

University of Mumbai

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Academic Authorities,
Meetings & Services (AAMS)
Room No. 128, M. G. Road, Fort,
Mumbai – 400 032.
Tel. 022-68320033

Re- accredited with A ++ Grade (CGPA 3.65) by NAAC
Category- I University Status awarded by UGC

2026/MAY/AAMS/C-118/44081

Date: 14th May, 2026

CIRCULAR:-

Attention of all the Principals of the Affiliated Colleges, all Academic Heads of University Departments, the Directors of the Recognized Institutions/Centers, Director, Centre for Distance & Online Education, Director, Dharmaveer Anand Dighe Thane Sub-Campus, Co-ordinator, School of Engineering and Applied Sciences, Kalyan Sub-Campus, Director, Chitrakar Padmabhushan Dr. Dhananjay Keer Ratnagiri Sub-Campus, Director, Sindhudurg Sub-Campus, Principal, Vishwabhushan Bharatratna Dr. B. A. Ambedkar College, Ambadave, Ratnagiri and Principal, V.V. Dalvie College, Talere, Sindhudurg is invited to this office Circular No. AAMS_UGS/ICC/2025-26/37 dated 27th May, 2025 relating to the NEP UG & PG Syllabus.

They are hereby informed that the recommendations made by the Board of Studies in Economics at its meeting held on 26th February, 2026 and subsequently passed by the Board of Deans at its meeting held on 17th March, 2026 **vide** item No. 5.41 (N) have been accepted by the Academic Council at its meeting held on 25th March, 2026 **vide** item No. 5.41 (N). In accordance therewith syllabus for **B.A. (Economics) (Sem V & VI) Scheme III** (NEP 2020) is introduced as per appendix with effect from the academic year 2026-27.

(The said circular is available on the University's website www.mu.ac.in).

MUMBAI – 400 032

14th May, 2026

To.

(Dr. Prasad Karande)
REGISTRAR

All the Principals of the Affiliated Colleges, all Academic Heads of University Departments, the Directors of the Recognized Institutions/Centers, Director, Centre for Distance & Online Education, Director, Dharmaveer Anand Dighe Thane Sub-Campus, Co-ordinator, School of Engineering and Applied Sciences, Kalyan Sub-Campus, Director, Chitrakar Padmabhushan Dr. Dhananjay Keer Ratnagiri Sub-Campus, Director, Sindhudurg Sub-Campus, Principal, Vishwabhushan Bharatratna Dr. B. A. Ambedkar College, Ambadave, Ratnagiri and Principal, V.V. Dalvie College, Talere, Sindhudurg.

AC 5.41(N)/25/03/2026

Copy forwarded with Compliments for information to:-

- 1) The Chairman, Board of Deans,
- 2) The Dean, Faculty of Humanities,
- 3) The Chairman, Board of Studies in **Economics**,
- 4) The Director, Board of Examinations and Evaluation,
- 5) The Director, Department of Students Development,
- 6) The Director, Department of Information & Communication Technology,
- 7) The Director, Centre for Distance and Online Education (CDOE), Vidyanagari,
- 8) The Deputy Registrar, Admissions, Enrolment, Eligibility & Migration Department (AEM).

Copy forwarded for information and necessary action to :-	
1	The Deputy Registrar, (Admissions, Enrolment, Eligibility and Migration Dept)(AEM), dr@eligi.mu.ac.in
2	The Deputy Registrar, Result unit, Vidyanagari drresults@exam.mu.ac.in
3	The Deputy Registrar, Marks and Certificate Unit,. Vidyanagari dr.verification@mu.ac.in
4	The Deputy Registrar, Appointment Unit, Vidyanagari dr.appointment@exam.mu.ac.in
5	The Deputy Registrar, CAP Unit, Vidyanagari cap.exam@mu.ac.in
6	The Deputy Registrar, College Affiliations & Development Department (CAD), deputyregistrar.uni@gmail.com
7	The Deputy Registrar, PRO, Fort, (Publication Section), Pro@mu.ac.in
8	The Deputy Registrar, Executive Authorities Section (EA) eau120@fort.mu.ac.in He is requested to treat this as action taken report on the concerned resolution adopted by the Academic Council referred to the above circular.
9	The Deputy Registrar, Research Administration & Promotion Cell (RAPC), rapc@mu.ac.in
10	The Deputy Registrar, Academic Appointments & Quality Assurance (AAQA) dy.registrar.tau.fort.mu.ac.in ar.tau@fort.mu.ac.in
11	The Deputy Registrar, College Teachers Approval Unit (CTA), concolsection@gmail.com
12	The Deputy Registrars, Finance & Accounts Section, fort draccounts@fort.mu.ac.in
13	The Deputy Registrar, Election Section, Fort drelection@election.mu.ac.in
14	The Assistant Registrar, Administrative Sub-Campus Thane, thanesubcampus@mu.ac.in
15	The Assistant Registrar, School of Engg. & Applied Sciences, Kalyan, ar.seask@mu.ac.in
16	The Assistant Registrar, Ratnagiri Sub-centre, Ratnagiri, ratnagirisubcentar@gmail.com
17	The Director, Centre for Distance and Online Education (CDOE), Vidyanagari, director@idol.mu.ac.in
18	Director, Innovation, Incubation and Linkages, Dr. Sachin Laddha pinkumanno@gmail.com
19	Director, Department of Lifelong Learning and Extension (DLLE), dlleuniversityofmumbai@gmail.com

Copy for information :-	
1	P.A to Hon'ble Vice-Chancellor, vice-chancellor@mu.ac.in
2	P.A to Pro-Vice-Chancellor pvc@fort.mu.ac.in
3	P.A to Registrar, registrar@fort.mu.ac.in
4	P.A to all Deans of all Faculties
5	P.A to Finance & Account Officers, (F & A.O), camu@accounts.mu.ac.in

To,

1	The Chairman, Board of Deans pvc@fort.mu.ac.in
2	Faculty of Humanities, Offg. Dean 1. Prof.Anil Singh Dranilsingh129@gmail.com Offg. Associate Dean 2. Prof.Manisha Karne mkarne@economics.mu.ac.in 3. Dr.Suchitra Naik Naiksuchitra27@gmail.com
	Faculty of Commerce & Management, Offg. Dean, 1 Prin.Ravindra Bambardekar principal@model-college.edu.in Offg. Associate Dean 2. Dr.Kavita Laghate kavitalaghate@jbims.mu.ac.in 3. Prin.Kishori Bhagat kishoribhagat@rediffmail.com

	Faculty of Science & Technology Offg. Dean 1. Prof. Shivram Garje ssgarje@chem.mu.ac.in Offg. Associate Dean 2. Dr. Madhav R. Rajwade Madhavr64@gmail.com 3. Prin. Deven Shah sir.deven@gmail.com
	Faculty of Inter-Disciplinary Studies, Offg. Dean 1. Dr. Anil K. Singh aksingh@trcl.org.in Offg. Associate Dean 2. Prin. Chadrashekhhar Ashok Chakradeo cachakradeo@gmail.com 3. Dr. Kunal Ingle drkunalingle@gmail.com
3	Chairman, Board of Studies,
4	The Director, Board of Examinations and Evaluation, dboee@exam.mu.ac.in
5	The Director, Board of Students Development, dsd@mu.ac.in DSW directr@dsw.mu.ac.in
6	The Director, Department of Information & Communication Technology, director.dict@mu.ac.in

AC – 25/03/2026
Item No. – 5.41 (N)

As Per NEP 2020

University of Mumbai



(Scheme-III)

Syllabus for Major Vertical – 1 & 4		
Name of the Programme – B.A. (Economics)		
Faculty of Humanities		
Board of Studies in Economics		
U.G. Third Year Programme	Exit Degree	U.G. Degree in Economics
Semester	V & VI	
From the Academic Year	2026-2027	

University of Mumbai



(As per NEP 2020)

Sr. No.	Heading	Particulars
1	Title of program O: _____	B.A. (Economics)
2	Exit Degree	U.G. Degree in Economics
3	Scheme of Examination R: _____	NEP 40% Internal 60% External, Semester End Examination Individual Passing in Internal and External Examination
4	Standards of Passing R: _____	40%
5	Credit Structure R. HSU-530E(III) R. HSU-530F(III)	Attached herewith
6	Semesters	Sem. V & VI
7	Program Academic Level	5.5
8	Pattern	Semester
9	Status	New
10	To be implemented from Academic Year	2026-27

Sd/-	Sd/-	Sd/-	Sd/-
Sign of BOS Chairman Prof. Suresh Maind Board of Studies in Economics	Sign of the Offg. Prof Manisha Karne Associate Dean Faculty of Humanities	Sign of the Offg. Dr. Suchitra Naik Associate Dean Faculty of Humanities	Sign of the Dean Prof. Dr Anil Singh Faculty of Humanities

Undergraduate Degree in Economics

Credit Structure (Scheme-3)

BA (Sem. V & VI)

R. HSU-530E(III) R. HSU-530F(III)

M1 M2 M3

Academic Level	Sem	Major (M1)		Major (M2)	Major (M3)	O E	VSC SEC	AEC, IKS, VEC	OJT, FP, CEP, CC, RP	Cum Cr/sem	Degree/ Cum Cr.
		Mandatory	Elective								
5.5	V	4+4+2 1. Advanced Micro Economics-III (4) 2. Economics of Growth & Development (4) 3. Kautirya's Economics -I (2) (IKS)	4 1. Indian Agriculture Economics (4) OR 2. Mathematics for Economic Analysis (4) OR 3. Economy of Maharashtra-I (4)	2	--	-	VSC (2) 1. Technical Analysis of Stock Market (2) OR 2 Economics of Argo-processing industries and management (2) OR 3. Application of AI tools for Finance and Economics (2) OR 4 Research Methodology-I (2)	--	4 CC (2) FP/ CEP (2)	22	UG Degree 132
	VI	4+4+4+2 1. Advanced Macroeconomics-III (4) 2. International Economics (4) 3. Indian Economy-II (4) 4. Indian Economic Thoughts-II (2)	4 1. Co-operation: principles and practices (4) OR 2. Quantitative Economics-II (4) OR 3. Environmental Economics-I (4)	--	--	--	--	--	4 OJT (4)	22	
Cum Cr.		52	8	12		12	14	14	20	132	
Exit option; Award of UG Degree in Major and Minor with 132 credits of Continue with Major and Minor											

