Programme	B.A. Economics Honours				
Course Title	**INTERMEDIATE MICROECONOMICS**				
Type of Course	**Major**				
Semester	IV				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics of 100 – 199 level				
Course Summary	This course focuses on the behaviour of consumers under certain conditions, optimisation in production, different conditions prevailing in competitive markets and the choices of a competitive firm.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO 1	To understand the core concepts and methods of microeconomics	U	C	Instructor-created exams / Practical Assignment
CO 2	Understand the basic elements of consumption and production theories.	U	F	Writing assignments / Quiz
CO 3	To analyze the consumer choice under different conditions of preferences.	An	P	Observation of Practical Skills / Group Discussion
CO 4	Apply the economic perspective and reason accurately in relation to different competitive market conditions.	Ap	P	Observation of Practical Skills / Home Assignments
CO 5	To solve and interpret stylized problems based on microeconomic models.	An	P	Group Discussion / Instructor-created exams
CO 6	Use microeconomic models to evaluate real-world microeconomic phenomena and issues.	E	M	Practical Assignment Viva Voce

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)

- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	**Choice Under Certainty**		**10**	**15**
	1	Optimal Choice determination: Budget Line – Marginal Rate of Substitution;	2	
	2	Consumer's Equilibrium using indifference curves -	2	
	3	Interior Optimum - Boundary Optimum.	2	
	4	Optimisation: Perfect Substitutes and Perfect Complements.	2	
	5	Estimating Utility Functions and implication of the MRS condition.	2	
II	**Comparative Statics in Consumer Theory**		**14**	**20**
	6	Offer Curves: Income Offer Curves- Engel Curves – Normal, Inferior and Giffen Goods –	3	
	7	Perfect Substitutes and Perfect Complements – Homothetic and Quasilinear preferences - Price Offer Curves:	2	
	8	Perfect Substitutes and Perfect Complements – Discrete Goods – Inverse Demand Function	1	
	9	Revealed Preference Approach: WARP and SARP;	2	
	10	The total change in demand: The substitution effect and income effect with suitable examples.	2	
	11	Rates of changes	1	
	12	Elasticity-Price elasticity of demand-The elasticity of linear demand curve-Income elasticity of demand; cross elasticity of demand;	2	
	13	Consumer Surplus.	1	
III	**Optimisation In Production**		**12**	**17**
	14	Short run and long run production function- Cost curves-	5	

		Profit Maximisation in the Short Run and Long Run.		
	15	Cost Minimisation - Returns to Scale and the Cost Function	5	
	16	Cobb Douglas Production Function	2	
IV	**The Analysis of Competitive Markets**		**12**	**18**
	17	Short run and long run Equilibrium in perfectly competitive firm and industry	3	
	18	Monopoly – linear demand curve – Mark up pricing – Inefficiency of monopoly-Dead Weight Loss-	2	
	19	Price Discrimination-bundling-Two-part tariffs	2	
	20	Monopolistic Competition-Product differentiation-selling cost	2	
	21	Oligopoly-collusive versus non collusive oligopoly-	2	
	22	Kinked demand curve model.	1	
V	**Open ended module**		**12**	
		Discussion based on different market structures in the world		
		Seminars to analyse changing equilibrium conditions under different market structures.		
		Practical Assignments to compare and relate market of different products with different market structures.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. H.R Varian (2009), Intermediate Microeconomics- A Modern Approach. W W Norton & Co
2. Pindyck, R. and Rubinfeld, D. Microeconomics (2017, Ninth Edition). ISBN: 978-1-292-21-331-6.

ADDITIONAL READINGS

1. Dominick Salvatore (2013): Microeconomics: Theory and Applications- 5thEdition, Oxford
2. A Koutsoyiannis (1979): Modern Microeconomics- 2ndEdition, Macmillan
3. Gregory Mankiw (2006) Principles of Microeconomics, (Paperback) South Western
4. Robert Y Awh (1976): Microeconomics: Theory and Applications- John Wiley & Sons.
5. Watson and Getz (2004): Price Theory and its Uses- 5thEdition, AITBS Publishers and Distributors.

MAPPING OF COS WITH PSOS:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	-	-	-	1	1
CO 2	3	1	-	1	-	-	1	1	1
CO 3	3	2	-	1	-	-	1	2	1
CO 4	-	3	2	1	1	-	1	2	2
CO 5	2	1	-	1	-	-	2	2	3
CO 6	-	2	2	2	2	-	3	2	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics Honours				
Course Title	**INTERMEDIATE MACROECONOMICS**				
Type of Course	**Major**				
Semester	IV				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 100 – 199 level				
Course Summary	This course explores important concepts, basic theories and models and other fundamental macro aspects of economics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the important concepts of economics and its real-world applications.	U	C	Instructor-created exams / Quiz
CO2	Develop and practice the skill of thinking like an economist.	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Help the student master the macroeconomic aspects essential for understanding the economic climate, specific economic issues, and policy alternatives.	U	P	Seminar Presentation / Group Discussion
CO4	Understand and apply the macroeconomic perspective and reason accurately and objectively about economic matters.	Ap	C	Instructor-created exams / Home Assignments
CO5	To make the students curious about the functioning of the economy and the power and breadth of economics	U	F	Writing assignments
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	Ap	P	Viva Voce

