the basic concepts of Nash Equilibrium, Correlated Equilibrium, Dominance & rationalizability, Sub Game perfection and Bayesian Equilibrium. Practical applications of these concepts will be studied in the context of repeated games, bargaining and auction problems, signaling and cheap talk games. **(3:1:0)**

**Pre-requisites for this course: MAT 101**

**This course is a pre-requisite for: ECO 431**

**ECO 301: Intermediate Microeconomics**

This course is intended to provide advanced tools and techniques in the spheres of consumer theory, markets, and general equilibrium and builds on the introductory microeconomics course ECO 101. Students will be rigorously taught how consumers maximize their preferences given their budgets to make optimal consumption decisions, which in turn are aggregated to form the industry demand. Again, firms choose technology and employ resources optimally to minimize costs, which give rise to the industry supply function. The industry demand and supply then interact in the context of different market structures (perfect competition, monopoly, oligopoly, etc.) to determine market price and quantity in equilibrium, which give rise to consumer and producer surplus. The government may impose taxes or provide subsidies to alter these surpluses. Finally, general equilibrium analysis is invoked to analyse the behavior of multiple markets at the same time, and how a change in one affects the other. **(3:1:0)**

**Pre-requisites for this course: ECO 101/MEC 102, MAT 101 or equivalent**

**This course is a pre-requisite for: ECO 302, ECO 327, ECO 385, ECO 354, ECO**

367, ECO 401, ECO 402, ECO 411, ECO 415, ECO 424, ECO 431

**ECO 302: Intermediate Macroeconomics**

This course is a continuation of the concepts introduced in the introductory macroeconomics course ECO 102 and discusses the facts and theories about the determination of per capita income and its differences across countries and across time. In particular, it includes the study of economic fluctuations in output and employment and the role of government in influencing these aggregate variables through its monetary and fiscal policies. A range of macroeconomic problems are analyzed from government finances in the intermediate run to economic stability in the short run. The course equips the students to use tools of macroeconomics to study various macroeconomic models and macroeconomic policies in-depth. **(3:1:0)**

**Pre-requisites for this course: ECO 102, ECO 301**

**This course is a pre-requisite for: ECO 437, ECO 461, ECO 462, ECO 492**

**ECO 401: Advanced Microeconomics**

This course is a continuation of the series of courses in Microeconomics – ECO 101, ECO 301. This is an advanced course in undergraduate microeconomics that teaches the behaviour of individual agents and builds from this foundation to a theory of aggregate economic outcomes. The course begins with a detailed study of preference in consumer decision making problem. Next, it focuses on the individual demand, the aggregate demand and the production theory. The final section of this course provides the detailed discussion on general equilibrium theory, welfare theorems and uncertainty. **(3:1:0)**

**Pre-requisites for this course: ECO 301**

**ECO 415: Economic Development**

This course aims to develop the foundation of development economics, using the concepts from both the macro and microeconomics. It focuses on building an understanding of the developing world, using basic knowledge in economic theory, econometric methods, and demography. It starts with alternatives theories of development, and then overview of developing countries, major trends in income, inequality, poverty, education, health and nutrition, population, and the contemporary models of underdevelopment. The course will help students to pursue Development Economics as a field in graduate or doctoral studies. **(3:1:0)**

**Pre-requisites for this course: ECO 203/ECO 213, ECO 301**

**ECO 461: International Economics**

This course is an introduction to the theory of international trade and trade policy. The course also introduces the students to forex market and macroeconomic analyses of an open economy. The issues discussed include gains from trade and their distribution; analysis of protectionism; trade barriers; exchange rate determination; and interlinkages of the domestic economy with rest of the world. By the end of the course the students should be equipped with a deeper understanding of international economic exchanges and the analytical frameworks with which to seek answers to the puzzles of our changing economic times, especially in relation to the rest of the world. **(3:1:0)**

**Pre-requisites for this course: ECO 302**

## *ECONOMICS ELECTIVES*

Not all but a selection of electives is offered every year. Below is a list of courses offered in the recent past.<sup>4</sup>

### **ECO 241: History of Economic thought**

This course will enhance the students understanding of the development and progression of the discipline of economics. This course is structured around questions like: How have different schools of thought in economics analyzed markets as the institution of resource allocation? How have the views about the market and the state as two major institutions of resource allocation changed over time. **(3:1:0)**

**Pre-requisites for this course: ECO 101/MEC 102**

### **ECO 243: Law and Economics**

Here we focus on the relationship of economic principles to law and the use of economic analysis to study legal problems. Topics will include: property rights and intellectual property; analysis of antitrust and of legal decision-making. **(3:1:0)**

**Pre-requisites for this course: ECO 102, MAT 101**

### **ECO 303: Time Series and Forecasting**

This course is intended to provide students with a good understanding of statistical, graphical and numerical data analyses of time-series data. This course introduces the theory and practice of time series analysis with an emphasis on practical skills. The course starts with a review of the probability theory and OLS and then proceeds to time series topics like serial correlation, univariate models, non-stationary models, structural breaks, simultaneous equations models and vector autoregression models. **(3:0:1)**

**Pre-requisites for this course: ECO 203/ECO 213**

**This course is a pre-requisite for: ECO 403**

### **ECO 304: Indian Economic History**

This course is an attempt to understand how historical institutions shape present economic outcomes but will focus on it from an Indian perspective. What have been the long-lasting impacts of historical Indian institutions on economic outcomes? What did the nature of the Indian economy look like two centuries ago? How did the experience under the British Empire change Indian society and economy? We will look at theories dealing with the persistence of the caste system, the effect of global events on the pre-independence Indian politics, etc. **(3:1:0)**

**Pre-requisites for this course: ECO 102**

### **ECO 314: Health Economics**

This course introduces the students to the fundamentals of health economics and enables them to examine the health sector and health policy from an economics perspective. The course covers a wide range of topics such as the relationship between health and human capital, impact of changes in the health status of the population on demographic changes, linkages between health and overall economic development, demand for health services, demand for health insurance, provision of healthcare and health insurance and health policies in developing countries with special focus on India. The goal is to help students to apply economic concepts and tools to the fields of health

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<sup>4</sup> For the students being admitted into the programme in 2018-19 academic year and later, all these courses are 4 credit courses.

economics. **(3:1:0)**

**Pre-requisites for this course: ECO 203/ECO 213**

### **ECO 327: Introductory Financial Economics**

This course introduces students to the economics of finance with special emphasis on asset pricing and the valuation of risky cash flows. Some of the basic models used to benchmark valuation of assets and derivatives are studied in detail. Details of consumer decision-making under uncertainty is studied; using that general framework as a basis for understanding theories of securities pricing, including the capital asset pricing model (CAPM) and the arbitrage pricing theory (APT). The course highlights fundamentals of the theory of finance with examples from financial markets in India. It ends with international corporate finance. Students are expected to be familiar with statistics and probability theory in order to take this course. **(3:1:0)**

**Pre-requisites for this course: ECO 301**

### **ECO 354: Public Economics**

This is an introductory public economics course that focuses on role of government in the economy. It is designed to provide a basic understanding of reasons of government intervention, the benefits of such policies and the consequent response of the economic agents. The course begins with the scope of government intervention in case of market failure, and then covers various forms of intervention from taxation, redistribution to provision of public goods. **(3:1:0)**

**Pre-requisites for this course: ECO 301**

### **ECO 367: International Finance**

The course is divided into two modules. The first module contains the theory of determination of exchange rates. The underlying causes of exchange rate fluctuations are analysed in detail using the theoretical macroeconomic models. The second half of the first module starts with how central banks regulate exchange rates. Effectiveness of government policies are studied under the fixed exchange rate vis-a-vis flexible exchange rate regime. Transition from the fixed to the flexible/partially flexible exchange rate system is studied in detail. The second module consists of time series econometrics and its application in what is taught in the first module.

**Pre-requisites for this course: ECO 203/ECO 213, ECO 301**

### **ECO 375: Labour Economics**

This course is an introduction to labour economics with an emphasis on applied microeconomics and empirical analysis. The purpose is to inform students of topics like labour supply, labour demand, labour market institutions and public policies affecting labour markets, immigration, returns to human capital investment, labour market discrimination and empirical analysis of wage and earning gaps. The recommended statistical software for this course is STATA. The aim of the course is to introduce students is to develop empirical skills of students, relevant not just for labour economics but applied microeconomics in general. **(3:1:0)**

**Pre-requisites for this course: ECO 203/ ECO 213**

### **ECO 385: Introductory Environmental Economics**

Most environmental problems are problems of market failure. In this course, we will study the public policy response to such problems in an economic setting. We compare the different responses by using different criterion like equity, economic efficiency and environmental sustainability. We will study conditions of optimal extraction of renewable

and non-renewable natural resources in a dynamic setting. **(3:1:0)**

**Pre-requisites for this course: ECO 301**

**This course is a pre-requisite for: ECO 455**

#### **ECO 402: Advanced Macroeconomics**

This course covers macroeconomic theory at an advanced level that falls between the 2nd year basic intermediate macroeconomics (ECO 302) and graduate microeconomics. It covers the behaviour of individual agents and builds from this foundation to a theory of aggregate economic outcomes.

**Prerequisites for this course: ECO 302**

#### **ECO 403: Advanced Econometrics**

This is an advanced undergraduate econometrics course for those who want to go deeper into econometric theory and its applications, continuing with the concepts developed in ECO 203. Topics covered will include instrumental variables, panel data methods, difference-in-difference techniques, limited dependent variable methods and experimental methods. Students will be required to be familiar with and use various econometric softwares. After completing the course, the students should be able to handle large microdata and work independently on empirical research projects. **(3:1:0)**

**Pre-requisites for this course: ECO 303**

#### **ECO 411: Contract Theory and Institutions:**

This course is a bridge between undergraduate and graduate level microeconomics. The first few lectures is devoted to some recapitulation of basic microeconomics, reminder of the basic notion of competitive equilibrium, the various reasons why markets may fail in achieving efficient outcomes - externalities, information problems, etc, a brief description of the Coase Theorem and the power of decentralized solutions. The various sources of transaction costs and different property rights regimes (private goods, public goods, common property resources) and the problems that arise if property rights are not well defined are discussed. The course concentrates on simple models of information economics - both adverse selection and moral hazard – and then specific applied examples are discussed. **(3:1:0)**

**Pre-requisites for this course: ECO 301**

#### **ECO 422: Money and Banking**

This course is an introduction to the economics of money, credit, banking, interest rates, financial intermediaries and financial markets. We will study how monetary policy influences interest rates and asset markets, such as the bond market and the stock market. We will analyze financial intermediation and the role of banks in the economic system and study the economic rationale behind banking regulation. We will also review evidence and theory on how monetary policy affects real economic activity, and then study the instruments and goals of monetary policy, focusing on credibility and expectations management for central banks, and the connection with fiscal policy. We will consider and evaluate these topics within Keynesianism and Monetarism and deal with contemporary financial issues in developing countries including a focus on monetary policy in India. **(3:1:0)**

**Pre-requisites for this course: ECO 101/MEC 102**

#### **ECO 424: Economics and Politics**

This course will introduce students to the economic (game theoretic) analysis of political situations. We will then look at the interaction between economics and politics. In

particular, we study how politics and policy making affect economic outcomes (with an exclusive focus on developing countries) and how economic developments in turn can lead to substantive political changes. The course will use theoretical and econometric tools developed in your previous economics courses. **(3:1:0)**

**Pre-requisites for this course: ECO 203/ ECO 213, ECO 301**

#### **ECO 431: Industrial Organization**

The course aims to familiarize students with the various aspects of Industrial Organization. IO like most disciplines in Economics is largely an empirical field. However, this course will be mostly theoretical and descriptive in nature. The focus in this approach will be to cover a large array of topics. The idea would be to equip students with the theoretical background and motivation to ask the empirical questions about a significant range of issues discussed in the discipline. The other aspect of the course will be to motivate students to apply the theoretical concepts to market structures and firm strategies in the Indian context. IO is a highly applied field but the data and motivation is mostly based on the experiences of the US and Europe. **(3:1:0)**

**Pre-requisites for this course: ECO 221, ECO 301**

#### **ECO 437: Financial Economics and Asset Pricing**

An introductory course on asset pricing that will introduce various financial assets and its pricing mechanism. Beginning with mean variance models, the course will move to arbitrage pricing theory. Aspects of commodity market, including hedging, arbitrage and speculation will also be presented in case of various financial assets/instruments. **(3:1:0)**

**Pre-requisites for this course: ECO 302**

#### **ECO 485: Topics in Environmental Economics**

This course deal with issues related to third world environmental problem. It will show of issues of development and environment is inextricably related to each other in a third world context. We will cover topics like CPR theory, Poverty and Environment, Gender and Environment and the Political Economy of Environmental Policy. **(3:1:0)**

**Pre-requisites for this course: ECO 385**

#### **ECO 462: Global Economy**

Global economy has transformed rapidly in the last few decades and global economic integration has taken giant strides. Economic growth and crisis has been important part of the economic narrative in the evolution of the global economy. This course provides an understanding of the factors behind the growth experienced by countries and why some countries have grown faster than others. Economic and financial crises has also been a recurrent part of the global economy. This course would provide a sound understanding of the different types of crises and the factors responsible for them. **(3:1:0)**

**Pre-requisites for this course: ECO 302**

#### **ECO 492: Topics in Macroeconomics**

This course concentrates on the fundamentals of modern macroeconomic modelling and applications for forecasting and policy analysis. Attention will focus on representing such macroeconomic phenomena as inflation, unemployment, the business cycle, productivity, and secular growth. Students will build a macro model. Topics will include how to simulate a range of fiscal and monetary policies and how to measure their effectiveness for stabilization and growth. **(3:1:0)**

**Pre-requisites for this course: ECO 302**

