



MS IN ECONOMICS

Economics is the first academic department at NSU to offer graduate studies. The Master of Science (MS) in Economics at NSU is a degree program specially designed for students with a research bent of mind. MS in Economics is a 30 credits program and it has five broad specializations: International Economics, Financial Economics & Banking, Development Economics, Environmental & Natural Resource Economics, and Econometrics. It has two alternative modes: one with thesis, and without thesis the other.

Credits earned in our MS in Economics program are generally accepted abroad towards transfer of credits.

Admission requirement

To be accepted for enrollment in MS in Economics a student must have a 4-year undergraduate degree in Economics with a minimum CGPA of 2.5.

Students with 3-years undergraduate degree in economics will be advised to complete some make-up credits before being finally accepted as an MS student.

Teaching Assistantship/Financial Aid

A limited number of Teaching Assistantships are available for highly qualified students. The value of the assistantship may cover most part of the tuition at NSU.

NSU also offers both full and half-tuition waiver to at least 5% of its students. Students enrolled in MS may apply for such tuition waiver.

Evening Classes

To fit the needs of the working students MS is made an evening program and most of the courses are taught after 6.00 pm.

Courses

It is a 39-credit program. A student with insufficient coursework in Economics at undergraduate level may be required to do up to 9 credits of the foundation courses depending on his/her background. And 12-credits of core courses are required for a Master degree program. Students must also complete 9 credits of elective courses from the list of courses [**Note: Students taking specialization in one field may use courses from**

other fields as an open elective course] & 6 credits of research/thesis.

Course Waiver

One or more (maximum three) foundation courses may be waived depending on background preparation

Specialization

The Department offers five specializations for students of MS in Economics. However students may complete total credits requirements without fulfilling any concentration requirement and may be allowed to take master's degree in Economics without specialization.

- International Economics
- Financial Economics & Banking
- Development Economics
- Environmental and Natural Resource Economics
- Econometrics

MS Thesis

A thesis must be an original research of publishable quality. There shall be a thesis supervisor who shall guide the student to complete the research. A thesis must be defended in person by the student in front of a Thesis Examination Committee. Thesis defense is open to all interested persons.

MS Supervised Research

Students willing to complete MS without thesis must submit a supervised research paper in an area of his/her choice. This will be graded by the supervisor.

Graduate Student Advisor

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MS IN ECONOMICS (30 CREDITS)

Minimum CGPA requirement 2.75

1. Foundation Courses (9 Credits)

| Course ID | Course Title | Credits |
|-----------|---|---------|
| ECO 511 | Microeconomic Analysis | 3 |
| ECO 512 | Macroeconomic Analysis | 3 |
| ECO 514 | Quantitative Techniques for Economic Analysis | 3 |

2. Core Courses (12 Credits) in this field students have to maintain minimum CGPA 2.75

| Course ID | Course Title | Credits |
|-----------|------------------------|---------|
| ECO 501 | Mathematical Economics | 3 |
| ECO 502 | Econometric Method | 3 |
| ECO 503 | Microeconomic Theory | 3 |
| ECO 504 | Macroeconomic Theory | 3 |

3. Field Courses (6 Credits)

a) International Economics

| Course ID | Course Title | Credits |
|-----------|-----------------------------------|---------|
| ECO 611 | International Trade Theory | 3 |
| ECO 612 | International Financial Economics | 3 |

b) Financial Economics & Banking

| Course ID | Course Title | Credits |
|-----------------|---|---------|
| ECO 621 | Financial Economics | 3 |
| ECO 622/ECO 612 | Banking and Financial Institutions/ International Financial Economics | 3 |

c) Development Economics

| Course ID | Course Title | Credits |
|-------------|---|---------|
| ECO 631 | Development Economics | 3 |
| ECO/DEV 570 | Methods and Tools in Development Research | 3 |

d) Environmental and Natural Resource Economics

| Course ID | Course Title | Credits |
|-----------|--|---------|
| ECO 641 | Economics of Exhaustible Resources | 3 |
| ECO 649 | Special Topics in Environmental Economics. | 3 |

e) Econometrics

| Course ID | Course Title | Credits |
|-----------|--------------------------------------|---------|
| ECO 651 | Panel and Limited Dependent Variable | 3 |
| ECO 652 | Time Series Model | 3 |

4. Elective Courses (6 Credits)

| Course ID | Course Title | Credits |
|-----------|---------------------------------|---------|
| ECO 681 | Advanced Mathematical Economics | 3 |
| * ECO 682 | Contemporary Economic Ideas | 3 |
| ECO 683 | International Trade Policy | 3 |
| ECO 684 | Monetary Economics | 3 |
| ECO 685 | Quantitative Modelling | 3 |
| ECO 686 | Game Theory | 3 |
| ECO 687 | Agricultural Economics | 3 |
| ECO 688 | Applied Econometric Forecasting | 3 |
| ECO 689 | Project Analysis and Evaluation | 3 |
| ECO 691 | Selected Readings in Economics | 3 |
| ECO 692 | Special Topics in Economics | 3 |

* ECO 682 is compulsory for students with no coursework background in economic thought.

4. Research Courses (6 Credits)

| Course ID | Course Title | Credits |
|-----------|---------------------------|---------|
| ECO 695 | Research Based Term Paper | 3 |
| ECO 6xx | One ECO Course | 3 |
| OR | | |
| ECO 699 | Thesis | 6 |

Description of Courses:

Foundation Courses:

ECO 511 Microeconomic Analysis.

Theory of choice and its application to consumer and producer behavior; theory of production and cost; output and input markets; their structure; equilibrium and efficiency; market failure; introduction to general equilibrium. **3 credits.**

Books:

- 1) al R. Varian, Intermediate Microeconomics, 9th edition, W.W. Norton & Company.

H

Supplementary Text:

- 2) esanko, D. and Braeutigam R. 2011, Microeconomics, International Student Version, Wiley.

B

ECO 512 Macroeconomic Analyses.

Mainstream models in macroeconomics-classical models; Keynesian model, introduction to neo-classical and neo-Keynesian economics; consumption and investment analysis; IS-LM models of closed and open economics, AD-AS model, inflation and unemployment; basic growth theory; macroeconomic policy debates. **3 credits.**

Book:

1. Arnold, Roger A. 2016. Macroeconomics. 12th Edition. Cengage Learning.

Supplementary Texts:

2. Parkin, Michael. 2014. Economics (Chapters 21-31). 11th edition. Pearson-Global edition.
3. Mankiw, Gregory N. 2013. Macroeconomics, 8th edition, Macmillan-International edition.

ECO 514 Basic Quantitative Techniques for Economic Analysis.

Probability and probability distribution; Sampling distribution; Estimation; Hypothesis testing, Multivariate differential calculus, Simple and multiple regression, Additional topics in _regression (Multicollinearity, Heteroscedasticity, Autocorrelation, Non linearity etc.). **3 credits.**

Books:

- 1) Gerald Keller, Statistics for Management and Economics, South-Western College Publication, 10th edition, 2014
- 2) Wooldridge, Jeffrey M., Introductory Econometrics, South-Western College Publication, 5th edition 2012

Core Courses

ECO 501: Mathematical Economics

This course addresses the applications of calculus and linear algebra in Economics. The discussion will include mathematical concepts like Optimization, Linear algebra, Matrix, comparative statics in utility and/or profit maximization, Input output modeling, Envelope theorem, Duality etc. Topics also include optimization with inequality constraints, production functions, consumer demand theory, competitive market theory, behavior under uncertainty, risk aversion, intertemporal choices, general equilibrium, welfare theorems etc. (Prerequisite: ECO 514 or ECO 244 and ECO 301 or equivalents, 3 credits).

Books:

- 1) Structure of Economics: A Mathematical Analysis, By Eugene Silberberg, McGraw-Hill Publishing Company, 2001
- 2) Mathematics for Economics, by Carl P. Simon and Lawrence Blume, W.W. Norton & Company, 2009

Supplementary Text:

- 3) Fundamental Methods of Mathematical Economics by Alpha C. Chiang

ECO 502: Econometric Method

This is the first graduate course in Econometrics. There will be a balance between theory and applications. The first half of the course will be mostly theoretical. The later segment of the course is applied, in the sense that it deals with real data sets and real problems. Computer work is an integral part of the course. An important way in which econometrics differs from statistics is that econometrics focuses on links between economic theory and statistical analysis. In particular, this course will emphasize the kinds of inferences that can and cannot be drawn from statistical analysis, particularly from cross-section data. Understanding when to use particular methods and what conclusions you can draw is as important as understanding how to do the analysis. You are required to use EViews, STATA or SAS to solve data related assignments. Topics include: Review of Basics of Multiple Linear Regression and Matrix Algebra; Classical Linear Regression Model; Heteroskedasticity; Endogeneity and Instrumental Variables Estimation; Simultaneous Equations System; Selection issues and Probit Models; Introduction to Panel Data Regression (Prerequisite: ECO 514 or ECO 372 or equivalents, 3 credits)

Books:

Primary Text

- 1) Econometrics: **Hayashi**, Fumio: Princeton University Press, 1st edition, 2000

Supplementary Text:

- 2) Econometric Analysis of Cross Section and Panel Data, **Wooldridge**, Jeffrey M. MIT Press, 1st edition 2002

ECO 503: Microeconomic Theory

The course is about analyzing problems in microeconomic theory at the beginning graduate level. Students successfully completing the course will be able to comfortably work standard problems in microeconomic theory using calculus based techniques and methods. Topics to be covered may include the theory of the consumer, theory of the firm, market equilibrium, general equilibrium, welfare measurement, market structures, risk and uncertainty and information economics. (Prerequisite: ECO 501 and ECO 511 or ECO 244 or equivalents, 3 credits).

Books:

- 1) Microeconomic Analysis, Varian, Hall. (Primary), W. W. Norton and Company, 3rd edition, 1992
- 2) Advanced Microeconomic Theory, Jehle, Geoffrey A., and P.J. Reny (Alternative for few chapters), Financial Times/Prentice Hall, 3rd edition.

Supplementary Text:

- 3) Microeconomics with Calculus, Binger, B. R., and E. Hoffman (Supplementary), Addison Wesley, 2nd edition 1998.

ECO 504: Macroeconomic Theory

This is a graduate level one semester compact course on macroeconomics, which provides an advance treatment of macroeconomic theory and policy. In this course, students will develop analytical skills in solving and constructing macroeconomic models. The advanced topics covered will include topics such as: the Solow growth model, infinite horizon and overlapping generations models, endogenous growth model, the real business cycle model, unemployment and inflation. The course assumes a prior knowledge of undergraduate macroeconomics (ECO 104 and ECO 204) or ECO 512. It entails extensive use of calculus, algebra and graphs. (Prerequisite: ECO 512 or ECO 204 or equivalents, 3 credits).

Books:

- 1) Romer, David. 2012. *Advanced Macroeconomics*. 4th Edition. McGraw-Hill Irwin

Supplementary Texts:

- 2) Jones, Charles I. 1998. *Introduction to Economic Growth*. W. W. Norton & Company, Inc.
- 3) Weil, David N. 2013. *Economic Growth*. 3rd Edition, Pearson - International Edition.
- 4) Williamson, Stephen D. 2014. *Macroeconomics*. 5th Edition. Pearson.

Elective Courses:

ECO 611: International Trade Theory

This course offers advanced treatment of trade models as well as incorporates new developments in international trade theory. Topics include preliminaries of two sector models, advanced treatment of Heckscher-Ohlin-Samuelson model and HOV, many goods and factors, trade in intermediate inputs and wages, increasing returns and Gravity Equations, gains from trade and regional agreements etc. (Prerequisite: Eco 328 or equivalents, 3 credits).

Books:

- 1) Markusen, James R., James R. Melvin, William Kaempfer and Keith E. Maskus, *International Trade Theory and Evidence* McGraw-Hill 1995.
- 2) Robert C. Feenstra, *Advanced Trade theory*, Princeton University Press, Princeton 2004.

ECO 612: International Financial Economics

This course offers an advanced treatment of the financial and macro aspects of International Economics. Topics include : various concepts and measurement of exchange rates, traditional and modern theories of exchange rate determination, expectations and exchange rate dynamics, effectiveness of devaluation, monetary approach to balance of payments, Krugman's model of balance of payments crisis, hedging exchange rate risk - futures, options and currency swaps, multinational corporations and foreign direct investment, international financial markets, role of international financial institutions, financial crisis, objective analysis of recent issues in international financial system - common currency etc. (Prerequisite: Eco 204, ECO 328 or equivalents, 3 credits).

Book:

- 1) Schmitt-Grohe, Lecture Notes, Uribe and Woodford, 2016

Supplementary Texts:

- 2) Foundation of International Macroeconomics, M. Obstfeld and K.S. Rogoff, MIT Press, 1966
- 3) International Macroeconomics & Finance: Theory and Empirical Methods, Nelson, C. Mark, Blackwell Publishers, 2001

ECO 621: Financial Economics

This course addresses the basic and some of the advanced issues of Financial Economics ranging from discussions of basic concepts of Financial Economics like Expected utility theorem, Choice under uncertainty, Pure exchange economies, Preference representation and risk aversion and also the characteristics, valuation techniques and macroeconomic implications of basic financial assets,

like bonds, equities and different types of financial derivatives. Other topics include Risk, Arbitrage, Law of one price, Capital Asset Pricing Model (CAPM), Financial markets, Emerging Financial markets, Efficient market hypothesis, Explaining anomalies in theory, Behavioral Finance, Real options etc. **(Prerequisite: ECO 204 or equivalents, 3 credits)**

Book:

- 1) Copeland, Thomas E., J. Fred Weston and Kuldeep Shastri, Financial Theory and corporate policy, Pearson new International edition, 2013
- 2) Stephen F. LeRoy and Jan Werner, Principles of Financial Economics , Cambridge University Press 2nd Edition, 2014

ECO 622: Banking & Financial Institutions

This course addresses the basic aspects of financial institutions. Topics include discussions on all standard financial institutions with an emphasis to commercial banks. Discussion includes Mutual funds, Insurance companies, Leasing firms, Credit unions and nonprofits, Investment banks, Hedge funds etc., commercial bank operation, balance sheet and off balance sheet activities, Bank performance, Agency problem and compensation package, Bank regulation, interaction with central banks and so on, Lending and deposit operation, risk management and hedging. **3 credits**

Books:

- 1) Casu B. Girardone C. and P. Molineux, (2015). Introduction to Banking (2nd ed.)Pearson.
- 2) Chartered Banker (2014), Contemporary issues in Banking.

Supplementary Texts:

- 3) Mishkin F. (2016) The Economics of Money, Banking and Financial Markets, Global Edition, 11th edition update.
- 4) Hubbard R.G. (2008). Money the Financial System and the Economy, 6th edition, Pearson-Addison Wesley.
- 5) Thompson M. K. (2008). The Economics of Banking, (2nd ed.).

ECO 631: Development Economics

This is an advanced course on economic growth and development. It offers an analytical exposition of selected topics in growth theory and development economics. It covers neoclassical and new growth theories and their relevance to understand the dynamics of developing economies. The course also provides a modern treatment of some of the traditional theories of growth and development. Finally, it covers some current applied issues in development. The course assumes a prior knowledge of a first course in development economics as well as a sound understanding of intermediate level micro and macroeconomics. It entails an extensive use of calculus, algebra and graphs. **(Prerequisite: ECO 350 or equivalents, 3 credits.)**

Books:

- 1) Understanding Poverty A. Banerjee, R. Benabou, and D. Mookherjee, editors, Oxford University Press: March 2006.
- 2) Abhijit Banerjee and Esther Duflo, Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty,Public Affairs, 2012
- 3) William R. Easterly, The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics; MIT Press, 2002
- 4) Francis Teal, Simon Quinn, Måns Söderbom , Markus Eberhardt , Andrew Zeitlin Empirical Development Economics; Routledge, 2014

ECO570: Advanced Methods in Development Research

The main objective of this course is to lay the philosophical and methodological foundations of development research, both qualitative and quantitative. The course focuses on the bivariate and the multivariate analysis such as multiple regressions, analysis of variance and experimental designs, canonical correlation, multiple classification analysis and path analysis etc. in the context of development research. Furthermore, stochastic statistical method such as Markov Chain Analysis and Cohort Analysis will be covered. For qualitative methods, the course begins with a critical appraisal of participatory method and focus group discussions, and focuses on thick narratives, case study method, content analysis etc. Other recent methodologies used in development research will also be covered. **(Prerequisite: ECO 173 or equivalents). 3 Credits.**

Book:

- 1) Chatfield, C. and Collins, A.J. (1989). Introduction to Multivariate Analysis. London: Chapman & Hall

Supplementary Texts:

- 2) Kothari, C.R. and Garg, G. (2014). Research Methodology: Methods and Techniques. (3rd edition), New Delhi: New International Publishers.
- 3) Islam, M.N. (2011). An Introduction to Research Methods. (2nd edition) Dhaka: Mullick & Brothers.

ECO 641: Economics of Exhaustible Resources

Resource allocation under externality; intertemporal equilibrium, ecological and environmental models; production of depletable resources, optimal depletion of exhaustible resources, taxation of exhaustible resources; price movements in resource market, laws and rules related to conservation of natural resources of Bangladesh. **(Pre-requisite: ECO 303 & ECO 244 or equivalents, 3 credits.)**

Book:

1) Jon M. Conrad and Colin W. Clark, *Natural Resource Economics: Notes and Problems*, Cambridge University Press, 1987.

Supplementary Texts:

- 2) A.C. Fisher, *Resource and Environment Economics*, Cambridge University Press, 1981.
- 3) P.S. Dasgupta and G.M. Heal, *Economic Theory and Exhaustible Resources*, Cambridge University Press, 1979.
- 4) Jon M. Conrad, *Resource Economics*, Cambridge University Press, 1999.
- 5) Nick Hanley, Jason F. Shogren, and Ben White, *Environmental Economics in Theory and Practice*, Oxford University Press, 1997.
- 6) John M. Hartwick and Nancy D. Olewiler, *the Economics of Natural Resource Use*, 2nd Ed., Addison Wesley 1998.

ECO 649: Special Topics in Environmental Economics

This course deals with the economics of pollution, taxation and optimal pollution, standards, taxes and subsidies, marketable permits for emission trading, pollution-control policy in mixed economy, global pollution policy and a set of case studies and policies on environment in the developing countries. **(Pre-requisite: ENV/ECO354, 3 credits)**

Book:

1) Jonathan M. Harris, *Environmental & Natural Resource Economics, A Contemporary Approach*, Houghton Mifflin Company, 2006..

Supplementary Texts:

- 2) Tom Tietenberg and Lynne Lewis, *Environmental & Natural Resource Economics*, Pearson, Eight Edition, 2009
- 3) Barry Field, *Natural Resource Economics, An Introduction*. Waveland Press, 2001.
- 4) Frank A. Ward, *Environmental and Natural Resource Economics*, Pearson Education Ltd. 2006.

ECO 651: Panel and Limited Dependent Variable

Advantages and disadvantages of panel data, different kinds of static panel estimation such as fixed-effects, random-effects, and random coefficients model, dynamic panel data models such as Arelano-Bond, rationale for nonlinear models, binary choice models such as logit, probit, and tobit estimation, latent variable, sample selection, Heckman's two step method etc. **(Pre-requisite: ECO 502, 3 credits)**

Book:

1) Badi H. Baltagi, *Econometric Analysis of Panel Data*: Wiley, 5th edition, 2013

ECO 652: Time Series Model

Dynamic regression models, univariate time series models such as AR, MA, and ARMA, trend and difference stationary models, time series models of heteroscedasticity such as ARCH, GARCH, EGARCH, Kalman filter, stationary dynamic systems such as VAR, impulse response function, non-stationary dynamic systems, unit root, cointegration, and error correction model etc. **(Pre-requisite: ECO 502, 3 credits)**

Book

1) *Applied Econometric Time Series* by Walter Enders, 4th edition, Wiley

ECO 681: Advanced Mathematical Economics

This course addresses basic and some of the applications of advanced mathematical concepts in Economics. The course starts with necessary discussion on real analysis. After proper foundation the course develops into nonlinear programming applied to standard utility and/or production maximization. Topics on Economic dynamics like dynamic market models, dynamics of inflation and unemployment, Overlapping generation models etc. Stochastic calculus with special application to Economics (portfolio allocation, risk-return calculation etc.) will also be included. **(Pre-requisite: ECO 501, 3 credits)**

Books:

- 1) Rakesh v. Vohra, *Advanced Mathematical Economics*, Routledge, 2004.
- 2) Boyd & Vandenberg (2004), "Convex Optimization", Cambridge University Press.
- 3) Luenberger (1968), "Optimization by Vector Space Methods", Wiley.
- 4) De La Fuente (2000), "Mathematical Methods & Models for Economists", Cambridge University Press.

ECO 682: Contemporary Economic Ideas

This is an advanced level of ECO 406. The course is designed to study contemporary economic ideas, methodology and issues. The course is expected to cover the development in microeconomics, macroeconomics, heterodox economics, evolutionary economics, and new institutionalism. Besides these, the course is also designed to deal with contemporary issues including Islamic economic thought. Lastly, but not the least students will have a lecture on the philosophy of economics. **3 credits.**

Books:

- 1) R.B. Ekelund, R.F. Hebert, A History of Economic Theory and Thought, McGraw-Hill International Edition (3rd edition) 1990.
- 2) H. Landreth & D.C. Colander, History of economic Thought, South-Western College Publications, 4th edition, 2001.

ECO 683: International Trade Policy

Applies the theory of international economics to the problems of policy design such as import tariffs and dumping, import quotas and export subsidies, political economy of trade policy, trade and endogenous growth, multinationals and organization of the firm, trade and environment, trade and labor standard, WTO etc. **(Pre-requisite: ECO 328, 3 credits)**

Book:

- 1) Markusen, James R., James R. Melvin, William Kaempfer and Keith E. Maskus, International Trade Theory and Evidence. McGraw-Hill 1995 (MMKM)

Supplementary Texts:

- 2) Gandolfo, Giancarlo, International Trade Theory and Policy, Springer, Second edition, 201(GG)
- 3) Kerr, William A. and James D. Gaisford, Handbook on International Trade Policy Edward Elgar, 2007

(KG)

Oxford

- 4) Lukauskas, Arvid, Robert M, Stern and Gianni Zanini (eds.) Handbook of Trade Policy for Development, University Press, 2013
- 5) WTO-UN, A Practical Guide to Trade Policy Analysis, 2006.

ECO 684: Monetary Economics

Empirical evidence on money and output, money in a general equilibrium framework, money and transactions, money and public finance, money and output in the short run, money and the open economy, the credit channel of monetary policy, discretionary policy and time inconsistency, monetary policy operating procedures, interest rates and monetary policy etc. **(Pre-requisite: ECO 304, 3 credits)**

Book:

- 1) Frederic S. Mishkin, The Economics of Money, banking and Financial Markets, 7th edition, Addison Wesley.

Supplementary Text:

- 2) Jagdish Handa, Monetary Economics, 2nd edition, Routledge Carl E. Walsh, Monetary Theory and Policy, 3rd edition, The MIT Press.

ECO 685: Quantitative Modeling

Purposes of Model Building; theoretical basis for different traditions of modeling. Construction and simulation of (a) Econometric models, (b) Input Output models and (c) Computable General Equilibrium (CGE) models. Knowledge of computer use is a logical requirement for this course. **3 credits.**

Books:

- 1) Robert S. Pindyck and Danial L. Rubin Feld, Econometric Models and Economic Forecasting, 3rd edition, McGrew Hill 1990.
- 2) Ronald E. Miller & Peter D. Blair, Input-Output Analysis: Foundation and Extensions, Cambridge University Press, 2nd edition 2009.
- 3) Textbook of Computable General Equilibrium Modeling: Programming & Simulations, Nabushiro Hoso.

ECO 686: Game Theory

Static Games of Complete Information: Normal Form Representation of Games; Dynamic Games of Complete Information; Dynamic Games of Complete and Perfect Information: Two-Stage Games of Complete but Imperfect Information, Sub game Perfection, Repeated Games; Dynamic Games of Complete but Imperfect Information; Static Games of Incomplete Information: Static Bayesian Games and Bayesian Nash Equilibrium; Dynamic Games of Incomplete Information: Introduction to Perfect Bayesian Equilibrium, Signaling Games. **(Pre-requisite: ECO 303, 3 credits.)**

Book:

1) There is no required textbook for this course. Lecture Notes and Journal papers will be provided through google classroom or email.