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
# - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I		**Classical Macroeconomics**	**12**	**17**
	1	The Classical Revolution, Production, Employment: Labor Demand, Labor Supply,	2	
	2	Equilibrium Output and Employment: The Determinants of Output and Employment, Factors That Do Not Affect Output,	2	
	3	The Quantity Theory of Money: The Equation of Exchange, The Cambridge Approach to the Quantity Theory,	2	
	4	Theory, The Classical Aggregate Demand Curve, The Classical Theory of the Interest Rate,	3	
	5	Policy Implications of the Classical Equilibrium Model: Fiscal Policy, Monetary Policy	3	
II		**The Keynesian System**	**12**	**17**
	6	The Problem of Unemployment, The Simple Keynesian Model: Conditions for Equilibrium Output,	2	
	7	The Components of Aggregate Demand: Consumption, Investment, Government Spending and Taxes,	2	
	8	Determining Equilibrium Income, Changes in Equilibrium Income,	1	
	9	Fiscal Stabilization Policy,	1	
	10	Exports and Imports in the Simple Keynesian Model Money in the Keynesian System: Interest Rates and Aggregate Demand,	2	
	11	The Keynesian Theory of the Interest Rate,	2	
	12	The Keynesian Theory of Money Demand, The Effects of an Increase in the Money Supply	2	
III		**The orthodox Keynesian school**	**12**	**17**
	13	The IS–LM model for a closed economy: Money Market Equilibrium: The LM Schedule, Product Market Equilibrium:	2	
	14	The IS Schedule, The IS and LM Schedules Combined, Underemployment equilibrium in the Keynesian model,	2	
	15	Factors That Affect Equilibrium Income and the Interest Rate:	1	
	16	Monetary Influences: Shifts in the LM Schedule, Real Influences: Shifts in the IS Schedule,	1	
	17	The Relative Effectiveness of Monetary and Fiscal Policy: Policy Effectiveness and the Slope of the IS Schedule, Policy Effectiveness and the Slope of the LM Schedule,	2	
	18	The IS–LM model for an open economy,	2	

	19	The Phillips curve and orthodox Keynesian economics, The central propositions of orthodox Keynesian economics	2	
IV	**Aggregate Supply and Demand**		**13**	**19**
	20	The Keynesian Aggregate Demand Schedule, The Keynesian Aggregate Demand Schedule Combined with the Classical Theory of Aggregate Supply,	3	
	21	A Contractual View of the Labor Market: Sources of Wage Rigidity, A Flexible Price–Fixed Money Wage Model, Labor Supply and Variability in the Money Wage: Classical and Keynesian Theories of Labor Supply,	3	
	22	The Keynesian Aggregate Supply Schedule with a Variable Money Wage, Policy Effects in the Variable-Wage Keynesian Model,	3	
	23	The Effects of Shifts in the Aggregate Supply Schedule: Factors That Shift the Aggregate Supply Schedule	4	
V	**Open ended module**		**12**	
		Discussion based on different schools of thought		
		Practical Assignments		
		Seminar		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Froyen, R. T., (2013). Study guide macroeconomics theories and policies, tenth edition, Pearson Education India
2. Brian Snowdon and Howard R. Vane (2005), Modern Macroeconomics: Its Origins, Development and Current State, Edward Elgar

ADDITIONAL READINGS

1. Goodwin, N., Harris, J. M., Nelson, J. A., Roach, B., & Torras, M. (2015b). Macroeconomics in context. Routledge.
2. Sikdar, S. (2020). Principles of macroeconomics. Oxford University Press.
3. Mankiw, N. G., Kneebone, R. D., & McKenzie, K. J. (2023). Principles of Macroeconomics, 9th Edition. Cengage Canada.
4. DeLorme, C. D., & Ekelund, R. B. (1983). Macroeconomics. Plano, Tex.: Business Publications.

Mapping of COs with PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO 7	PSO 8	PSO 9
CO 1	3	-	-	1	-	-	-	-	-
CO 2	1	1	1	1	-	-	2	1	-
CO 3	3	2	-	2	-	-	2	1	-
CO 4	3	2	-	2	-	-	3	2	-
CO 5	2	1	-	-	-	-	-	1	-
CO 6	1	-	2	1	3	-	2	1	-

