Scheme of Examination and Syllabus for M.Sc Economics (Honours) 5 Year Integrated Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner in IIHS.

Semes ter	Core course(CC) @6credits Subject-1 ECONOMICS	Core course (CC)@6credits Subject-2 APPLIED ECONOMICS	Core course (CC@6credits) Subject-3 MATHEMATICS	Ability enhancem ent compulsor y course (AECC)@ 2credits	Skill Enhancement Course (SEC) @2-6 credits	Discipline Specific Course (DSE)@6credi ts	Activity/H obby @2 credits (Audit)	Total credits	Exit option
I Level- 5	CC-1A Basic Micro Economics -I- T(4CR)+P(2C R)	CC-2A Basic Macro Economics - I- T(4CR)+P(2CR)	CC-3A Mathematical Methods-I- T(4CR)+P(2CR)	(Language communic ation)/Envi ronmental Studies	SEC-1 Human Values and Ethics/Computer Science Level-1 @2credits	X	2	24	Certificate @58 credits
II Level- 5	CC-1B Basic Micro Economics-II- T(4CR)+P(2C R)	CC-2B Basic Macro Economics-II- T(4CR)+P(2CR)	CC-3B Mathematical Methods- II- T(4CR)+P(2CR)	(Language communic ation)/Envi ronmental Studies	SEC-2 Human Values and Ethics/Computer Science Level-1 @2credits	X	2	24	
		I	nternship @10 credits	(450 hours)	after 2nd semester (only	for exit option)			
Semes ter	Core course (CC) @6credits Subject-1	Core course (CC) @6credits Subject-2	Core course (CC @6credits) Subject- 3	General Elective [*] course @ credits	Skill Enhancement Course (SEC) @ 2- 6credits	Discipline Specific Course (DSE)@6credi ts	Activity/H obby @2 credits- Audit	Total credits	Exit Option

III Level- 6	CC-1C Development Economics T(4CR)+P(2C R)	CC-2C Indian Economy - I- T(4CR)+P(2CR)	CC-3C Statistical Methods-I- T(4CR)+P(2CR)	GE- 1*@6Cred its of level 5	SEC-3- Community Development/Personali ty Development/MOOC* *	Х	2	22+6*	Diploma @ 102 credits
IV Level- 6	CC-1D Basic Econometrics- T(4CR)+P(2C R)	CC-2D Indian Economy - II- T(4CR)+P(2CR)	CC-3D Statistical Methods-II T(4CR)+P(2CR)	GE- 2*@6Cred its of level 5	SEC-4 -Community Development/Personali ty Development/MOOC*	Х	2	22+6*	
]	internship @10 credits	s (450 hours)) after 4th semester (con	pulsory for all)			
Semes ter	Core course(CC) @6credits Subject-1	Core course (CC)@6credits Subject-2	Core course (CC@6credits) Subject-3	General Elective* course @6 credits	Skill Enhancement Course (SEC) @ 6credits	Discipline Specific Course (DSE)@ 6credits	Activity/H obby/ clubs @2 credits (Audit)	Total credits	Exit Option
V Level- 7	CC-1H1 subject H	X	Х	GE-	SEC-5	DSC -1-	2	20 + 10 of	Graduation

						T(4CR)+P(2 CR) DSE-I- OPT- 3 MOOC DSE-2- OPT-1 Public Economics-I T(4CR)+P(2 CR) DSE-2- OPT-2 Welfare Economics-I- T(4CR)+P(2 CR) DSE-2- OPT-3 MOOC			
VI Level- 7	CC-1H2 subject H Advanced Econometrics- II–T- (4CR)+P- (2CR)	Χ	X	GE- 4*@6credi ts of level 5/6	SEC-6 Economic Analysis Through Software-II- T(4CR)+P(2CR)	DSC-3-OPT- 1 Money, Banking and Finance- T(4CR)+P(2 CR) DSC-3-OPT- 2	2	20+6 ^H +6*	

			Economics of Law– II- T(4CR)+P(2 CR)		
			DSE-3- OPT-3 MOOC		
			DSC-4-OPT- 1 Public Economics – II- T- (4CR)+P(2C R)		
			DSE-4- OPT-2 Welfare Economics-II T(4CR)+P(2 CR)		
			DSE-4- OPT-3 MOOC		

Semester	Core course(CC) @6credits Subject	Discipline Specific Course (DSE)@6credits	Total credits	Exit Option
VII Level-8	CC-1M1 Advanced Micro Economics-I- T- (4CR)+P(2CR) CC-1M2 Advanced Macro Economics –I- T(4CR)+P(2CR) CC-1H1 subject H Advanced Econometrics – I- T(4CR)+P(2CR)	DSE-5- OPT-1 International Economics-I- T(4CR)+P(2CR) DSE-5- OPT-2 Current Issues in Global Economy-I- T(4CR)+P(2CR) DSE-6- OPT-1 Economics of Growth and Development -I- T(4CR)+P(2CR) DSE-6- OPT-2 Labour Economics- T(4CR)+P(2CR)	24	PG Diploma Subject @202 credits
VIII Level-8	CC-1M3 Advanced Micro Economics-II- T(4CR)+P(2CR) CC-1M4 Advanced Macro Economics-II - T-(4CR)+P(2CR) CC-1H2 subject H Advanced Econometrics – II	DSE-7- OPT-1 International Economics II- T(4CR)+P(2CR) DSE-7- OPT-2 Economics of Infrastructure - T(4CR)+P(2CR) DSE-8- OPT-1 Economics of Growth and Development -II- T- (4CR)+P(2CR)	24	

T-(4CR)+P(2CR)	DSE-8- OPT-2 Economics of Insurance - T(4CR)+P(2CR)		
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Semester	Core course(CC) @6credits Subject	Discipline Specific Course (DSE)@6credits	Total credits	Exit option
IX Level-9	CC-1M5 Mathematical Economics-I-T- (4CR)+P(2CR) CC-1M6 Research Methods in Economics-I - T(4CR)+P(2CR)	DSE-9- OPT-1 Agriculture Economics-I- T(4CR)+P(2CR) DSE-9- OPT-2 Economics of Health and Education-I- T(4CR)+P(2CR) *DSE-10- OPT-1 Operational Research-I-T(4CR)+P(2CR) OPT-2 Empirical research in Economics- I- T(4CR)+P(2CR)	24	Postgraduate in Subject @250 credits

Х	CC-1M5	*DSE-11- OPT-1	24	
Level-9	Mathematical	Operational Research-II-T(4CR)+P(2CR)		
	Economics-II-T-			
	(4CR)+P(2CR)	OPT-2		
		Empirical research in Economics- II- T(4CR)+P(2CR)		
	CC-1M6			
	Research Methods			
	in Economics –II-			
	T(4CR)+P(2CR)	DSE-12- OPT-1		
		Industrial Economics- T(4CR)+P(2CR)		
		DSE-12- OPT-2		
		Demography - $T(4CR)+P(2CR)$		

*Dissertation/Project for 12 credits shall be compulsory in lieu to DSC-10 and DSC-11 at level-9. The student will submit dissertation/project report in Xth semester and will be evaluated at the end of Xth semester.

Notes:

1. Credits (C), Core Courses (CC); Discipline Specific Elective Courses (DSE); General Elective Courses (GE); Skill Enhancement Courses (SEC), Ability Enhancement Compulsory Courses (AECC). Research Ability Enhancement Course(RAEC)

Major, Minor, Generic Elective subjects and DSE options will be offered depending upon the availability of faculty/infrastructure /timetable of the Institute/College.

2. Students can opt exit after completing internship after 2nd semester and earn a Certificate. Continuing students will do internship after 4th Semester.

3. Students continuing in 5th year (IXth and Xth semester) can opt for course work or research to complete Master's programme(integrated) in subject.

4. Students can opt for one course from other programmes as General Elective @ 6 credits in IIIrd, IVth, Vth and VIth semesters subject to the eligibility, availability of seats and class timings not overlapping.

5. H Honors courses. CC- 1H1 and CC-1H2 are honors courses to be taken if students opt for Honors course in third year and will have to be taken compulsorily by the students opting for 4th year of the programme (Honors and Research) if these courses are not completed earlier at level 7.

6. All the field work, Internship, dissertation/thesis will be effected through guided learning by allotting a teacher as guide to every student.

7. Each candidate shall be examined in the courses through a system of Comprehensive Continuous Assessment using a mix of Internal and End term evaluation. The Internal Assessment and End term evaluation for different courses of programme shall carry weightage of 50% each. Internal assessment (50%) shall be based on clearly defined components of class attendance and participation (10%), mid term exam of 2 hour duration (30%) and assignments-presentations (10%) of the credit and the rest (50%) through End term Examination. Evaluation rubrics shall be followed as per Annexure -1

8. Hobby/activity courses are audit courses and shall be evaluated by the instructor as prescribed in syllabi. The grades will be as Completed/Non-completed. These grade will not contribute to the calculations of SGPA/CGPA

9. The codes of the courses shall be identifiable with the following format;

B-ENG-N101 B-HIN-N101 and so on (Prefix N before number to distinguish from the earlier course codes)

Students	Students scores and learning levels against CO's (Evaluation scale 1-4 (1; <30%, 2; 30-59%, 3;60-70 %, 4; > 70 %) [% denotes marks on absolute scale]									
	Aggregated (Marks between 0- 100)	Class Participation (Marks between 0-10)	Assignments and presentations (Marks between 0-10)	Mid term Exam (Marks between 0-30)	End term exam (Marks between 0-50)					

Structure of Examination for M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner in IIHS.

Semester	Nomenclature	Code	Subjects	Internal	Contact	Mid	End	Total	Credit	Exam Hours
	*	no.		Assessmen	Hours	Term	Term	Marks		
				t (IA) Marks		Exam	Exam	Warks		
						Marks	Marks			
						(1711)	(ET)			
I		CC-1A		20	4	30	50	100	4	3 HOURS
		MSECO-	Basic Micro							
	ECONOMICS	N-101-T	Economics-I-T							
		CC-1A	Basic Micro	10	4	15	25	50	2	3 HOURS
		MSECO-	Economics-I-P							
		N-101-P								
II		CC-1B		20	4	30	50	100	4	3 HOURS
	ECONOMICS	MSECO-	Basic Micro							
		N-102-T	Economics-II-T							
		CC-1B	Basic Micro	10	4	15	25	50	2	3 HOURS
		MSECO-	Economics-II-P							
		N-102-P								
		CC-1C	Development	20	4	30	50	100	4	3 HOURS
	ECONOMICS	MSECO-	Economics-T							
		N-103-T								
		CC-1C	Development	10	4	15	25	50	2	3 HOURS
		MSECO-	Economics-P							
		N-103-P								
IV		CC-1D	Basic	20	4	30	50	100	4	3 HOURS
	ECONOMICS	MSECO-	Econometrics-T							
		N-104-T								
		CC-1D	Basic	10	4	15	25	50	2	3 HOURS
		MSECO-	Econometrics-P							
		N-104-P								

*T-Theory, P- Practical

Structure of Examination for M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner in IIHS.

Semester	Nomenclature*	Code no. CC-2A	Subjects	Internal Assessment (IA) Marks 20	Contact Hours 4	Mid Term Exam Marks (MT) 30	End Term Exam Marks (ET) 50	Total Marks 100	Credit	Exam Hours 3 HOURS
	APPLIED ECONOMICS	MSECO- N-201-T	Basic Macro Economics-I-T							
		CC-2A MSECO- N-201-P	Basic Macro Economics-I-P	10	4	15	25	50	2	3 HOURS
II	APPLIED ECONOMICS	CC-2B MSECO- N-202-T	Basic Macro Economics-II-T	20	4	30	50	100	4	3 HOURS
		CC-2B MSECO- N-202-P	Basic Macro Economics-II-P	10	4	15	25	50	2	3 HOURS
111	APPLIED ECONOMICS	CC-2C MSECO- N-203-T	Indian Economy-I-T	20	4	30	50	100	4	3 HOURS
		CC-2C MSECO- N-203-P	Indian Economy-I-P	10	4	15	25	50	2	3 HOURS
IV	APPLIED	CC-2D MSECO- N-204-T	Indian Economy-II-T	20	4	30	50	100	4	3 HOURS
	ECONOMICS	CC-2D MSECO- N-204-P	Indian Economy-II-P	10	4	15	25	50	2	3 HOURS

Structure of Examination for M.Sc Economics (Honours) 5 Year Integrated (I to

IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to

NEP-2020 w.e.f. the session 2022-23 in phased manner in IIHS.

Semester	Nomenclature*	Code no.	Subjects	Internal Assessment (IA) Marks	Contact Hours	Mid Term Exam Marks (MT)	End Term Exam Marks (ET)	Total Marks	Credit	Exam Hours
I	MATHEMATICS	CC-2A MSECO- N-301-T	Mathematical Methods-I-T	20	4	30	50	100	4	3 HOURS
		CC-2A MSECO- N-301-P	Mathematical Methods-I-P	10	4	15	25	50	2	3 HOURS
II	MATHEMATICS	CC-2B MSECO- N-302-T	Mathematical Methods-II-T	20	4	30	50	100	4	3 HOURS
		CC-2B MSECO- N-302-P	Mathematical Methods-II-P	10	4	15	25	50	2	3 HOURS
111	MATHEMATICS	CC-2C MSECO- N-303-T	Statistical Methods-I-T	20	4	30	50	100	4	3 HOURS
		CC-2C MSECO- N-303-P	Statistical Methods -I-P	10	4	15	25	50	2	3 HOURS
IV	MATHEMATICS	CC-2D MSECO- N-304-T	Statistical Methods -II-T	20	4	30	50	100	4	3 HOURS
		CC-2D MSEO- 304	Statistical Methods -II-P	10	4	15	25	50	2	3 HOURS

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

PROGRAMME OUTCOMES (POs) for 5 Year Integrated Postgraduate Program in Economics

To develop skills in graduate students so that they are able to acquire theoretical and practical knowledge about economics, economy, economic behavior, economic policies and economic problems.

PO-II To inculcate ability in students for critical thinking, lateral thinking about economic phenomena, problems and policies so as to create professional potential in them.

PO-III To create awareness on ethical issues, good business practices and ecology-economics interface

PO-IV To development ability in youth for understanding basic economic rationality and effective communication skills

PO-V To prepare youth for career in teaching, industry, government organizations and self-entrepreneurship

PO-VI To make students aware of natural resources, sustainable use and environment

PO-VII To provide learning experience in students that instills deep interest in economic science for the benefit of society.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

PROGRAMME SPECIFIC OUTCOMES (PSOs) for 5 Year Integrated Postgraduate Program in Economics

PSO1:Demonstrate the knowledge and understanding of economic science i.e vital processes of economy, consumer and producer behavior at micro level and macro-level.

PSO2: Critically think and correlate the economics knowledge with decisionmaking with regard to economic planning and economic policies, understanding of conflicts and tradeoffs and welfare implications of economic measures to improve the quality of life in person as well as of community.

PSO3: Demonstrate an understanding of the principles, methods of economic analysis in static and dynamic terms, analysis of economic data.

PSO4: Concise and meaningful writing and reporting, effective presentation skills and ability to work productively in a group with co-operation.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

5 Year Integrated Postgraduate Program in ECONOMICS

Semester-1

Theory-MSECO-N-101-T

CC-1A – Basic Micro Economics-I

Credits:4

Total marks : 100

Time: 3 Hours

End Term Exam Marks (ET):50

Internal Marks (IA-20 + MT-30):50

Note:

- (i) Seven Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory.

(iii) For the remaining four questions, students will attempt 2 out of 3 questions from each of the two units.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

UNIT-1

*Introduction and Demand Analysis

-Subject matter of economics

- Scarcity as basic economic problem

-Analysis of basic problems through Production Possibility Frontier

- Law of Demand and Elasticity of Demand(Price, Income and Cross) and their measurement

*Utility analysis

-Diminishing Marginal and Equi-Marginal Utility

- -Ordinal utitlity analysis and Consumer Equilibrium
- Revealed Preference and Hicks' revised Demand Theory
- Consumer Surplus and Producer Surplus

UNIT-2

***Theory of Production**

- --Production function-types
- Law of variable proportions
- -Iso- quants & least-cost Combination
- Laws of returns & economies of scale

*Supply and Cost Analysis

- Law of supply

-Elasticity of Supply and its measurement

- -Economies and Diseconomies of Scale
- -Costs- Traditional & Modern Theory

Reading List

- Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.
- Salvatore D (2006), Microeconomics-Theory and Applications, Oxford University Press
- Varian, H. (2003), Intermediate Microeconomics, East-West Press.
- Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

- Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.
- Boyes.W and Melvin. M, Micro economics, Houghton Mifflin Company Boston New York.
- Collel A., Whinston and Green (2012), Microeconomics Theory, Oxford University Press.
- Da Costa, G. C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Goodwin, Nelson, Ackerman and WeissKopf(2009), Micro Economics in context, PHI Learning Private Limited.
- Gravelle, H. and Rees, R. (2008), Micro Economics, Dorling Kindersley.
- Green H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth.
- Gupta K.R. (2009), Advanced MicroEconomics, Atlantic Publishers and Distributors LTD
- Healthfields and Wibe (1987), An Introduction to Cost and Production Functions, Macmillan, London.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory: A Mathematical Approach, McGraw Hill, New Delhi.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.
- Jehle Geoffrey A.and Reny Philip J (2008), Advanced Micro Economic Theory, Dorling Kindersley (India)
- Kreps, David M. (1990), A Course in Microeconomic Theory, Princeton University Press, Princeton.
- Layard, P.R.G. and A.W. Walters (1978), Microeconomic Theory, McGraw Hill, New York.
- Lipsey and Chrystal (2014), Economics, Oxford University Press
- Mankiw (2006), Principles of Microeconomics, Cengage Learning
- Mansfield Edwin, Applied Microeconomics, W.W.Norton, New York London.
- Sen, A. (1999), Microeconomics: Theory and Applications, Oxford University Press, New Delhi.
- Sen, A. (2007), Micro Economics: Theory and applications. Oxford University Press.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Course Outcome

CO 1	Have understanding about the subject matters of economics and the central problem of economics.
CO 2	Have insight about the economics, the economic problem and consumer behavior in terms of demand and its elasticity.
CO 3	Have further understanding of consumer behavior in terms of utility analysis, indifference cruces and responsiveness of demand.
CO 4	Have knowledge about nature of production and producer behavior in terms of laws of production, economies and diseconomies of scale and elasticity of supply.

CO-PO & CO-PSO Matrix

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	1	2	3	4	5	6	7	1	2	3	4
CO-2	3	3	2	2	2	2	2	3	2	2	2
CO-2	3	3	2	2	2	2	2	3	2	2	2
CO-3	3	3	2	2	2	2	2	3	2	2	2
CO-4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3 2	2	2 2	2 2		2	3	2	2	2

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Theory-MSECO-N-201-T

CC-2A-Basic Macro Economics-I

Credits:4

Time: 3 Hours

Total marks : 100

End Term Exam Marks (ET):50

Internal Marks (IA-20 + MT-30):50

Note:

- (i) Seven Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory.

(iii) For the remaining four questions, students will attempt 2 out of 3questions from each of the two units.

UNIT-1

*Introduction and National Income Aggregates

-Nature And Scope Of Macro Economics

- GDP,NDP,GNP and NNP at market price

- GDP,NDP,GNP and NNP at factor cost

-Private, personal and personal Disposable Income

*Measurement of National Income

-Expenditure Approach

-Income Approach

-Value Added Approach

-Problem in the estimation of National Income

Unit-2 *System of Accounting -Income–output Accounting -Flow of fund Accounting

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

-Balance of Payment Accounting

-Limitations of GDP Concept

*Consumption and Income Functions

- -Concepts of APC,MPC,MPS,APS
- Autonomous and Induced Investment
- MEC, Supply price
- Actual and Potential GDP

Reading List

- Ackley, G. (2978), Macroeconomics: Theory and Policy, Macmillan, New York.
- Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
- Branson, W.A. (2989), Macroeconomic Theory and Policy, (3rd Edition), Harper and Row, New York.
- Dornbusch, R. and F. Stanley (2999), Macroeconomics, Irwrin McGraw Hill, Inc. New York, 7th Edition.
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- Jha, R. (2992), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.
- Romer, D.L. (2996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
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- Mankiw, N. Greogory (2000), Macroeconomics Macmillan Worth Publishers 4th Edition
- Frisch, H. (2983), Theories of Inflation, Cambridge University Press, Cambridge.
- Sheffirin, S.M. (2996), Rational Expectations, Cambridge University Press, Cambridge.
- Lucas, R. (2982), Studies in Business Cycle Theory, MIT Press, Cambridge, Masscechusetts.
- Taylor, L. (2983), Structuralist Macroeconomics, Basic Books, New Longman.

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- Turnovsky, S.J. (2977), Macroeconomic Analysis and Stabilization Policy, Cambridge University Press, Cambridge.
- Ruggles R. and N. Ruggles (2956), National Income Accounts and Income Analysis Mc Graw Hill, Newyork.
- Veniers, Y.P. and F.D.Sebold, (2977) Macroeconomics; Models and Policy John Wiley and Inc, USA.
- Bernburg, T.F. and D. M. McDougall, Macroeconomics, McGraw Hill International Book Company.

Course Outcome

CO 2	Have knowledge about national income and related concept.
CO 2	Have knowledge about different approaches of measurement of national income aggregates and methodology.
CO 3	Have knowledge about different approaches of accounting and limitation of GDP concept.
CO 4	Have understanding about basic elements consumption and investment functions.

CO-PO & CO-PSO Matrix

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	7	2	2	3	4
CO-2	3	3	2	2	2	2	2	3	2	2	2
CO-2	3	3	2	2	2	2	2	3	2	2	2
CO-3	3	3	2	3	2	2	2	3	2	2	2
CO-4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2	2	2	3	2	2	2

Theory-MSECO-N-301-T

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner CC-3A –Mathematical Methods-I

Credits:4

Total marks : 100

Time: 3 Hours

End Term Exam Marks (ET):50

Internal Marks (IA-20 + MT-30):50

Note:

- (i) Seven Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory.

(iii) For the remaining four questions, students will attempt 2 out of 3 questions from each of the two units.

UNIT-1

*Set, Function, Limits And Continuity

- Concepts, Elementary set operation, laws of set operations

- Number of elements in a set, Applications of set theory in economics
- Types of functions, Factors

-Methods of Substitution and rationalization

-Continuity and discontinuity of functions

*Matrices

-Types, Addition, Multiplication

- Inverse of matrix,

- Cramer's rule and matrix inverse method, More on matrices (vectors, quadratic forms, Eigen roots and Eigen vectors)

-Applications of matrices in economics -Input-output analysis

UNIT-2

*Derivatives

-Differentiation

-Simple derivatives

-Higher order derivatives of one variable (Economic application)

- Partial total derivatives

- Double order partial derivative (Economic applications)

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

*Maxima & minima of functions, Linear Programming:

- Necessary and sufficient conditions for functions
- Economic application of unconstrained & constrained maxima & Minima
- -Graphical and Simplex method
- -Dual Problem in linear programming

Reading list

- A.C Chiang, K Wainwright: Fundamental Methods of mathematical economics, McGraw-Hill Publishing co.
- Aggarwal, H.S.: Modern Micro Economics, Konark, New Delhi, 2998.
- Allen R.G.D. (2974), Mathematical Analysis for Economists, Macmillan Press, London.
- Bhardwaj RS: Mathematics for Economics and Business, EXCEL Books, New Delhi
- Elias J. Richard: Mathematics for Business and Economics, D. Van Nostrand Company, New York, Cincinnati, Toronto, London, Melbourne
- Henderson J. and Quandt R.E(2980): Micro-economic Theory: A Mathematical Approach; McGraw-Hill, New Delhi
- Jain TR, Aggarwal SC, Rana, RK: Basic Mathematics for Economists, V Publications, New Delhi
- Leontief, W. (2936) Quantitative input-output relations in the economic systems of the United States. Review of Economics and Statistics, Vol 28, pp.205-225.
- Mathematics for Economics by Michael Hoy etal, PHI, New Delhi, 2004.
- Quantitative Methods by D.R. Aggarwal, Basic Mathematics for Economists by R.C. Joshi, New Academic Publishing.
- Gupta S. P (2024): Statistical Methods, Sultan Chand & Sons, New Delhi.
- Spiegel, M. R. and Stephens L. J. (2000): Theory and Problems of Statistics 3rd Edition, Schaum's Series, Tata McGraw Hill, New Delhi.
- Weber, J. E. (2982): Mathematical Analysis (Business and Economic Applications) 4th Editions, Harper and Row, New York.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

- Yamane, Taro. (2972): Fundamental Methods for Mathematical Economics, Prentice-Hall, New Delhi
- Aggarwal, S. C. and R. K. Rana.: Basic Mathematics for Economists, V.K. (India), (2007) Enterprises, Delhi.
- Arora, P. N., Sumeet Arora, S. Arora.: Comprehensive Statistical Methods, S. Chand & and (2007) Company Ltd., New Delhi.
- Freund, J. E. (2992): Mathematical Statistics, Prentice Hall India, 5th Edition. Prentice-Hall, New Delhi.
- Gupta, S. C. (2023): Fundamentals of Statistics, Himalaya Publications.
- Kandoi, Balwant (2022): Mathematics for Business and Economics with Applications, Vol. 2, Himalaya, Mumbai.
- Aggarwal, S. C. and R. K. Rana.: Basic Statistics for Economists (Latest Edition), (2007) V K (India) Enterprises, Delhi.

Course Outcome

CO 2	Have knowledge about the basics of set theory, economic
	applications.
CO2	Have understanding of matrix algebra and economic, applications of matrices.
CO 3	Have knowledge about derivatives and differentiation, Maxima and minima of a function.
CO 4	Have understanding about basic elements of linear Programming.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner CO-PO & CO-PSO Matrix

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	/	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2 2	2 2	2	3	2	2 2	r

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner Practicals **MSECO-N-1**01-P

CC-IA – Basic Micro Economics-I

Credits:2

Total marks : 50

Internal Marks (IA-10 + MT-15):25

End Term Exam Marks (ET):25

Time: 3 Hours

PRACTICALS

- 1. Derivation of DemandCurve.
- 2. Computation Of Demand Elasticity
- 3. Compensating Variation For Consumer Surplus
- 4. Equivalent Variation For Consumer Surplus
- 5. Derivation Of A Production Function
- 6. TR, MR, AR Relationship
- 7. TC, MC, AC Relationship
- 8. TP, MP, AP Relationship
- 9. Computation Of Elasticity Of Supply
- 10. Derive PE=SE+IE

Course Outcome

CO 2	To learn about, how to derive the demand, find out the demand and supply elasticity.										
CO2	To study and understand the relationship between basic fundamentals of concepts like: TR, MR, AR, TC, MC, AC, TP, MP, AP.										
CO 3	Able to find out the consumer surplus and price effects.										
CO 4	Able to analyze the production function.										

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2	2	2	3 2	2	2 2	2

CO-PO & CO-PSO Matrix

Scheme of practical examination:

Distribution of Marks:

- 1. Viva voice = 05 Marks
- 2. Practical file = 20 Marks
- 3. Practical Examination = 20 Marks

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Practicals MSECO-N-201-P

CC-2A- Basic Macro Economics-I

Credits:2 Time :3 hours Total Marks: 50 End Term Exam Marks (ET):25 Internal Marks (IA-10 + MT-15):25

PRACTICALS

- 1. Computation of GDP at market price
- 2. Computation of GNP at market price
- 3. Computation of NNP at market price
- 4. Computation of NDP at market price
- 5. Computation of GDP at factor cost
- 6. Computation of GNP at factor cost
- 7. Computation of NDP at factor cost
- 8. Computation of NNP at factor cost
- 9. Derivation and computation of APC, MPC, MPS, APS, MEC, Supply price
- 10.Derivation of Input-Output Account

Course Outcome

CO 2	To learn about, how to compute the different national income related aggregates
CO2	To study, computation and understand the relationship between basic fundamentals of concepts like: APC, MPC, MPS, APS
CO 3	Able to understand and construct a input- output account
CO 4	Able to analyze the MEC and supply price

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2 2	2	2 3	3	2	2	2

CO-PO & CO-PSO Matrix

Scheme of practical examination:

Distribution of Marks:

- 1. Viva voice = 05 Marks
- 2. Practical file = 20 Marks
- 3. Practical Examination = 20 Marks

Practicals MSECO-N-301-P

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner CC-3A– Mathematical Methods -I

Credits:2

Time :3 hours

Total Marks: 50 End Term Exam Marks (ET):25 Internal Marks (IA-10 + MT-15):25

PRACTICALS

- 2. Set operations
- 2. Matrix algebra problems in economics
- 3. Economic applications of partial derivatives
- 4. Economics applications of total derivatives
- 5. Unconstrained maximization & minimization in economics
- 6. Constrained maximization and minimization in economic
- 7. Graphical Method (Linear Programming problem)
- 8. Simplex Method (Linear Programming problem)

Course Outcome

CO 2	To learn about, how to compute Set operations, Matrix algebra problems in economics
CO2	To study, computation and understand the Economic applications of partial derivatives and total derivatives
CO 3	Able to understand and computation of Unconstrained and Constrained maximization & minimization in economics
CO 4	Able to analyze Linear Programming problems

CO-PO & CO-PSO Matrix

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2	2	2	3	2 2	2	

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner <u>Scheme of practical examination</u>:

Distribution of Marks:

- 1. Viva voice = 05 Marks
- 2. Practical file = 20 Marks
- 3. Practical Examination = 20 Marks

5 Year Integrated Postgraduate Program in ECONOMICS

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner Semester-2

Theory-MSECO-N-102-T

CC-IB – Basic Micro Economics-II

Credits:4

Time: 3 Hours

Total marks : 100

End Term Exam Marks (ET):50

Internal Marks (IA-20 + MT-30):50

Note:

- (i) Seven Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory.

(iii) For the remaining four questions, students will attempt 2 out of 4 questions from each of the two units.

UNIT-1

*Markets

- -Features of perfect competition
- Equilibrium of perfect competition
- Equilibrium of the firm in short run and Long run
- Increasing, decreasing and constant cost industry

*Monopoly

- features
- Short and long run price and output determination
- -Price Discrimination
- -Comparison of perfect completion and monopoly

UNIT-2

*Monopolistic Competition

- -Features
- -Short run and long equilibrium
- Chamberlin Approach

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

-features of Oligopoly markets and Kinked demand curves

*factor Pricing

-Basicconcept

-Wage Determination

-Marginal productivity theory of Distribution

-Rent theories

Reading List

- Koutsoyiannis, A. (2979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.
- Salvatore D (2006), Microeconomics-Theory and Applications, Oxford University Press
- Varian, H. (2003), Intermediate Microeconomics, East-West Press.
- Archibald, G.C. (Ed.) (2972), Theory of the Firm, Penguin, Harmondsworth.
- Baumol, W.J. (2982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.
- Boyes.W and Melvin. M, Micro economics, Houghton Mifflin Company Boston New York.
- Collel A., Whinston and Green (2022), Microeconomics Theory, Oxford University Press.
- Da Costa, G. C. (2980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Goodwin, Nelson, Ackerman and WeissKopf(2009), Micro Economics in context, PHI Learning Private Limited.
- Gravelle, H. and Rees, R. (2008), Micro Economics, Dorling Kindersley.
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- Gupta K.R. (2009), Advanced MicroEconomics, Atlantic Publishers and Distributors LTD
- Healthfields and Wibe (2987), An Introduction to Cost and Production Functions, Macmillan, London.
- Henderson, J.M. and R.E. Quandt (2980), Microeconomic Theory: A Mathematical Approach, McGraw Hill, New Delhi.
- Hirshleifer, J. and A. Glazer (2997), Price Theory and Applications, Prentice Hall of India, New Delhi.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

- Jehle Geoffrey A.and Reny Philip J (2008), Advanced Micro Economic Theory, Dorling Kindersley (India)
- Kreps, David M. (2990), A Course in Microeconomic Theory, Princeton University Press, Princeton.
- Layard, P.R.G. and A.W. Walters (2978), Microeconomic Theory, McGraw Hill, New York.
- Lipsey and Chrystal (2024), Economics, Oxford University Press
- Mankiw (2006), Principles of Microeconomics, Cengage Learning
- Mansfield Edwin, Applied Microeconomics, W.W.Norton, New York London.
- Sen, A. (2999), Microeconomics: Theory and Applications, Oxford University Press, New Delhi.
- Sen, A. (2007), Micro Economics: Theory and applications. Oxford University Press.

Course Outcome

CO 2	Have insight about basics of perfect completion and determination										
	of market equilibrium										
CO2	Have knowledge about imperfect markets and determination of										
	market equilibrium										
CO 3	Have understanding about basic concepts of factor pricing										
CO 4	Have further understanding of wage and rent determination theory										

CO-PO & CO-PSO Matrix

CO#	PO2	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
		2	3	4	5	6	7	2	2	3	4
CO2	3	3	2	2	2	2	2	3	2	2	2
CO2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	2	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3 3	3 2	2	2	2	2 2	2	3	2	2 2	2

Theory-MSECO-N-202-T

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner CC-2B-Basic Macro Economics- II-T

Credits:4

Total marks : 100

Time: 3 Hours

End Term Exam Marks (ET):50

Internal Marks (IA-20 + MT-30):50

Note:

- (i) Seven Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory.

(iii) For the remaining four questions, students will attempt 2 out of 3 questions from each of the two units.

UNIT-1 *flow ofIncome and Employment Equilibrium -Circular flow of income -Say's Law of Market -Classical Theory of Income and Employment -Keynesian theory *Income and Consumption Relationship -Absolute income hypothesis -Relative Income hypothesis -Life cycle hypothesis - Permanent income hypothesis UNIT-2 *Demand for Money and supply of Money -Classical, Keynesian and Friedman approach -Money supply determination, aggregates *Concept Multiplier, Inflation and Policies -Investment, Tax, Foreign trade multiplier and Accelerator Principle - Philips curve analysis -External and Internal balance through IS-LM approach

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

-Fiscal and Monetary policy

Reading List

- Ackley, G. (2978), Macroeconomics: Theory and Policy, Macmillan, New York.
- Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
- Branson, W.A. (2989), Macroeconomic Theory and Policy, (3rd Edition), Harper and Row, New York.
- Dornbusch, R. and F. Stanley (2999), Macroeconomics, Irwrin McGraw Hill, Inc. New York, 7th Edition.
- Heijdra, B.J. and V.P. Fredericck (2002), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
- Jha, R. (2992), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.
- Romer, D.L. (2996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
- Shapiro, E. (2996), Macroeconomic Analysis, Galgotia Publications, New Delhi.
- Mankiw, N.G. and D. Romer (Eds.) (2992), New Keynesian Economics, (2Vols.), MIT Press, Cambridge.
- Mankiw, N. Greogory (2000), Macroeconomics Macmillan Worth Publishers 4th Edition
- Frisch, H. (2983), Theories of Inflation, Cambridge University Press, Cambridge.
- Sheffirin, S.M. (2996), Rational Expectations, Cambridge University Press, Cambridge.
- Lucas, R. (2982), Studies in Business Cycle Theory, MIT Press, Cambridge, Masscechusetts.
- Taylor, L. (2983), Structuralist Macroeconomics, Basic Books, New Longman.
- Turnovsky, S.J. (2977), Macroeconomic Analysis and Stabilization Policy, Cambridge University Press, Cambridge.
- Ruggles R. and N. Ruggles (2956), National Income Accounts and Income Analysis Mc Graw Hill, Newyork.
- Veniers, Y.P. and F.D.Sebold, (2977) Macroeconomics; Models and Policy John Wiley and Inc, USA.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

• Bernburg, T.F. and D. M. McDougall, Macroeconomics, McGraw Hill International Book Company.

.Course Outcome

CO 2	Have knowledge about flow of income, Classical and Keynesian
	Theory of income and employment.
CO2	Have knowledge about hypothesis of income and consumption relationship.
CO 3	Have understanding about the concept of multiplier and theory of money.
CO 4	Have further understanding the implications of monetary and fiscal policies.

CO-PO & CO-PSO Matrix

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2 2	2.25	2	2	2	3	2	2 2	

Theory-MSECO-N-302-T

CC-3B – Mathematical Methods -II

Total marks : 100

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner Time: 3 Hours End Term Exam Marks (ET):50

Internal Marks (IA-20 + MT-30):50

Note:

- (i) Seven Questions will be set in all and students will be required to attempt 5 questions.
- (ii) Question No. 1 will be compulsory.

(iii) For the remaining four questions, students will attempt 2 out of 3 questions from each of the two units.

UNIT-1

*Data, Research and Variables

- -Types of data (time series, cross- section and panel data)
- Data pooling, Data purging
- Direct, indirect and intermediate variables
- Dummy variable, Measurement scales

*Quantitative methods, Analysis of trends and elasticities

- Application in consumer behavior
- -Demand forecasting
- -Cost forecasting
- linear, log linear, Double log
- -Elasticities

UNIT-2

*Quantitative methods, Measurement of technical change

- -Application in production
- -Estimation of the parameters of Cob Doughlas production function
- factor productivity (Total factor productivity and partial factor productivity
- -Hicks and Harrod approach of technical change

*Analysis of growth rates

- Simple growth rates
- Compounded annual growth rate
- -Continuous Compounding

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Reading list

- A.C Chiang, K Wainwright: Fundamental Methods of mathematical economics, McGraw-Hill Publishing co.
- Aggarwal, H.S.: Modern Micro Economics, Konark, New Delhi, 2998.
- Allen R.G.D. (2974), Mathematical Analysis for Economists, Macmillan Press, London.
- Bhardwaj RS: Mathematics for Economics and Business, EXCEL Books, New Delhi
- Elias J. Richard: Mathematics for Business and Economics, D. Van Nostrand Company, New York, Cincinnati, Toronto, London, Melbourne
- Henderson J. and Quandt R.E(2980): Micro-economic Theory: A Mathematical Approach; McGraw-Hill, New Delhi
- Jain TR, Aggarwal SC, Rana, RK: Basic Mathematics for Economists, V Publications, New Delhi
- Leontief, W. (2936) Quantitative input-output relations in the economic systems of the United States. Review of Economics and Statistics, Vol 28, pp.205-225.
- Mathematics for Economics by Michael Hoy etal, PHI, New Delhi, 2004.
- Quantitative Methods by D.R. Aggarwal, Basic Mathematics for Economists by R.C. Joshi, New Academic Publishing.
- Gupta S. P (2024): Statistical Methods, Sultan Chand & Sons, New Delhi.
- Spiegel, M. R. and Stephens L. J. (2000): Theory and Problems of Statistics 3rd Edition, Schaum's Series, Tata McGraw Hill, New Delhi.
- Weber, J. E. (2982): Mathematical Analysis (Business and Economic Applications) 4th Editions, Harper and Row, New York.
- Yamane, Taro. (2972): Fundamental Methods for Mathematical Economics, Prentice-Hall, New Delhi
- Aggarwal, S. C. and R. K. Rana.: Basic Mathematics for Economists, V.K. (India), (2007) Enterprises, Delhi.
- Arora, P. N., Sumeet Arora, S. Arora.: Comprehensive Statistical Methods, S. Chand & and (2007) Company Ltd., New Delhi.
- Freund, J. E. (2992): Mathematical Statistics, Prentice Hall India, 5th Edition. Prentice-Hall, New Delhi.

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

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- Kandoi, Balwant (2022): Mathematics for Business and Economics with Applications, Vol. 2, Himalaya, Mumbai.
- Aggarwal, S. C. and R. K. Rana.: Basic Statistics for Economists (Latest Edition), (2007) V K (India) Enterprises, Delhi.

Course Outcome

CO 2	Have knowledge about the basics of data and variables
CO2	Have understanding of application of quantitative methods in
	production and analysis of trends
CO 3	Have knowledge about estimation of production function and
	productivity
CO 4	Have further understanding the implications of basics of growth rates

CO-PO & CO-PSO Matrix

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2	2	2	3	2	2 2	,

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Practicals MSECO-N-102-P

CC-1B-Basic Micro Economics-II

Credits:2 Time :3 hours Total Marks: 50 End Term Exam Marks (ET):25 Internal Marks (IA-10 + MT-15):25

PRACTICALS

- 1. Equilibrium of the firm under Perfect competition market
- 2. Equilibrium of the Industry under Perfect competition market
- 3. Short run equilibrium of the firm under Monopoly market
- 4. Long run equilibrium of the firm under Monopoly market
- 5. Short run equilibrium of the firm under monopolistic market
- 6. Long run equilibrium of the firm under monopolistic market
- 7. Derivation of Kinked Demand curve
- 8. Graphical presentation of reaction curves under oligopoly markets
- 9. Computation and relationship of MPP, MRP, VMP
- 10. Derivation and computation of Quasi rent

Course Outcome

CO 2	To learn about, how to derive the equilibrium of firms and Industry under perfect competition
CO2	To study, computation and derivation the short run and long run equilibrium of firms under monopoly and monopolistic markets
CO 3	Able to understand and computation of the relationship between MPP, MRP, VMP
CO 4	Able to analyze the Quasi rent

CO-PO & CO-PSO Matrix

CO#	PO	PSO	PSO	PSO	PSO						
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship

and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner											
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2	2	2	3	2	2	2

Scheme of practical examination:

Distribution of Marks:

- 1. Viva voice = 05 Marks
- 2. Practical file = 20 Marks
- 3. Practical Examination = 20 Marks

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Practicals MSECO-N-202-P

CC-2B- Basic Macro Economics-II

Credits:2	Total Marks: 50
Time :3 hours	End Term Exam Marks (ET):25
	Internal Marks (IA-10 + MT-15):25

PRACTICALS

2. Presentation of Circular flow of Income

2. Derivation, presentation and formulation of income multiplier

3. Derivation and presentation and formulation of foreign trade multiplier

4. Graphical presentation and derivation of aggregate demand and aggregate supply (AD-AS)

5. Graphical presentation and derivation of Invest and saving (I-S)

6.Graphical presentation and derivation of Invest and saving (L-M)

7. Graphical presentation and derivation of IS-LM in closed and open economy

8. Derivation and computation of money supply aggregates measures

9. Graphical presentation and derivation of Philips Curve analysis

20. Derivation of liquidity preference theory

	-
CO 2	To study, computation and understand the concept of multiplier
CO2	To study and able to understand the aggregate demand and aggregate supply
CO 3	Able to understand the external and internal balance through IS-LM approach
CO 4	Able to analyze the theory of Philips curve and liquidity preference theory

Course Outcome

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

CO#	PO	PO	PO	PO	PO	PO	PO	PSO	PSO	PSO	PSO
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2 2	2	2	3	2	2	2

CO-PO & CO-PSO Matrix

Scheme of practical examination:

Distribution of Marks:

- 1. Viva voice = 05 Marks
- 2. Practical file = 20 Marks
- 3. Practical Examination = 20 Marks

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Practicals MSECO-N-302 -P

CC-3B- Mathematical Methods - II

Credits:2 Time :3 hours Total Marks: 50 End Term Exam Marks (ET):25 Internal Marks (IA-10 + MT-15):25

PRACTICALS

- 1. Analyze the time series data
- 2. Analyze the cross section data
- 3. Nominal Scales of measurement
- 4. Ordinal Scales of measurement
- 5. RatioScales of measurement
- 6. Interval Scales of measurement
- 7. Analysis of secular trends in economic data
- 8. Estimation of Cobb- Douglas production functions
- 9. Measurement of factor productivity
- 10.Compounded average growth rate

Course Outcome

CO 2	To learn about, how to analyze time series and cross section data								
CO2	To study, computation and understand scale of measurement								
CO 3	Able to understand and estimation Cobb- Douglas production functions								
CO 4	Able to analyze the measurement of factor productivity and growth rate								

CO-PO & CO-PSO Matrix

CO#	PO	PSO	PSO	PSO	PSO						
	2	2	3	4	5	6	7	2	2	3	4
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 2	3	3	2	2	2	2	2	3	2	2	2
CO 3	3	3	2	3	2	2	2	3	2	2	2

and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner											
CO 4	3	3	2	2	2	2	2	3	2	2	2
Average:	3	3	2	2.25	2	2	2	3	2	2	2

M.Sc Economics (Honours) 5 Year Integrated (I to IV semester) Multiple Entry-Exit, Internship and CBCS-LOCF in accordance to NEP-2020 w.e.f. the session 2022-23 in phased manner

Scheme of practical examination:

Distribution of Marks:

- 1. Viva voice = 05 Marks
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