[Abbreviation - OE – Open Electives, VSC – Vocation Skill Course, SEC – Skill Enhancement Course, (VSEC), AEC – Ability Enhancement Course, VEC – Value Education Course, IKS – Indian Knowledge System, OJT – on Job Training, FP – Field Project, CEP – Continuing Education Program, CC – Co-Curricular, RP – Research Project]

Program Structure for Sem V & VI (NEP 2020)

Vertical		Paper Title	Credits
Sem V			
1.	Mandatory	1. Advanced Micro Economics-III	4
		2. Economics of Growth & Development	4
		4. Kautilya’s Economics -I (IKS)	2
	Electives	1.Indian Agriculture Economics OR 2.Mathematics for Economic Analysis OR 3.Economy of Maharashtra-I	4
2.	Minor (To be selected from other discipline)		4
4.	VSC	1.Technical Analysis of Stock Market OR 2 Economics of Argo-processing industries and management OR 3. Application of AI tools for Finance and Economics OR 4 Research Methodology-I	2
6.	CEP (To be selected from CEP topic list)		2
Credits			22
Sem VI			
1.	Mandatory	1. Advanced Macroeconomics-III	4
		2. International Economics	4
		3. Indian Economic -II	4
		4. Indian Economic Thoughts-II	2
	Electives	1.Co-operation: principles and practices OR 2. Quantitative Economics-II OR 3.Environmental Economics-I	4
2.	Minor (To be selected from other discipline)		4
6.	OJT		4
Credits			22
Total Credits			44

Sem. - V

Sem - V
Vertical – 1
Major
Mandatory
(4+4+2*)

Name of the Course
ADVANCED MICROECONOMICS-III
TYBA

SEMESTER-V

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	<i>Advanced Microeconomics – III</i> is an analytical and rigorous course designed to deepen students' understanding of microeconomic theory by focusing on advanced market structures, strategic behaviour, general equilibrium, and welfare economics. Building upon the foundations laid in earlier microeconomics courses, this paper introduces students to modern theoretical frameworks used to analyze complex economic environments. The course emphasizes game theory, information economics, general equilibrium analysis, and welfare theorems, equipping students with the tools needed to interpret real-world market outcomes. Students will explore how individuals and firms behave under conditions of uncertainty, asymmetric information, and strategic interdependence. Special attention is given to the efficiency and stability of competitive markets, market failures, and the role of government in correcting inefficiencies. Through theoretical models, mathematical reasoning, and applied examples, the course prepares learners for advanced research in economics, policy analysis, and higher-level competitive examinations.
2	Vertical:	Mandatory Major Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives: 1. To develop an in-depth understanding of advanced microeconomic theories and analytical tools. 2. To introduce students to general equilibrium analysis and the conditions for economic efficiency. 3. To examine the implications of asymmetric information, uncertainty, and market failures. 4. To provide theoretical foundations for welfare economics and policy evaluation. 5. To equip learners for research, higher studies, and competitive examinations requiring advanced microeconomic reasoning.	
8	Course Outcomes After completing this course, students will be able to: 1. Analyse complex decision-making situations involving strategic behaviour. 2. Understand and evaluate general equilibrium and welfare models. 3. Critically evaluate market failures and propose government interventions. 4. Use advanced.	

9	Module 1: Market Structure: Monopoly and Monopolistic Competition (15 Hours) Monopoly - Measurement of Monopoly Power - Price Discrimination: Types and Degrees of Price Discrimination - Equilibrium under discriminating Monopoly - Regulation of Monopoly Market Product Differentiation in Monopolistic Competition - Chamberlin's Alternative approach- Equilibrium under Monopolistic Competition - Excess Capacity Module 2: Oligopoly (15 Hours) Meaning and Characteristics of Oligopoly Market - Rigid Prices - The Cournot Model - The Sweezy Model of Kinked Demand Curve - Collusive Oligopoly - Cartel: Centralised and Market Sharing Cartel - Imperfect Collusion- Price Leadership Models, Game Theory - Prisoner's Dilemma, Nash Equilibrium and Dominant Strategy Equilibrium Module 3: General Equilibrium and Welfare Economics (15 Hours) Concept of General Equilibrium and Walrasian General Equilibrium Model - Pareto Optimality – The Pareto Optimality Condition of Social Welfare - Marginal Conditions for Pareto Optimal Resource Allocation - Perfect Competition and Pareto Optimality - Arrow's Impossibility Theorem Module 4: Information Economics (15 Hours) Economics of Search and Search Cost - The Theory of Asymmetric Information-The Market for Lemons and Adverse Selection - Risk Preference and Expected Utility - The Problem of Moral Hazard - Market Signaling - Principal-Agent Problem- Market Failure- Remedies for market failure: Taxation, regulation, subsidies- Role of institutions in reducing information problems
10	Text Books
11	Reference Books: 1. Jhingan M. L. (2012), Advanced Economic Theory, Vrinda Publications, Delhi. 2. Mankiw N. Gregory (2015), Principles of Microeconomics, Cengage Learning. 3. Patil K. A (Second edition, 2011, Marathi), Advanced Economic Theory-Micro Analysis, Shri Mangesh Prakashan, Nagpur. 4. Salvatore D. (2006), Microeconomics: Theory and Applications, Oxford University Press, New Delhi. 5. Varian Hal R. (8th Edition 2010) Intermediate Microeconomics: A Modern Approach, East-West Press, New Delhi

12	Internal Continuous Assessment: 40		60 marks Semester-end Examination	
13	A) Internal Assessment: 40 marks (Internal Assessment- without Practical Courses)			
	Sr. No.	Particular		Marks
	01	One periodical class test / online examination is to be conducted in the given semester		20 Marks
	02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned		10 Marks
		Presentation	05 Marks	
		Written Document	05 Marks	
	03	Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism, articulation, and exhibit leadership qualities in organizing related academic activities		10 Marks
14	Question Paper Pattern			
	B) External Assessment 60 Marks			
	Marks: 60		Duration: 2 Hrs.	
	Question No	Particular		Marks
	Q-1	Attempt Any 2 out of 3 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit I)		15 Marks
	Q-2	Attempt Any 2 out of 3 A. (Based on Unit II) B. (Based on Unit II) C. (Based on Unit II)		15 Marks
	Q-3	Attempt Any 2 out of 3 A. (Based on Unit III) B. (Based on Unit III) C. (Based on Unit III)		15 Marks
	Q-4	Attempt Any 2 out of 3 A. (Based on Unit IV) B. (Based on Unit IV) C. (Based on Unit IV)		15 Marks

Name of the Course
ECONOMICS OF GROWTH AND DEVELOPMENT
TYBA

SEMESTER-V

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	Economic Growth and Development Economics constitute a significant branch of economics. For undergraduate learners, it is crucial to understand the fundamental concepts of economic development, the methodologies used to measure development, and the theoretical contributions of various economists. This course aims to equip students with the analytical skills required to identify obstacles to economic development and to understand the strategies necessary for guiding the development process in a sustainable and meaningful direction.
2	Vertical:	Mandatory Major Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives: 1. To provide students with a foundational understanding of Development Economics and to introduce them to key concepts related to economic development. 2. To enable students to comprehend general theories of economic development along with the challenges and problems associated with developmental processes. 3. To help students identify and understand the essential determinants required for achieving developmental goals. 4. To familiarise students with various schemes and policy measures designed for inclusive development, particularly those aimed at addressing issues such as poverty and income inequality. 5. To help students understand the significance of financial resources and the role of diverse institutions in accelerating the process of economic development.	
8	Course Outcomes: 1) Students will develop a comprehensive understanding of key concepts in economic development and economic growth. 2) Students will be able to compare and critically evaluate various approaches and indicators used for measuring development. 3) Students will gain clarity on major theories of economic development and their contemporary relevance. 4) Through systematic study, students will understand the importance of a wide range of factors that influence the development process. 5) Students will be able to explain the role of different financial resources and institutions in facilitating and accelerating economic development.	

9	Module 1: Concepts of Economic Growth and Development: (15Hours) Meaning & difference between economic growth and development, Indicators of Growth & Development – Meaning of Human Development: HDI & GDI - Amartya Sen’s Capability Approach of Development- Meaning & indicators of Sustainable Development- Concept of Human Happiness & Gross Happiness Index- Concept & Need of Inclusive Growth Module 2: Theories of Economic Growth (15Hours) Adam Smith's theory of economic development, Karl Marx's theory of economic development- W. W. Rostow's Stages of growth theory, Harrod-Domar growth model - Lewis dual sector model - Schumpeter's theory of development. Module 3: Development Issues and Policies (15Hours) Concept of Human Capital- Role of education health and nutrition in human capital-Meaning and measurement of Poverty and Inequality - Measures to eradicate poverty and inequality, Migration, Urbanization, Formal and informal Sector- Environmental sustainability and climate change- Self Help Groups and Micro Finance, Module 4: Planning Technology and Economic Development (15Hours) Concept and Role of infrastructure in economic development- Role of Technology in economic development- Labour-intensive versus Capital-intensive Technology, Schumacher’s concept of intermediate and appropriate Technology -Green technology -Meaning & types of Economic Planning -Role of planning in economic development. - NITI Aayog.
10	Text Books
11	Reference Books: 1. Todaro, M. P. & Smith, S. C. <i>Economic Development</i>, Pearson. 2. Thirlwall, A. P. <i>Growth and Development: With Special Reference to Developing Economies</i>, Palgrave. 3. Michael Barro, Robert J. & Xavier Sala-i-Martin <i>Economic Growth</i>, MIT Press. 4. Debraj Ray <i>Development Economics</i>, Oxford University Press. 5. Misra, S. K. & Puri, V. K. <i>Indian Economy</i>, Himalaya Publishing House. 6. Uma Kapila (Ed.) <i>Indian Economy: Performance and Policies</i>, Academic Foundation. 7. Dhingra, I. C. <i>Indian Economy</i>, Sultan Chand. 8. Jhingan, M. L. <i>Economics of Development and Planning</i>, Vrinda Publications.

12	Internal Continuous Assessment: 40	60 marks Semester end Examination																					
13	Internal Assessment: 40 marks (Internal Assessment- without Practical Courses)																						
	<table><tr><th>Sr. No.</th><th colspan="2">Particular</th><th>Marks</th></tr><tr><td>01</td><td colspan="2">One periodical class test / online examination is to be conducted in the given semester</td><td>20 Marks</td></tr><tr><td rowspan="3">02</td><td colspan="2">One Project with a presentation based on the curriculum to be assessed by the teacher concerned</td><td rowspan="3">10 Marks</td></tr><tr><td>Presentation</td><td>05 Marks</td></tr><tr><td>Written Document</td><td>05 Marks</td></tr><tr><td>03</td><td colspan="2">Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism, articulation and exhibit leadership qualities in organizing related academic activities</td><td>10 Marks</td></tr></table>	Sr. No.	Particular		Marks	01	One periodical class test / online examination is to be conducted in the given semester		20 Marks	02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned		10 Marks	Presentation	05 Marks	Written Document	05 Marks	03	Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism, articulation and exhibit leadership qualities in organizing related academic activities		10 Marks		
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14	Question Paper Pattern																						
	External Assessment 60 Marks																						
	Marks: 60	Duration: 2 Hrs.																					
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Q-1	Attempt Any 2 out of 3 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit I)	15 Marks																					
Q-2	Attempt Any 2 out of 3 A. (Based on Unit II) B. (Based on Unit II) C. (Based on Unit II)	15 Marks																					
Q-3	Attempt Any 2 out of 3 A. (Based on Unit III) B. (Based on Unit III) C. (Based on Unit III)	15 Marks																					
Q-4	Attempt Any 2 out of 3 A. (Based on Unit IV) B. (Based on Unit IV) C. (Based on Unit IV)	15 Marks																					

Sem V

IKS- Major

(2*)

Name of the Course
KAUTILYA'S ECONOMICS – I (IKS)
TYBA

SEMESTER-V

(Credit 2)

Sr. No.	Heading	Particulars
1	Description of the Course:	This course introduces the economic and administrative ideas found in the Arthashastra, attributed to Kautilya. It explains the role of the text in the ancient Indian knowledge system and its contribution to economic governance. The course examines the structure of the state economy, including sources of revenue and taxation. It also studies the responsibilities of financial officials and the organization of the revenue system. Additionally, it discusses financial accountability, anti-corruption measures, and principles of public finance in ancient India.
2	Vertical:	Mandatory Major Course
3	Type:	Theory
4	Credit:	2 Credits
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: 1. To introduce students to the economic ideas presented in the Arthashastra written by Kautilya and understand its relevance in the ancient Indian knowledge system. 2. To examine the structure and management of the state economy, including sources of revenue, taxation, expenditure, and financial accountability in ancient India.	
8	Course Outcomes 1. CO2 (Understanding): Explain the structure of the ancient Indian revenue system and the role of state officials in economic governance as described in the Arthashastra. 2. CO5 (Evaluating): Evaluate the relevance of Kautilya's economic ideas in relation to modern public finance and governance.	

9	Module 1: Introduction to Kautilya’s Economic Thought and State Finance and Revenue Administration (15 Hours) Historical background of the Arthashastra, Structure and contents of Arthashastra, Various disciplines in the ancient Indian education system, Place of Kautilya’s economic ideas among ancient Indian knowledge traditions, Concept of state income in Kautilya’s economic thought, Sources of revenue of the state, Methods of revenue collection, Administrative duties of the Koshadhyaksha (Treasurer) , Financial organization of the Mauryan state, Economic role of the state in Kautilya’s theory. Module 2: Ancient Revenue System and Financial Regulation (15 Hours) Forty ways of embezzlement of revenue, Punishments for financial corruption, Accountability of state officials, Principles of expenditure, loss and profit in public finance, Accounting and maintenance of state records, Recovery of debts, Deposits of the state, Resumption of gifts and grants, Remission of taxes and financial relief.										
10	Text Books										
11	REFERENCES: 1. Kautilya (2012). <i>The Arthashastra</i> . New Delhi: Penguin Books India. 2. R. P. Kangle (2010 reprint). <i>The Kautiliya Arthashastra</i> . Delhi: Motilal Banarsidass Publishers. 3. L. N. Rangarajan (1992). <i>Kautilya: The Arthashastra</i> . New Delhi: Penguin Books. 4. D. R. Bhandarkar (2016 reprint). <i>Some Aspects of Ancient Indian Polity</i> . Delhi: Motilal Banarsidass Publishers. 5. B. K. Sarkar (2019 reprint). <i>Political Institutions and Theories of the Hindus</i> . New Delhi: Low Price Publications. 6. U. N. Ghoshal (2017 reprint). <i>A History of Indian Political Ideas</i> . New Delhi: Oxford University Press. 7. Romila Thapar (2002). <i>Early India: From the Origins to AD 1300</i> . New Delhi: Penguin Books India. 8. Arthashastra of Kautilya by T. Ganapati Shastri, Chaukhambha Surbharti Prakashana, Varanasi, India, 2005. 9. Arthashastra of Kautilya by Sri. Vacaspati Gairola, Chaukhambha Vidyabahavan, Varanasi, India, 2013 10. Kautilya’s Arthashastra: The Way of Financial Management and Economic Governance, Jaico Publishing House, Mumbai, India.										
12	Internal Continuous Assessment: 20	30 marks Semester end Examination									
13	A. Internal Assessment: 20 marks (Internal Assessment- without Practical Courses) <table><tr><th>Sr. No.</th><th>Particular</th><th>Marks</th></tr><tr><td>01</td><td>One periodical class test / online examination is to be conducted in the given semester</td><td>10 Marks</td></tr><tr><td>02</td><td>One Project with a presentation based on the curriculum to be assessed by the teacher concerned</td><td>10 Marks</td></tr></table>		Sr. No.	Particular	Marks	01	One periodical class test / online examination is to be conducted in the given semester	10 Marks	02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned	10 Marks
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01	One periodical class test / online examination is to be conducted in the given semester	10 Marks									
02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned	10 Marks									

		Presentation	05 Marks	
		Written Document	05 Marks	

14

Question Paper Pattern

B. External Assessment 30 Marks

Marks: 30

Duration: 1 Hrs.

Question No	Particular	Marks
Q-1	Attempt Any 1 out of 2 A. (Based on Unit I) B. (Based on Unit I)	10 Marks
Q-2	Attempt Any 1 out of 2 A. (Based on Unit II) B. (Based on Unit II)	10 Marks
Q-3	Attempt Any 2 out of 4 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit II) D. (Based on Unit II)	10 Marks

Sem- V

Vertical – 1

Electives

(4)

Name of the Course
INDIAN AGRICULTURE ECONOMICS
TYBA

SEMESTER-V

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	While designing the present curriculum, the undergraduate level has been taken into consideration. Students will be able to understand the importance of the agricultural sector in the Indian economy. They will become aware of the challenges faced while practicing traditional agricultural methods and how these challenges can be addressed. They will also gain knowledge about the techniques used in modern farming practices. In addition, students will understand how agriculture can become more professional through the use of technologies such as Artificial Intelligence
2	Vertical:	Elective Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives:	1. To provide foundational knowledge of Indian agriculture, including its role in economic development, cropping patterns, and farm management practices. 2. To familiarize students with the principles and modern agricultural practices, including seed technology, fertilizers, irrigation methods, plant protection, and sustainable farming techniques. 3. To introduce students to modern technological innovations in agriculture, including farming, drones, GIS, remote sensing, AI-based farming, hydroponics, and digital agriculture platforms. 4. To enable students to analyze the role of agribusiness, rural entrepreneurship, and value-added food processing in strengthening the agricultural economy.
8	Course Outcomes:	1. Students will be able to understand the basics and contemporary dynamics of Indian agriculture. 2. The study will help to understand the scope of agribusiness and to analyze issues like agri-tech innovations. 3. It will help to understand the applications of strategies for sustainable and modern farming practices. 4. To understand scientific farm management practices.

9	Module 1: Fundamentals of Indian Agriculture: (15 Hours) Role of Agriculture in Economic Development -Features of Indian Agriculture, Productivity of major crops in India- Cropping pattern in India-Concept and Supportive schemes for the organic farming - Irrigation in India - Problems and importance - Agricultural labour Problems and remedies - Principles and practices of organic farming, Government schemes supporting organic cultivation. Module 2: Agricultural Credit (15 Hours) Institutional and Non-Institutional Sources of Credit, Co-operative Credit and Agriculture Rural Indebtedness - Commercial Banks and Regional Rural Banks - Microfinance and NABARD – Role and Performance - Crop loan and Crop Insurance, Kisan Credit Card Yojana. Module 3: Agricultural Marketing and Price Policy (15 Hours) Meaning and Types of Agricultural Marketing - Problems of Agricultural Marketing and its Measures, National Agricultural Market - FPO – Farmers Producer Organizations - Food Security in India - Agricultural Price Policy - Evaluation - Agricultural Crisis and Farmers Suicide. Module 4 : Innovations in Indian Agriculture (15 Hours) Agribusiness and Rural Entrepreneurship: Concept and scope of agribusiness, Food processing and value addition. Start-ups in agriculture, Digital agriculture platforms, Artificial intelligence (AI) and Data-driven farming- Use of drones, GIS, and remote sensing, Climate-smart agriculture (CSA), Adaptation strategies for agri business growth, Agro tourism.
10	Text Books
11	Reference Books: 1) Singh, G. (2019). <i>Principles of Agronomy</i>. Kalyani Publishers. 2) Sridhar, R., & Reddy, S. R. (2021). <i>Agricultural Economics</i>. Oxford & IBH Publishing. 3) Nair, N. G. (2017). <i>Modern Concepts of Organic Farming</i>. Himalaya Publishing House. 4) Subbarao, G. V. (2018). <i>Soil Science and Management</i>. Oxford University Press. 5) Bilgrami S.A.R. (2000), An Introduction of agricultural Economics, Himalaya Publishing House, Mumbai 6) Datta Ruddra and Mahajan Ashwini (2016), Indian Economy, Chand and Company Ltd., New Delhi. 7) Gupta P. K.,(2012), Agricultural Economics, Vrinda Publications (P) Ltd. Delhi. 8) Mamoria C.B. and B.B. Tripalhi (1991), Agricultural Problems in India, Kitab Mahal, Allahabad. 9) Sadhu and Singh (2008), Fundamental of Agricultural Economics, Himalaya Publishing House, Mumbai. 10) Tyagi B.P., (2016), Agricultural Economics and Rural Development, Jaiprakash Nath and Co., Meerut.

12	Internal Continuous Assessment: 40	60 marks Semester end Examination																					
13	Internal Assessment: 40 marks (Internal Assessment- without Practical Courses)																						
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Name of the Course
MATHEMATICS FOR ECONOMIC ANALYSIS
TYBA

SEMESTER-V

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	‘Mathematics for Economic Analysis’ is a foundational course designed to equip students with the essential mathematical tools required for understanding, interpreting, and solving economic problems. The course introduces concepts such as functions, limits, differential and integral calculus, and optimisation techniques. This course enables students to analyze consumer and producer behaviour, and various types of economic functions. This course also focuses on applying mathematical methods to core economic models, including utility maximisation, production functions, and comparative statics, etc. Students also learn mathematics to be applied in understanding inter-sectoral relationships in an economy. This course strengthens students’ ability to engage in advanced economic analysis and lays a strong foundation for further study in microeconomics, macroeconomics, econometrics, and mathematical economics.
2	Vertical:	Elective Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives: 1. To introduce fundamental mathematical tools for economic theory and analysis. 2. To develop the ability to formulate economic problems mathematically. 3. To apply calculus, linear algebra, and optimization techniques to microeconomic and macroeconomic models. 4. To enhance analytical thinking for understanding economic relationships and functions. 5. To understand the practical use of mathematics in economic data analysis.	
8	Course Outcomes: After completing the course Mathematics for Economic Analysis, students will be able to: 1) Understand and explain fundamental mathematical concepts such as functions, derivatives, and matrices relevant to economic analysis. 2) Apply calculus to analyze economic relationships, including demand, supply, cost, revenue, etc. 3) Formulate and solve economic optimization problems. 4) Develop and interpret mathematical models for economic decision-making. 5) Enhance analytical and logical reasoning skills for advanced study in economics.	

9	Module 1: Basic Mathematical Concepts (15 Hours) Meaning, Nature and scope: Numbers, sets, intervals, inequalities- Functions: Types and economic applications- Limits and continuity of functions- Economic applications: Demand and supply functions, elasticity, marginal concepts. Module 2: Differential Calculus and Applications in Economics (15 Hours) Meaning and numerical examples: Rules of differentiation, Higher-order derivatives, Maxima and minima of single-variable functions, Curvature and convexity/concavity. Applications to economics: Profit maximization, Cost minimization, Revenue and price elasticity, Equilibrium analysis. Module 3: Multivariable Calculus in Economic Analysis (15 Hours) Meaning, importance and applications: Partial derivatives, total differentiation and the Chain Rule, Homogeneous functions and Euler's theorem. Economic applications: Production functions (Cobb-Douglas), Returns to scale, Marginal Rate of Technical Substitution (MRTS), Multivariable optimization Module 4: Optimization Techniques (15 Hours) Meaning, nature and scope: Lagrangian method, Applications to consumer utility maximization, Applications to producer cost minimization and profit maximization- Formulation of linear programming problems- Graphical method- Applications in production, input choice, transportation- The use of optimization techniques in economic analysis.
10	Text Books
11	Reference Books: 1) Bose, D. (2025). <i>Mathematical Economics</i> (2nd ed.). Himalaya Publishing House. 2) Chiang, A. C., & Wainwright, K. (2013). <i>Fundamental methods of mathematical economics</i> (4th ed.). McGraw-Hill. 3) Dowling, E. T. (2012). <i>Introduction to Mathematical Economics</i> (4th ed.). McGraw-Hill Education. 4) Dr. B. N. Gupta & Dr. Shiv Narayan Gupta. (2021). <i>गणितीय अर्थशास्त्र (Mathematical Economics)</i>. SBPD Publications. 5) Mukherji, B., & Pandit, V. P. (1982). <i>Mathematical Method of Economic Analysis</i>. Allied Publishers 6) Shevale, Anand, and Vishal Belure (2022), '<i>Gaṇitīya Arthaśāstra va Arthamiti</i>' (गणितीय अर्थशास्त्र व अर्थमिती), Vidya Books. 7) Yamane, T. (1973). <i>Mathematics for economists: An elementary survey</i> (2nd ed.). Prentice-Hall.

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Name of the Course
ECONOMY OF MAHARASHTRA-I
TYBA

SEMESTER-V

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	The syllabus on Economy of Maharashtra mainly includes an introduction to Economy of Maharashtra, Agriculture and Cooperation, Industry and Infrastructure, Banking and Finance in Maharashtra, which focuses generally on Features, key economic indicators, Administrative Setup, Geographical Structure, Causes of Deprivation and Reforms, Issues and Challenges of Urbanization and Role of the state government. Whereas Agriculture and Cooperation highlights on Role of agriculture, Agriculture productivity-Problems & Policies, Agricultural Marketing, Co-operative Movement, Structure of Co-Operative Financial System etc., other side it focuses on Industry and Infrastructure which generally includes Industrial Development, MIDC and Industrial Policy, FDI, Infrastructure including road and transport, Communication, Irrigation & Power, Public health & Educational and fourth unit focuses on Banking and Finance which generally includes on Structure of Banking, priority sector lending, Micro finance and financial inclusion, progress of banking, State Finance Commission, revenue, expenditure and budget of government of Maharashtra.
2	Vertical:	Elective Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives: 1. To enable students to understand the structural features, geographical setting, administrative framework, and key economic indicators of the Economy of Maharashtra. 2. To develop analytical understanding among students to examine the causes of deprivation, urbanisation challenges, and the role of the State Government in Maharashtra's economic development. 3. To familiarise students with the role and functioning of agriculture and cooperative institutions in the economic growth of Maharashtra, including productivity, marketing, and financial systems. 4. To equip students with the ability to analyse industrial development, infrastructure growth, banking structure, and public finance of Maharashtra.	
8	Course Outcomes: 1. Describe and explain: the nature, structure, and major issues of the Economy of Maharashtra with reference to socio-economic indicators and regional disparities. 2. Analyse agricultural performance, cooperative movement, and marketing systems and assess their contribution to Maharashtra's economic development. 3. Examine and evaluate: the role of industry, infrastructure, and MIDC in the process of industrialisation and economic growth of Maharashtra. 4. Assess and interpret: the banking system, financial inclusion measures, state finance, revenue, expenditure, and budgetary policies of the Government of Maharashtra.	

9	Unit-1 Introduction to the Economy of Maharashtra - (15 Hours) Features of the Economy of Maharashtra, key economic indicators of Maharashtra, Geographical Structure and Administrative Setup of Maharashtra, Population Composition of Maharashtra, Role of State Government in the Economy of Maharashtra, Issues and challenges of the economy of Maharashtra. Causes of Deprivation and Reforms to be undertaken in Maharashtra. Issues and Challenges of Urbanisation in Maharashtra. Unit-2: Agriculture and Cooperation in Maharashtra (15 Hours) Role of agriculture in the economy of Maharashtra, Agriculture productivity-Problems & Policies measures to increase productivity. Cropping pattern and area under cultivation in Maharashtra, Problems and policy measures of Agricultural Marketing in Maharashtra. Meaning, Objectives, Features of Co-operative Movement in Maharashtra, Features & objectives of Co-operative Marketing. Structure of Co-Operative Financial System in Maharashtra. Unit-3: Industry and Infrastructure in Maharashtra (15 Hours) Industrial Development in Maharashtra, Role of MIDC and Industrial Policy of Maharashtra. Effects of Industrialization. FDI & Industrial Development in Maharashtra. Role of Infrastructure in the development of the economy of Maharashtra, progress of road and transport, Communication, Irrigation & Power, Public health & Educational infrastructure in Maharashtra. Unit-4: Banking and Finance in Maharashtra (15 Hours) Structure of Banking in the economy of Maharashtra, Structure of Co-Operative Financial System in Maharashtra, Priority Sector Lending of banks in Maharashtra. Microfinance and financial inclusion in Maharashtra: The role and progress of banking in Maharashtra. State Finance Commission of Maharashtra. Sources of Revenue and Expenditure of the Maharashtra State Government. Budget of Maharashtra.
10	Text Books
11	Reference Books: 1) Economic Survey of Maharashtra of 2024-25 published by Directorate of Economics and Statistics, Planning Department, Govt. of Maharashtra, Mumbai 2) Bhalchandra Mungekar–(January 2003) The Economy of Maharashtra - Changing Structure and Emerging Issues, published by Dr. Ambedkar Institute of Social and Economic Change 3) Chandrahas Deshpande (2019) Economy of Maharashtra, Mumbai 4) Mishra / Puri, Ruddar & Dutt, Agarwal, (2013), Indian Economy, Himalaya Publishing House, Mumbai. 5) Mahajan Mukund, (1994), Indian Economy and the Economic problem of Maharashtra, Volume-I, Nirali Prakashan, Pune. 6) Mahajan Mukund, (1994), Indian Economy and the Economic problem of Maharashtra, Volume-I, Nirali Prakashan, Pune.

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Vertical – 4

VSC
(2)

Name of the Course
TECHNICAL ANALYSIS OF THE STOCK MARKET
TYBA

SEMESTER-V

(Credit 2)

Sr. No.	Heading	Particulars
1	Description of the Course:	This course provides students with a foundational understanding of how financial markets operate in India and equips them with essential skills used in modern trading and investment analysis. It introduces learners to the structure and functioning of capital markets, the digital processes involved in securities transactions, and the role of major financial institutions. The course blends theoretical knowledge with practical analytical tools, enabling students to interpret market movements and evaluate price behaviour. Through the study of market trends, chart-reading techniques, and analytical tools, learners develop the ability to recognize trading opportunities and understand market psychology. By the end of the course, students gain confidence in using technical analysis for informed financial decision-making and building a strong base for advanced studies in finance and investment.
2	Vertical:	VSC (Vocational Skill Course)
3	Type:	Theory
4	Credit:	2 Credits
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives:	1. To understand the functioning of the Indian stock market and its key participants. 2. To identify and analyse market trends like uptrend, downtrend, and sideways movements. 3. To develop skills for making informed trading and investment decisions.
8	Course Outcomes	1. Students will identify and interpret price trends in financial markets. 2. They will apply trend lines, support/resistance, breakout, pullback, and retest concepts in analysis.

	3. They will be capable of making basic trading or investment decisions using technical analysis principles.
9	MODULE I: INTRODUCTION OF STOCK MARKET IN INDIA (15 Hours) Introduction of Stock Market in India, Market participants – Speculators, Arbitrators, and Hedgers Stock, Different Types of Markets - Equity Market, Derivatives Market, Stock exchanges - BSE, NSE, Sensex, Nifty 50, Gift Nifty, Different Sector Wise Indices –Nifty Bank, Nifty Mid Cap, Nifty Small Cap, Nifty Large Cap Indices, Types of analysis – Fundamental & Technical Analysis, Bull, Bear and Sideways, Dow theory, Elliott Wave theory. MODULE II: TECHNICAL ANALYSIS (15 Hours) Introduction to technical analysis, its principles, charts and types of charts, Trend Line -Uses and Importance, Demand/Support and Supply/Resistance, Pull Back, Retest, Breakout, Types of candle sticks, chart patterns, Technical Tools (oscillators and indicators) : Moving Average, RSI, Pivot Points, MACD, Bollinger Bands.
10	Text Books
11	REFERENCES: 1. Technical Analysis of the Financial Markets: A Comprehensive Guide to Trading Methods and Applications — John J. Murphy, 2020 (Special Indian Edition, Prentice Hall / Penguin India), ISBN 9780593332443 2. Japanese Candlestick Charting Techniques — Steve Nison, 2001 (Second Edition, Prentice Hall Press), ISBN 9780735201811 3. Technical Analysis Explained — Martin J. Pring, McGraw-Hill India, ISBN-13: 9789339205102 4. A to Z Share Market — Gautam Kumar, Notion Press (भारत), ISBN 9798885212847 5. Technical Analysis Using Multiple Time Frames — Brian Shannon, LifeVest Publishing, 2008, ISBN details vary (commonly referenced by trading community) 6. Encyclopaedia of Chart Patterns — Thomas N. Bulkowski, Wiley, ISBN 9780471668268 (international edition) 7. Getting Started in Technical Analysis — Jack D. Schwager, Wiley, ISBN 9781119523675 8. Technical Analysis from A to Z — Steven B. Achelis, McGraw-Hill, ISBN 9780070627979 9. A Complete Guide to Volume Price Analysis — Anna Coulling, Harriman House, ISBN 9780857197618 10. Trading in the Zone — Mark Douglas, Prentice Hall Press, ISBN 9780735201446

	11. Investing in Stock Markets – Anil Chougule, New century Publication, New Delhi, 8177085425 and 9788177085426														
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14	External Assessment 30 Marks Marks: 30 Duration: 1 Hrs. <table border="1"> <thead> <tr> <th>Question No</th><th>Particular</th><th>Marks</th></tr> </thead> <tbody> <tr> <td>Q-1</td><td>Attempt Any 1 out of 2 A. (Based on Unit I) B. (Based on Unit I)</td><td>10 Marks</td></tr> <tr> <td>Q-2</td><td>Attempt Any 1 out of 2 A. (Based on Unit II) B. (Based on Unit II)</td><td>10 Marks</td></tr> <tr> <td>Q-3</td><td>Attempt Any 2 out of 4 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit II) D. (Based on Unit II)</td><td>10 Marks</td></tr> </tbody> </table>		Question No	Particular	Marks	Q-1	Attempt Any 1 out of 2 A. (Based on Unit I) B. (Based on Unit I)	10 Marks	Q-2	Attempt Any 1 out of 2 A. (Based on Unit II) B. (Based on Unit II)	10 Marks	Q-3	Attempt Any 2 out of 4 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit II) D. (Based on Unit II)	10 Marks	
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Name of the Course
ECONOMICS OF AGRO-PROCESSING INDUSTRIES AND MANAGEMENT
TYBA

SEMESTER-V

(Credit 2)

Sr. No.	Heading	Particulars
1	Description of the Course:	This course focuses on the economic and managerial aspects of agro-processing industries. It provides students with practical knowledge related to value addition, cost structures, supply chains, marketing, and policy support for agro-based industries. The course aims to enhance vocational skills, entrepreneurial thinking, and employability in the agro-processing sector.
2	Vertical:	VSC (Vocational Skill Course)
3	Type:	Theory
4	Credit:	2 Credits
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: 1. To enable students to understand and explain (<i>Bloom's Level: Understand</i>) the structure, scope, and economic importance of Agro-Processing Industries in agricultural and rural development. 2. To develop analytical and managerial skills to examine (<i>Bloom's Level: Analyze</i>) cost management, marketing practices, and policy support mechanisms related to the Agro-Processing Industry.	
8	Course Outcomes: 1. Describe and interpret (<i>Bloom's Level: Understand</i>) the role of agro-processing industries in value addition, employment generation, and income enhancement in the agricultural sector. 2. Analyse and apply (<i>Bloom's Levels: Analyse & Apply</i>) basic economic and management principles to assess efficiency, pricing, and marketing decisions in agro-processing industries.	
9	Unit-1 Introduction to Agro-Processing Industries (15 Hours) Meaning and scope of agro-processing industries, importance of agro-processing in agricultural development, value addition in agriculture, types of agro-processing industries, supply chain and value chain in agro-processing, role of agro-processing in employment generation and rural development, problems and challenges faced by agro-processing industries. Unit-2: Management and Policy Aspects of Agro-Processing Industries (15 Hours) Cost structure and pricing of agro-processing products, marketing and distribution channels, role of cooperatives and private sector in agro-processing, quality control and standardisation (FSSAI, AGMARK), government policies and schemes for agro-processing industries, role of MSMEs, export potential and future prospects of agro-processing industries in India.	

10	Text Books																		
11	REFERENCES: 1. Government of India, Ministry of Food Processing Industries , Annual Reports. 2. Acharya, S.S. & Agarwal, N.L., <i>Agricultural Marketing in India</i> , Oxford & IBH. 3. Ruddar Datt & Sundharam, <i>Indian Economy</i> , S. Chand & Company. 4. Economic Survey of India (Latest Edition). 5. FAO Reports on Agro-Processing and Value Addition.																		
12	Internal Continuous Assessment: 20	30 marks Semester-end Examination																	
13	Internal Assessment: 20 marks (Internal Assessment- without Practical Courses) <table><tr><td>Sr. No.</td><td colspan="2">Particular</td><td>Marks</td></tr><tr><td>01</td><td colspan="2">One periodical class test / online examination is to be conducted in the given semester</td><td>10 Marks</td></tr><tr><td rowspan="3">02</td><td colspan="2">One Project with a presentation based on the curriculum to be assessed by the teacher concerned</td><td rowspan="3">10 Marks</td></tr><tr><td>Presentation</td><td>05 Marks</td></tr><tr><td>Written Document</td><td>05 Marks</td></tr></table>			Sr. No.	Particular		Marks	01	One periodical class test / online examination is to be conducted in the given semester		10 Marks	02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned		10 Marks	Presentation	05 Marks	Written Document	05 Marks
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Name of the Course
APPLICATION OF AI TOOLS FOR FINANCE AND ECONOMICS
TYBA

SEMESTER-V

(Credit 2)

Sr. No.	Heading	Particulars
1	Description of the Course:	This course introduces students to the practical application of Artificial Intelligence (AI) tools in the fields of Finance and Economics. It focuses on skill-based learning using AI-enabled tools for data analysis, forecasting, financial decision-making, and economic analysis. The course aims to enhance digital literacy, analytical ability, and employability in data-driven economic and financial environments.
2	Vertical:	VSC (Vocational Skill Course)
3	Type:	Theory
4	Credit:	2 Credits
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: To enable students to understand and explain (<i>Bloom's Level: Understand</i>) the basic concepts of Artificial Intelligence and its applications in finance and economic analysis. To develop practical and analytical skills to apply (<i>Bloom's Levels: Apply & Analyze</i>) AI-based tools for data interpretation, forecasting, and decision-making in finance and economics.	
8	Course Outcomes: Describe and demonstrate (<i>Bloom's Levels: Understand & Apply</i>) the use of selected AI tools for financial analysis, economic data handling, and basic forecasting. Analyze and interpret (<i>Bloom's Level: Analyze</i>) financial and economic data outputs generated through AI tools to support informed decision-making.	
9	Unit-1 Introduction to AI Tools for Economics and Finance (15 Hours) Meaning and scope of Artificial Intelligence, overview of AI, Machine Learning, and data analytics, relevance of AI in economics and finance, types of data used in economic and financial analysis, introduction to AI-based tools (spreadsheets with AI features, basic statistical and visualization tools, AI-assisted research platforms), applications of AI in economic analysis, policy studies, and market research. Unit-2: Practical Applications of AI in Finance and Economic Analysis (15 Hours) AI applications in financial forecasting, budgeting, and investment analysis, use of AI tools for trend analysis and demand forecasting, AI in banking, risk assessment, and credit analysis, AI-based data visualization and reporting, ethical issues and limitations of AI in finance and economics, prospects of AI-driven decision-making in economic and financial sectors.	
10	Text Books	

11	REFERENCES: 1. Russell, S. & Norvig, P., <i>Artificial Intelligence: A Modern Approach</i> . 2. Economic Survey of India (Latest Edition). 3. OECD Reports on AI and Economic Analysis. 4. Varian, H.R., <i>Intermediate Microeconomics</i> (Data and analytics perspective). 5. Selected online resources and tutorials on AI tools for finance and economics.																		
12	Internal Continuous Assessment: 20	30 marks Semester-end Examination																	
13	Internal Assessment: 20 marks (Internal Assessment- without Practical Courses)																		
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Q-3	Attempt Any 2 out of 4 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit II) D. (Based on Unit II)	10 Marks																	

Name of the Course
RESEARCH METHODOLOGY-I
TYBA

SEMESTER-V

(Credit 2)

Sr. No.	Heading	Particulars
1	Description of the Course:	This 2-credit course introduces essential concepts for conducting social science research in Economics. It covers the complete research lifecycle, from problem formulation and hypothesis development to data analysis and reporting. Students will learn about the types of research, data types and sampling techniques (random/non-random). The course emphasizes quantitative skills, including calculating Measures of Central Tendency and Standard Deviation. Additionally, it introduces basic analytical methods like Correlation (Karl Pearson/Rank) and Time Series Analysis, concluding with an overview of research report formats.
2	Vertical:	VSC (Vocational Skill Course)
3	Type:	Theory
4	Credit:	2 Credits
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives:	1. Introduce students to the fundamental meaning, scope, and objectives of social science research. 2. Develop the foundational skills for understanding the research process, including problem formulation, research design, and hypothesis definition. 3. Enable students to understand data types, basic collection methods, and sampling principles. 4. Acquaint students with essential descriptive statistics and introductory analytical tools like correlation and time series analysis.
8	Course Outcomes	1. Explain the core concepts, different types of research, and the overall research process. 2. Differentiate between primary and secondary data, understand basic sampling techniques, and define a research hypothesis. 3. Apply measures of Central Tendency and Standard Deviation to summarize data. 4. Calculate and interpret basic measures of correlation and apply the Moving Average method for time series analysis
9	Module 1: Introduction to Research Methodology and Data Collection (15 Hours.)	Meaning and scope of social science research, Types of Research, Research Process & steps, Research problem: meaning and Criteria of a good research problem, Research design: concept and types, Hypothesis: meaning, functions, and types, Types of data: Primary & Secondary, Methods of primary data collection, Census and Sample survey, Sampling techniques: Random & Non-random Module 2: Statistical Tools of Data Analysis (15 Hours) Measures of Central Tendency: Mean, Median, Mode Measures of Dispersion: Standard Deviation Correlation Analysis: Meaning and types of correlation, Karl Pearson's Coefficient of Correlation, Rank Correlation, Time series analysis: Meaning and components of time series, Trend analysis using: Moving Averages (3, 4, 5 years).

10	Text Books			
11	REFERENCES: 1. Bhandarkar, P. L. (1994). <i>Samajik sanshodhan padhati</i>. Himalaya Publishing House. 2. D. C., & Kapoor, V. K. (2014). <i>Statistics: Theory, methods and applications</i>. S. Chand. 3. Gupta, S. P. (2014). <i>Statistical methods</i>. S. Chand Publishing. 4. Kothari, C. R. (2008). <i>Research methodology: Methods and techniques</i>. New Age International Publishers. 5. Krishnaswamy, O. R. (1993). <i>Methodology of research in social sciences</i>. Himalaya Publishing House. 6. Lerner, J. J., & Zima, P. (1986). <i>Theory and problems of business mathematics</i>. McGraw-Hill. 7. Sancheti, D.C. and V.K. Kapoor (2014). Statistics-Theory Methods and Applications, S. Chand.			
12	Internal Continuous Assessment: 20	30 Marks Semester-end Examination		
13	A. Internal Assessment: 20 marks (Internal Assessment- without Practical Courses)			
	Sr. No.	Particular	Marks	
	01	One periodical class test / online examination is to be conducted in the given semester	10 Marks	
	02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned	10 Marks	
		Presentation		05 Marks
		Written Document		05 Marks
14	B. External Assessment 30 Marks			
	Marks: 30		Duration: 1 Hrs.	
	Question No	Particular	Marks	
	Q-1	Attempt Any 1 out of 2 A. (Based on Unit I) B. (Based on Unit I)	10 Marks	
	Q-2	Attempt Any 1 out of 2 A. (Based on Unit II) B. (Based on Unit II)	10 Marks	
	Q-3	Attempt Any 2 out of 4 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit II) D. (Based on Unit II)	10 Marks	

SEM.-VI

Sem - VI
Vertical – 1
Major
Mandatory
(4+4+2)

Name of the Course
ADVANCED MACROECONOMICS-III
TYBA

SEMESTER-VI

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	Advanced Macroeconomics – III is an advanced undergraduate course designed for TYBA students to deepen their understanding of the functioning of a modern economy. The course focuses on long-run and short-run macroeconomic analysis, including economic growth, business cycles, inflation, unemployment, and stabilisation policies. It examines the role of fiscal and monetary policies in managing economic fluctuations, with special reference to the Indian economy. Students are introduced to contemporary macroeconomic issues, policy debates, and theoretical frameworks, enabling them to critically analyse national and global economic challenges and policy responses.
2	Vertical:	Mandatory Major Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives: 1. To introduce students to the role of public finance in achieving macroeconomic stability and economic development. 2. To develop an understanding of government revenue, expenditure, public debt, and budgetary imbalances in India. 3. To analyze the objectives and implications of fiscal discipline with special reference to the FRBM Act, 2003. 4. To examine key macroeconomic issues in India, such as inflation, unemployment, poverty, and inequality. 5. To assess the impact of economic reforms and the LPG framework on India's macroeconomic performance. 6. To familiarize students with global macroeconomic interdependence, international institutions, and financial crises. 7. To understand the challenges faced by emerging economies in a globalized world. 8. To critically evaluate contemporary macroeconomic issues including digitalization, climate change, and pandemic-related policy responses.	

8	Course Outcomes After successful completion of this course, the students will be able to: 1. Understand the role of public finance in maintaining macroeconomic stability and economic development. 2. Explain the structure of public revenue, public expenditure, and public debt, and assess their impact on the economy. 3. Analyse fiscal deficits and budgetary imbalances and understand the significance of the FRBM Act, 2003. 4. Identify major macroeconomic issues in India and evaluate the impact of economic reforms since 1991. 5. Understand the role of planning institutions such as NITI Aayog and assess recent macroeconomic challenges in India. 6. Explain the nature of globalization, macroeconomic interdependence, and the role of international financial institutions. 7. Analyse contemporary macroeconomic issues affecting emerging economies, including digitalization
9	Module 1: Public Finance and Macroeconomic Stability (15 Hours) Role of government in the economy - Public Revenue - Tax and non-tax revenue - Direct and indirect taxes - Public Expenditure - Types and importance - Public Debt - Meaning, sources and burden of public debt. Fiscal Deficit and Budgetary Imbalances - Revenue deficit, fiscal deficit, primary deficit. Fiscal Responsibility and Budget Management (FRBM) Act 2003. Module 2: Indian Macroeconomic Structure and Reforms (15 Hours) Macroeconomic issues in India – Inflation, unemployment, poverty and inequality. - Economic Reforms since 1991 - Liberalisation, Privatisation and Globalisation (LPG) - Macroeconomic Impact of Reforms - Growth, employment, inflation and external sector - Role of NITI Aayog and Planning in India - Recent Macroeconomic Challenges in India. Module 3: Global Macroeconomics and Interdependence (15 Hours) Globalisation and Macroeconomic Interdependence: Trade, capital flows and global production - International Financial Institutions - IMF, World Bank and WTO: roles and relevance - Global Financial Crises - Causes and macroeconomic consequences. Module 4: Emerging Economies and Contemporary Macroeconomic Issues. (15 Hours) Macroeconomics of Emerging Economies - Challenges of capital flows and exchange rate volatility - Contemporary Macroeconomic Issues - Digital economy and macroeconomic measurement - Climate change and sustainable growth. - COVID-19 and macroeconomic policy response.
10	Text books
11	REFERENCES: 1. Blanchard, Oliver (2008), Macroeconomics, Pearson Education, New Delhi, India. 2. Dornbusch, Fisher and Startz (2018): Macroeconomics, McGraw Hill Education (India) Pvt. Ltd. 3. Mankiw N Gregory (2003), Macroeconomics, 6" edition, Worth Publishers, New York. 4. Patil J. F (2005, Marathi Edition), Macroeconomic Analysis, Phadke Prakashan, Kolhapur.

5. Rana K. C. & Verma K.N (2017), International Economics, Vishal Publishing CO. Jalandhar.
6. Salvatore D. (1997), International Economics, Printice Hall, New York.
7. Datt, R. & Sundharam, K.P.M., *Indian Economy*, S. Chand.
8. Misra, S.K. & Puri, V.K., *Indian Economy*, Himalaya Publishing House.
9. Jhingan, M.L., *Advanced Economic Theory: Macroeconomics*, Vrinda Publications
10. Musgrave, R.A. & Musgrave, P.B., *Public Finance in Theory and Practice*, McGraw-Hill.

12 Internal Continuous Assessment: 40 **60 marks Semester-end Examination**

13 Internal Assessment: 40 marks (Internal Assessment- without Practical Courses)

Sr. No.	Particular	Marks
01	One periodical class test / online examination is to be conducted in the given semester	20 Marks
02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned	10 Marks
	Presentation	
	Written Document	
03	Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism, articulation and exhibit leadership qualities in organizing related academic activities	10 Marks

14 Question Paper Pattern

External Assessment 60 Marks

Duration: 2 Hrs.

Question No	Particular	Marks
Q-1	Attempt Any 2 out of 3 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit I)	15 Marks
Q-2	Attempt Any 2 out of 3 A. (Based on Unit II) B. (Based on Unit II) C. (Based on Unit II)	15 Marks
Q-3	Attempt Any 2 out of 3 A. (Based on Unit III) B. (Based on Unit III) C. (Based on Unit III)	15 Marks
Q-4	Attempt Any 2 out of 3 A. (Based on Unit IV) B. (Based on Unit IV) C. (Based on Unit IV)	15 Marks

Name of the Course
INTERNATIONAL ECONOMICS
TYBA

SEMESTER-VI

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	The syllabus of International Economics covers four units. The syllabus equips the students to understand and evaluate various concepts which include Traditional and modern International Trade Theories, Terms of trade and Gain from trade, Balance of Payment and exchange rates, Indian International Trade and various international Trading Blocks.
2	Vertical:	Mandatory Major Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives:	The objective of the course is to develop the understanding and analytical skills of the students about international trade.
8	Course Outcomes	The syllabus of the International Economics course will enable students: 1. To understand International Trade Theories. 2. To learn the concept of Terms of Trade and Gains from Trade, and how to measure them. 3. To discuss the concept of Balance of Payment and exchange rates and their applicability in the real world. 4. To learn about Indian International Trade and various international trading blocs.
9	Unit-1 International Trade Theory:	(15 Hours) International Trade: concept, Importance, Inter-regional (domestic) and international trade- Concepts, differences. Free trade v/s Protection The Classical Theories of International Trade - Adam Smith, David Ricardo, Mill's Reciprocal Demand Analysis. Modern theory of international trade: Heckscher-Ohlin theory of International Trade.

Unit-2 Terms of Trade and Gains from Trade: (15 Hours)

Terms of Trade: meaning, types and determinants. Gains from Trade- Meaning, Types and measurement–J.S.Mills and Modern Approach. Concept of Actual gains and potential gains from trade. Trade Multiplier

Unit-3 : Balance of Payment and Exchange Rate (15 Hours)

Concepts and Components of BOP, Equilibrium and disequilibria in Balance of Payments, Types of Disequilibrium, Remedial measures to correct the disequilibrium. Types of Tariffs and Quotas and Their Impact on Partial Equilibrium Analysis. Concept of Optimum Tariff.

Exchange rate: Meaning, functions and determination of the equilibrium rate of exchange.

Purchasing Power Parity Theory, fixed and flexible, spot and forward exchange rate, Devaluation and depression, and arbitrage. Exchange rate policy in India

Unit-4: Indian International Trade and Trading Blocks: (15 Hours)

Direction and Composition of India's Foreign Trade, Export and Import Policies of India.

Regional Trade Blocks (European Union, ASEAN, SAARC), GATT, WTO, IMF, World Bank, ADB.

10 Text Books

11 References:

- 1) Agarwal, Babita Antarrastriya Arthshastra, Omega Publications.
- 2) Bhatia, H.L International Economics, Vikash Publishing House.
- 3) Field, Alfred.J & Appleyard, Dennis.R International Economics, McGraw Hill
- 4) Kennan, P.B, The International Economy, Cambridge University Press London.
- 5) Kindleberger, C.P. International Economics, R.D. Irwin, Home Wood.
- 6) Krugman, P.R. and M. Obstfeld International Economics -Theory and policy, Glenview, Foresman.
- 7) Krugman, Paul.R & Obstfeld, Maurice International Economics, Pearson.
- 8) Mithani, D.M, Money, banking, International Trade and Public Finance, Himalaya Publishing House.
- 9) Patel S.J. Indian Economy Towards the 21st Century, University Press Ltd, India.
- 10) Salvatore, D.L. International Economics, Prentice-Hall, Upper Saddle River, N. J.
- 11) Salvatore, Dominick International Economics: Trade & Finance, Wiley Publishers.
- 12) Soderstein, International economics, Macmillan Press Ltd, London
- 13) Vaishya, M.C. & Singh, Sudama International Economics, Oxford & IBH Publishing House, Delhi

12	Internal Continuous Assessment: 40	60 marks Semester end Examination																
13	Internal Assessment: 40 marks (Internal Assessment- without Practical Courses)																	
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14	Question Paper Pattern External Assessment 60 Marks Marks: 60 Duration: 2 Hrs. <table> <tr> <th>Question No</th><th>Particular</th><th>Marks</th></tr> <tr> <td>Q-1</td><td>Attempt Any 2 out of 3 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit I)</td><td>15 Marks</td></tr> <tr> <td>Q-2</td><td>Attempt Any 2 out of 3 A. (Based on Unit II) B. (Based on Unit II) C. (Based on Unit II)</td><td>15 Marks</td></tr> <tr> <td>Q-3</td><td>Attempt Any 2 out of 3 A. (Based on Unit III) B. (Based on Unit III) C. (Based on Unit III)</td><td>15 Marks</td></tr> <tr> <td>Q-4</td><td>Attempt Any 2 out of 3 A. (Based on Unit IV) B. (Based on Unit IV) C. (Based on Unit IV)</td><td>15 Marks</td></tr> </table>		Question No	Particular	Marks	Q-1	Attempt Any 2 out of 3 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit I)	15 Marks	Q-2	Attempt Any 2 out of 3 A. (Based on Unit II) B. (Based on Unit II) C. (Based on Unit II)	15 Marks	Q-3	Attempt Any 2 out of 3 A. (Based on Unit III) B. (Based on Unit III) C. (Based on Unit III)	15 Marks	Q-4	Attempt Any 2 out of 3 A. (Based on Unit IV) B. (Based on Unit IV) C. (Based on Unit IV)	15 Marks	
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Q-4	Attempt Any 2 out of 3 A. (Based on Unit IV) B. (Based on Unit IV) C. (Based on Unit IV)	15 Marks																

Name of the Course
INDIAN ECONOMY-II
TYBA

SEMESTER-VI

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	This course provides a detailed, sector-wise analysis of the Indian economy, focusing on the Agricultural, Industrial, and Service sectors, alongside Economic Planning and Public Finance. It examines the Primary Sector's trends, causes of low farm productivity, and the impact of various revolutions and Price Policy. The course then analyzes the Industrial Sector, including the role and problems of MSMEs and the impact of the 1991 Liberalization Policy. Attention shifts to the Tertiary Sector's growth, employment generation (IT, BPO), and the role of Trade and Tourism. Finally, the course covers macro issues: the transition from the Planning Commission to NITI Aayog, Foreign Trade trends, and the principles of Public Finance, including the Budget and various types of Deficits.
2	Vertical:	Mandatory Major Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted	60 Hours
6	Marks Allotted	100 Marks
7	Course Objectives: 1. Analyze the structure, trends, and problems of the Agricultural sector, including the impact of various revolutions and price policies. 2. Examine the role, importance, and classification of the Industrial sector, paying special attention to the challenges and benefits of MSMEs and the impact of liberalization policies. 3. Evaluate the growth and contribution of the Tertiary (Service) sector in India, particularly its role in employment generation via IT, BPO, and KPO. 4. Compare the structure and objectives of Economic Planning in India, contrasting the roles of the Planning Commission and NITI Aayog. 5. Understand the trends, structure, and direction of India's Foreign Trade and analyze the concepts, sources, and types of Public Finance (Budget, Revenue, Expenditure, Deficits).	
8	Course Outcomes The syllabus of the International Economics course will enable students: 1. Describe the Indian economy's features and discuss policies on poverty, inequality, and unemployment. 2. Analyze National Income patterns and human resource development issues (population, literacy). 3. Examine the significance and problems of social and physical infrastructure for economic growth. 4. Evaluate the banking and financial sector's evolution and the impact of post-1991 reforms. 5. Analyze the Primary sector's challenges, the effect of the 1991 Industrial Policy on MSMEs, and Tertiary sector expansion.	

	6. Explain the shift to NITI Aayog and examine foreign trade patterns and public finance concepts.
9	Module 01: Agricultural sector of Indian Economy: (15 Hours) Contribution of primary sector in Indian Economy. Trends in agricultural production and productivity. Causes & measures of low farm productivity- Benefits of Green, White, Blue & Yellow revaluation in Indian agriculture. Meaning, merits & demerits of Organic farming. Agricultural price policy in India. Provisions for agriculture in WTO& India. Module 02: Industrial Sector of India: (15 Hours) Role & importance of Industrial sector in Indian Economy. Classification of industry: Large, Medium, Small & Micro Enterprises. Benefits, problems & measures of MSME -Impact of Liberalization on Indian industry. An overview of Industrial Policy of India 1956 & 1991. Industrial sickness, Industrial finance & Industrial labor. Module 03: Tertiary Sector & Economic Planning in India: (15 Hours) Growth & contribution of Service sector in Indian Economy. Employment generation in Services sector. Importance of BPO, KPO & IT services for employment in India. Performance of Trade and Tourism services. Meaning and major objectives Economic Planning in India. Major constraints and outcomes of Economic Planning. Planning Commission Vs NITI Aayog. Module 04: Indian Export-Import and public Finance: (15 Hours) Size of Indian Exports & Imports since Independence. Structure/pattern of Export & Import pre and post 1991. Direction of foreign trade of India. Problems & measures of Indian Export. India's Foreign Trade Policy 2023. Meaning & types of Budget. Limitations of Budget in India. Sources of Public Revenue and different types of Public Expenditure in India. Budgetary deficit & Deficit finance in India.
10	Text Books
11	References: 1. Dutt R. and Ashwini Mahajan, K.P.M. Sundaram's (Latest Edition), Indian Economy's., Sultan Chand and Co.Ltd., New Delhi. 2. Dhingra L.C., The Indian Economy - Environment and Policy, Sultan Chand and Sons, New Delhi. 3. Dutt R.C., The Economic History of India under Early British rule, Low Price publications, Delhi. 4. Mishra S.K. and V.K. Puri, Indian Economy -It's Development Experience, Himalaya Publishing House, Mumbai. 5. Jalan B., the Indian Economy - Problems and Prospects, Viking, New Delhi. 6. Dutt R., (Ed.), (2001), Second Generation Economic reforms in Indian, Deep and Deep Publications, New Delhi. 7. Handbook of Statistics on Indian Economy. (Various issues) 8. Economic Survey of India. (2023.24) 9. World Development Report. (Latest) 10. https://www.dgft.gov.in/CP/?opt=ft-policy (For Foreign Trade Policy 2023) 11. रायखेलकर-दामजी) २००३(भारतीय अर्थव्यवस्था,विद्या बुक्स पब्लिशर्स, औरंगाबाद 12. पारवेकर रावसाहेब २००४ भारतीय अर्थव्यवस्थेच्या विकासविषयक समस्या,मीनाप्रकाशन,देवगड 13. भोसले-काटे) २००५(, भारतीय अर्थव्यवस्था, फडके प्रकाशन, कोल्हापूर 14. दास्ताने सतो) २००६(महाराष्ट्र,दास्ताने रामचंद्र आणि कंपनी,पुणे.