Correlation Levels:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

Assessment Rubrics:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

Mapping of COs to Assessment Rubrics:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics Honours				
Course Title	**ANALYTICAL TOOLS FOR ECONOMICS II**				
Type of Course	**Major**				
Semester	IV				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course introduces students about statistical methods for economic analysis. Students shall acquire in-depth knowledge in the concepts of probability, probability distributions, theory of estimation, hypothesis testing and their applications in economic analysis.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO 1	Basic understanding of computation of probability.	U	C	Instructor-created exams / Quiz
CO 2	Identify various probability distributions and its applications	Ap	P	Practical Assignment / Observation of Practical Skills
CO 3	Understand estimation of mean, variance and population of parameters of sampling distributions	U	P	Seminar Presentation / Group Discussion
CO 4	Understand and Apply hypothesis testing for economics theories	Ap	C	Instructor-created exams / Home Assignments
CO 5	Develop critical thinking and problem-solving skills by applying statistical methods in Economic theories and acquired knowledge to address complex economic challenges in the contemporary world.	Ap	F	Viva Voce/Project

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
# - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I		**Elementary Probability Theory**	**14**	**21**
	1	Concepts- Set theory- Permutations and Combinations, Definitions of Probability - classical, empirical and axiomatic approaches- Addition and multiplication laws	3	
	2	Conditional probability- Bay's theorem	2	
	3	Random variables- probability distribution- Mathematical expectation- moments	3	
	4	Two random variables: joint, Marginal and conditional probability functions	3	
	5	Computing expected values- Covariance and correlation coefficients	3	
		Probability Distributions	**11**	**16**
II	6	Discrete Probability Distributions, Binomial , Poisson, Uniform - simple applications	4	
	7	Continuous probability distributions- Normal, Lognormal and Exponential Distributions (Derivations are not expected)	4	
	8	Concept of law of large numbers and Central limit theorem	1	
	9	Distribution function- Distribution function of one random variable	2	
III		**Theory of Estimation**	**12**	**17**
	10	Statistical Inference, Concept of population, sample- Sampling distributions- Standard error	3	
	11	Distributions of sample mean, Sample variance - chi square Student's t, and F distributions	3	
	12	Small and large sample properties of Z, t, Chi Square and F	2	
	13	Estimation of population parameters using method of OLS	1	
	14	Estimation of population parameters using method of maximum likelihood procedures	1	
	15	Point and interval estimation- Confidence intervals for population parameters	1	
	16	Properties of estimators	1	
IV		**Testing of Hypothesis**	**11**	**16**
	17	Simple and composite hypothesis- Null and alternative hypothesis	1	
	18	Type I and Type II error, Critical region- Level of significance, Power of a test	1	
	19	Test procedure - Test of significance in respect of Mean, Proportion, Variance and Correlation coefficient and their differences	2	
	20	Chi Square test of goodness of fit, and test for independence of attributes	2	

	21	Non parametric tests - Sign test, Wilcoxon- Mann Whitney U Test, Signed rank test	3	
	22	Kruskal Wallis test, Wald-Wolfowitz test	2	
V	**Open Ended Module**		**12**	
	1	Develop critical thinking and problem-solving skills by applying statistical methods in Economic theories		
	2	**Discussion** based on statistical tools		
	3	**Practical Assignments**		
	4	**Seminar**		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Paul G. Hoel, Sidney C. Port, Charles J. Stone: Introduction to Probability Theory, Universal Book Store, Delhi (Module 1)
2. John E. Freund's Mathematical Statistics with Applications, Pearson, 2014 (Module2)
3. G Casella and R L Berger, Statistical Inference, Duxbury Advanced Series, Cengage Learning, 200 and William G. Cochran, Sampling Techniques, John Wiley, 2007(Module 3)
4. Mood, A.M., F.A.Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill (Module 4)
5. Goon, Gupta and Dasgupta, Fundamentals of Statistics, Volume 1, 2, World Press(Module 4)

ADDITIONAL READINGS

1. Taro Yamane, Statistics: An Introductory Analysis, Harper & Row, Edition 3,1973
2. Hoel PG: Introduction to Mathematical Statistics, John Wiley & Sons, Edition 4,1971
3. YP Agarwal: Statistical Methods: Concepts, Application and Computation, Sterling Publishers1986
4. Sidney Siegal, N. John Castellan: Non parametric Statistics for Behaviour Sciences, Edition 2, 1988, McGraw-Hill
5. Tulsian, P.C and Vishal Pandey: Quantitative Techniques, Pearson Education, NewDelhi
6. S.P. Gupta: Statistical Methods, Sulthan Chand and Sons, NewDelhi.
7. Hooda R.P: Statistics for Business and Economics, Mac Million, NewDelhi
8. Alpha C Chiang: Fundamental Methods of Mathematical Economics, 2 nd Ed. -International Student Edition, McGrawhill
9. Edward T Dowling: Introduction to Mathematical Economics, Third Edition, Shaum's Outlines, Tata McGrawhill Publishing Co. Ltd, New Delhi.
10. SreenathBaruah: Basic Mathematics and its applications in Economics, Macmillan India Ltd.

Mapping of COs with PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	-	1	-	-	3	1	
CO 3	1	-	-	1	-	-	-	-	3
CO 4	-	-	1	2	-	-	2	-	3
CO 5	-	-	-	-	-	-	2		3

Correlation Levels:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

Assessment Rubrics:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

Mapping of COs to Assessment Rubrics: