MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
Syllabus of B. Sc. In Economics
(Effective for 2021-2022 Admission Session)
Choice Based Credit System
140 Credit (3-Year UG) MAKAUT Framework
w.e.f 2021-22

Semester-IV

Core Economics Course 8: INTERMEDIATE MICROECONOMICS - II

Course Description

This course is a sequel to Intermediate Microeconomics I. The emphasis will be on giving conceptual clarity to the student coupled with the use of mathematical tools and reasoning. It covers general equilibrium and welfare, imperfect markets and topics under information economics.

Course Outline

1. General Equilibrium, Efficiency and Welfare
Equilibrium and efficiency under pure exchange and production; overall efficiency and welfare economics.

2. Market Structure and Game Theory
Monopoly; pricing with market power; price discrimination; peak-load pricing; two-part tariff; monopolistic competition and oligopoly; game theory and competitive strategy.

3. Market Failure
Externalities; public goods and markets with asymmetric information.

Readings:

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, 8th edition, W.W. Norton and Company/Affiliated East-West Press (India), 2010.The workbook by Varian and Bergstrom could be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010.

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Core Economics Course 9: INTERMEDIATE MACROECONOMICS - II

Course Description

This course is a sequel to Intermediate Macroeconomics I. In this course, the students are introduced to the long run dynamic issues like growth and technical progress. It also provides the micro-foundations to the various aggregative concepts used in the previous course.

Course Outline

1. Economic Growth
Harrod-Domar model; Solow model; golden rule; technological progress and elements of endogenous growth.

2. Microeconomic Foundations

a. Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; rational expectations and random-walk of consumption expenditure.

b. Investment: determinants of business fixed investment; residential investment and inventory investment.

c. Demand for money.

3. Fiscal and Monetary Policy
Active or passive; monetary policy objectives and targets; rules versus discretion: time consistency; the government budget constraint; government debt and Ricardian equivalence.

4. Schools of Macroeconomic Thoughts
Classicals; Keynesians; New-Classicals and New-Keynesians.

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics,* Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Charles I. Jones, *Introduction to Economic Growth***,** W.W. Norton & Company, 2nd edition, 2002.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol. D'Souza, *Macroeconomics*, Pearson Education, 2009.
7. Robert J. Gordon, *Macroeconomics*, Prentice-Hall India Limited, 2011.

Core Economics Course 10: INTRODUCTORY ECONOMETRICS

Course Description

This course provides a comprehensive introduction to basic econometric concepts and techniques. It covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. The course also covers the consequences of and tests for misspecification of regression models.

Course Outline

1. Nature and Scope of Econometrics

2. Statistical Concepts

Normal distribution; chi-sq, t- and F-distributions; estimation of parameters; properties of estimators; testing of hypotheses: defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test; tests for comparing parameters from two samples.

3. Simple Linear Regression Model: Two Variable Case

Estimation of model by method of ordinary least squares; properties of estimators; goodness of fit; tests of hypotheses; scaling and units of measurement; confidence intervals; Gauss-Markov theorem; forecasting.

4. Multiple Linear Regression Model

Estimation of parameters; properties of OLS estimators; goodness of fit - R^2 and adjusted R^2; partial regression coefficients; testing hypotheses – individual and joint**;** functional forms of regression models; qualitative (dummy) independent variables.

5. Violations of Classical Assumptions: Consequences, Detection and Remedies

Multicollinearity; heteroscedasticity; serial correlation.

6. Specification Analysis

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

Readings

1. Jay L. Devore, *Probability and Statistics for Engineers,* Cengage Learning, 2010.
2. John E. Freund, *Mathematical Statistics*, Prentice Hall, 1992.
3. Richard J. Larsen and Morris L. Marx, *An Introduction to Mathematical Statistics and its Applications,* Prentice Hall, 2011.
4. D. N. Gujarati and D.C. Porter, *Essentials of Econometrics,* McGraw Hill, 4th edition, International Edition, 2009.
5. Christopher Dougherty, *Introduction to Econometrics*, Oxford University Press, 3rd edition, Indian edition, 2007.
6. Jan Kmenta, *Elements of Econometrics*, Indian Reprint, Khosla Publishing House, 2nd edition, 2008.

SEC 2: Statistics Lab II
Code: BECO 405
Credits- 2P

Course Objective:

- To familiarise students with the MS Excel & SPSS Statistical Tools.
- To aid as a complementary tool to comprehend Research Methodology.

Sl	Course Outcome	Mapped modules
1	Relate, demonstrate and assess students with technology in statistical and research analysis.	M1, M2, M3
2	Make use of statistical tools available with MS Excel and SPSS.	M1, M2, M3
3	Demonstrate and experiment in the operation of MS Excel and SPSS.	M1, M2, M3
4	Analyse & Assess the interpretation of the results of the various statistical tests on MS Excel and SPSS.	M1, M2, M3
5	Evaluate and Design students to develop problems on their own, followed by interpretation on MS Excel and SPSS.	M1, M2, M3

Module Number	Headline	Total Hours	%age of questions	Blooms level	Remarks (if any)
M 1	Sampling using MS Excel & SPSS, Inferences about Two Populations using MS Excel & SPSS, Hypothesis testing involving two population variances using MS Excel & SPSS	16	45%	1, 2, 3, 4, 5	
M 2	Chi-Square Testing Using Excel for Goodness of fit, equality of proportions and tests of independence, Experimental Design and ANOVA	8	30%	1, 2, 3, 4, 5	
M 3	Simple and Multiple Regression using MS Excel & SPSS	4	25%	1, 2, 3, 4, 5	
		28	**100**		

Module I:

- Sampling using MS Excel & SPSS. Hypothesis Testing using MS Excel & SPSS, with population mean, both known and unknown. Hypothesis testing of population proportion using MS Excel & SPSS.
- Inferences about Two Populations using MS Excel & SPSS, both known and unknown population standard deviations. Difference between Two Population Means with Matched Samples.
- Hypothesis testing involving two population variances using MS Excel & SPSS

Module II:

- Chi-Square Testing Using MS Excel & SPSS for Goodness of fit, equality of proportions and tests of independence.
- Experimental Design and ANOVA using MS Excel & SPSS.

Module III:

- Simple and Multiple Regression using MS Excel & SPSS.

Suggested Readings:

1. Statistical Analysis – MS Excel 2016 by Conrad Carlberg: Pearson
2. Statistics for Managers Using MS Excel by Levine, Stephan & Szabat: Pearson
3. Statistics for Business & Economics by Anderson, Sweeney, Williams, Camm & Cochran: Cengage
4. Discovering Statistics using IBM SPSS Statistics by Andy Field: Sage Texts