Supplementary Texts:

- 2) An Introduction to Game Theory, Martin J. Osborne
- 3) A Primer in Game Theory, Robert Gibbons

ECO 687: Agricultural Economics

This is an applied micro economics course with a focus on food and agricultural industries, broadly defined. This course begins with a treatment of production economics, followed by consumer choice theory to lay the foundations for market analysis. We will also cover land markets with a focus on land valuation. We take a close look at the agricultural household model where production and consumption is linked, i.e. the household is both a consumer and a producer. We study different responses of the agricultural household to public policy under varying assumptions about their risk presence. We will delve into trade and macroeconomic issues in agriculture. We will also look at how economic analysis helps us understand the problems of natural resource management and what steps can be taken toward solving these problems. We will look at some problems associated with nonrenewable resources, energy, forests, fisheries, and biodiversity.

Books:

- 1) David L. Debertin. *Agricultural Production Economics (Second Edition, Amazon Createspace 2012)* is a revised edition of the textbook *Agricultural Production Economics* published by Macmillan in 1986 (ISBN 0-02-328060-3).
- 2) Barry Field's, *Natural Resource Economics: An Introduction*, Second Edition, Waveland Press, 2008.

ECO 688: Applied Econometric Forecasting

Basics of forecasting, modeling and forecasting trend, modeling and forecasting seasonality, characterizing cycles, modeling cycles: MA, AR, and ARMA models, forecasting cycles, forecasting with regression models, evaluating and combining forecasts, unit roots, stochastic trends, ARIMA forecasting models, and smoothing, forecasting macro economy of Bangladesh etc. (**Pre-requisite: ECO 372, 3 credits**)

Book:

Economic Forecasting, Graham Elliott & Allan Timmermann, Princeton University Press, 2016.

ECO 689: Project Analysis and Evaluation

This course deals with project choice, institutional framework, cost-benefit analysis. It also covers measuring the profitability of a project under different goals - framework of project proposal - logical framework analysis - project monitoring with special reference to project proposal system used in Bangladesh (**Pre-requisite: ECO 101, ECO 104**)

Book:

1) Prasanna Chandra, (2007): *Projects – Planning, Analysis, Selection, Financing, Implementation, and Review* (6th ed.), Tata McGraw-Hill Publishing Company Ltd.

Supplementary Texts:

- 2) Gittinger, J.P. (1982): *Economic Analysis of Agricultural Projects*, EDI series in Economic Development, EDI, World Bank.
- 3) UN (1972): *Guidelines for Project Evaluation*, United Nations, New York.
- 4) Khandaker, S.R.; Koolwal, G.B. and Samad, H.A. (2010): *Handbook on Impact Evaluation: Quantitative Methods and practice*, The World Bank.

ECO 691: Selected Readings in Economics

A subset of selected textbooks written by economists like Adam Smith: *Wealth of Nations*; Karl Marx: *Capital Vol. 1*; Alfred Marshall: *Principles of Economics*, Thorstein Veblen: *Theory of Business Enterprise*; J M Keynes: *The General Theory*; Milton Friedman: *Capitalism and Freedom*; Ronald Coase: *The Problem of Social Cost*; James Buchanan: *Calculus of Consent*; Joseph Stiglitz: *Globalization and Its Discontent*; Paul Krugman: *Peddling Prosperity and other noted writers will be covered. 3 credits*

ECO 692: Special Topics in Economics

This is a general topic course to meet the special demand for students which may change from semester to semester depending on the need of students and the availability of expert. **3 credits**

Research Courses:

ECO 695: Research Based Term Paper

Students willing to complete MS without thesis must submit a supervised research paper in the field of his/her choice with prior approval of the Chairman of the Department. This will be graded by the supervisor. **3 credits**

ECO 699: Thesis

A thesis must be an original research of publishable quality. There shall be a thesis supervisor who shall guide the student to complete the research. A thesis must be defended in person by the student in front of a Thesis Examination Committee consisting of 3 to 5 members. Supervisor will serve as the Chairman of the Committee. Thesis defense is open to all interested persons. A student with minimum CGPA of 3.5 is eligible for taking Thesis with prior approval of the Chairman of the Department. **6 credits**