	15. भोसले-काटे-दामज) २०१४ भारतीय अर्थव्यवस्था, फडके प्रकाशन, कोल्हापूर.																						
12	Internal Continuous Assessment: 40	60 marks Semester end Examination																					
13	Internal Assessment: 40 marks (Internal Assessment- without Practical Courses)																						
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Name of the Course
INDIAN ECONOMIC THOUGHTS-II
TYBA

SEMESTER-VI

(Credit 2)

Sr. No.	Heading	Particulars
1	Description of the Course:	This course introduces key Indian economic thinkers and indigenous policy frameworks. It examines contributions of pre-colonial and colonial thinkers to agriculture, taxation, and socio-economic development, with special reference to Chhatrapati Shivaji Maharaj, Dadabhai Naoroji, and Mahatma Jyotiba Phule.
2	Vertical:	Mandatory Major Course
3	Type:	Theory
4	Credit:	2 Credits
5	Hours Allotted:	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives:	1. To understand indigenous economic institutions and policies in India, particularly in agriculture and taxation. 2. To critically analyze the economic ideas of early Indian thinkers in the context of colonial exploitation and social reform.
8	Course Outcomes	1. Students will be able to evaluate traditional Indian economic policies and their relevance to modern development debates. 2. Students will develop analytical insights into the contributions of Indian economic thinkers toward poverty, agriculture, and social justice.
9	Module I: Economic Policies of Chhatrapati Shivaji Maharaj	(15 Hours) Agrarian Policy and Rural Development: Land measurement and classification, Promotion of cultivation and settlement, Protection of peasants and revival of agriculture, Taxation Policy: Rational land revenue system (moderate taxation), Flexibility in tax payment (cash or kind), Remissions during natural calamities, Administrative Reforms: Direct relation between state and cultivators, Reduction of intermediaries, Significance: Welfare-oriented state, Farmer-centric governance

	Module 2: Economic Thought of Dadabhai Naoroji and Mahatma Jyotiba Phule (15 Hours) Dadabhai Naoroji- Drain Theory: Concept of economic drain under British rule. Causes: remittances, trade imbalance, pensions, and administrative expenses. Impact on poverty and underdevelopment. National Income Estimates, Critique of Colonial Taxation, Regressive tax structure, Burden of military expenditure, Relevance: Foundation of economic nationalism Mahatma Jyotiba Phule- Views on Agriculture, Condition of peasants and exploitation, Need for irrigation and state support, Critique of Social and Economic Inequality, Link between caste and economic deprivation, Role of Education in Economic Development, Advocacy for Social Justice and Inclusive Growth							
10	Text Books Standard Books 1. Datt, R.C. – Economic History of India 2. Naoroji, Dadabhai – Poverty and Un-British Rule in India 3. Desai, A.R. – Social Background of Indian Nationalism 4. Chandra, Bipan – India's Struggle for Independence 5. Sundaram, K.P.M. – Indian Economy 6. Venkata Subramanian – History of Economic Thought 7. Schumpeter, J.A. – History of Economic Analysis Books on Shivaji Maharaj 8. Sarkar, Jadunath – Shivaji and His Times 9. Mehendale, Gajanan – Shivaji: His Life and Times 10. Kulkarni, A.R. – Maharashtra in the Age of Shivaji Books on Dadabhai Naoroji 11. Naoroji, Dadabhai – Poverty and Un-British Rule in India 12. Chandra, Bipan – The Rise and Growth of Economic Nationalism in India Books on Mahatma Phule 13. Phule, Jyotiba – Gulamgiri 14. O'Hanlon, Rosalind – Caste, Conflict and Ideology: Mahatma Jotirao Phule 15. Omvedt, Gail – Cultural Revolt in a Colonial Society Additional Sources 16. IGNOU Study Material on Indian Economic Thought 17. UGC Modules on Indian Knowledge System (IKS) 18. University-level lecture notes on Indian economic thinkers							
11	REFERENCES:							
12	Internal Continuous Assessment: 20	31 marks Semester-end Examination						
13	C. Internal Assessment: 20 marks (Internal Assessment- without Practical Courses) <table border="1"> <thead> <tr> <th>Sr. No.</th><th>Particular</th><th>Marks</th></tr> </thead> <tbody> <tr> <td>01</td><td>One periodical class test / online examination is to be conducted in the given semester</td><td>10 Marks</td></tr> </tbody> </table>		Sr. No.	Particular	Marks	01	One periodical class test / online examination is to be conducted in the given semester	10 Marks
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			Presentation	05 Marks		
			Written Document	05 Marks		
14	D. External Assessment 30 Marks					
	Marks: 30					
	Duration: 1 Hrs.					
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	Q-1	Attempt Any 1 out of 2 A. (Based on Unit I) B. (Based on Unit I)				10 Marks
	Q-2	Attempt Any 1 out of 2 A. (Based on Unit II) B. (Based on Unit II)				10 Marks
Q-3	Attempt Any 2 out of 4 A. (Based on Unit I) B. (Based on Unit I) C. (Based on Unit II) D. (Based on Unit II)				10 Marks	

Sem- VI

Vertical – 1

Electives

(4)

Name of the Course
CO-OPERATION: PRINCIPLES AND PRACTICES
TYBA

SEMESTER-VI

(Credit 4)

Sr. No.	Hading	Particulars
1	Description of the Course:	The sector in India is playing a pivotal role in the Indian economy. It helps students to recognize how the cooperative sector in India has accelerated the process of development. An introduction to the cooperative movement has been included in the curriculum. Through this, students will study the background of cooperative development, the progress made in recent times, and the modern methods adopted by cooperatives in the contemporary period, along with their contribution to the economy.
2	Vertical:	Elective Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives:	1. To familiarize students with the historical development, structure, and functioning of various types of cooperatives in India, including agricultural, dairy, credit, housing, and emerging digital cooperatives. 2. To develop analytical skills for examining contemporary issues, challenges, and reforms in the Indian cooperative sector, especially in the context of globalization and technological change. 3. To equip students with knowledge of new trends and innovations in cooperative management, including digital governance, platform cooperatives, producer companies, and cooperative entrepreneurship.
8	Course Outcomes:	1. To understand the evolution of cooperative movements in India and abroad. 2. Analyse the structure, functioning and issues of Indian cooperatives. 3. Apply cooperative principles in modern socio-economic contexts.

9	Unit I: Introduction to Cooperation. (15 hours) Meaning, nature, principles, and philosophy of cooperation -Evolution of the cooperative movement in India and abroad-Rochdale Pioneers- International Cooperative Alliance (ICA)-International Cooperative Principles (ICA Principles 1995) - Cooperative movement in pre-independence & post-independence India. Unit II: Types of Cooperative Institutions. (15 hours) -Agricultural credit cooperatives, Marketing and processing cooperatives, Dairy cooperatives, Housing cooperatives, Urban and labour Cooperatives. Unit III: New Emerging Forms of Corporation,- (15 hours) New emerging forms: FPOs (Farmer Producer Organisations), Digital cooperatives and platform cooperatives, Worker cooperatives, producer companies Agri-tech, dairy-tech and cooperative start-ups, Youth participation and skill development in the cooperative sector- Success stories: AMUL, IFFCO, KRIBHCO. Unit IV: Contemporary Issues and Challenges (15 hours) Political interference and leadership issues, financial weaknesses and NPA problems, Lack of professionalism, regional imbalance and structural weaknesses, Impact of Globalisation and market competition. Reforms: Professionalization and digital governance, Cooperative banking reforms, Business diversification and integration, Strengthening FPOs and SHGs, Use of ICT, blockchain, GIS & MIS in cooperatives.
10	Text Books
11	Reference Books: 1. Bedi R. D. (2001), Theory, History and Practice of Co-Operation, International Publishing House, 2. Hajela T. N. (2000), Principles, problem and practice of Co-operation, Agarwal Publication, New Delhi. 3. Mathur B. S. (2000), Co-Operation in India, Sahitya Bhavan, Agra. 4. Matthai John, (1996), Agricultural Co-Operation in India, Reliance Publishing House, New Delhi. 5. Swami Krishna. (1985), Fundamentals of Co-Operation, S. Chand and Company Ltd, 6. Brijesh C. & Choudhary R. (2017). Cooperation and Cooperative Management. Himalaya Publishing House. 7. Taimni, K. K. (2001). Cooperatives in the New Millennium. ICA & ILO Publication. 8. Johnston Birchall (2011). People-Centred Businesses: Co-operatives, the idea of Membership. Palgrave Macmillan. 9. M.S. Krishnaswamy (2015). Fundamentals of Cooperation. S. Chand Publishing.

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Name of the Course
QUANTITATIVE ECONOMICS-II
TYBA

SEMESTER-VI

(Credit 4)

Sr. No.	Heading	Particulars
1	Description of the Course:	This advanced course builds directly on Quantitative Economics-I, focusing on sophisticated tools for economic modelling and empirical analysis. It covers optimization techniques for microeconomic theory, dynamic economic analysis using calculus, and the foundations of statistical inference and regression. The course is designed to equip students with the practical skills needed for advanced studies, research, and policy analysis.
2	Vertical:	Elective Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives:	1. To equip students with advanced optimization techniques, including multivariable calculus and the Lagrange method, for solving complex problems in consumer theory and firm behaviour. 2. To apply integral calculus and differential equations to analyze dynamic economic processes, such as capital formation, present value analysis, and simple economic growth models. 3. To develop foundational skills in statistical inference and regression analysis, enabling students to test economic hypotheses and interpret basic econometric results. 4. To provide practical knowledge for constructing economic indices and understanding sampling methodologies, essential for the critical evaluation of real-world economic data.
8	Course Outcomes:	1. Solve multivariable and constrained optimization problems using the Lagrange method. 2. Apply integral calculus to dynamic economic models and welfare analysis. 3. Apply integral calculus to dynamic economic models and welfare analysis. 4. Construct, analyze, and interpret economic indices and understand sampling methods for data collection.
9	Module 1: Advanced Calculus for Economic Modeling	(15 Hours)
		• Multivariable Optimization: Functions of several variables. Partial derivatives and second-order partial derivatives. Unconstrained optimization for functions of two variables (using Hessian Determinant). • Constrained Optimization: The Lagrange Multiplier Method for problems with equality constraints. Economic applications: Utility Maximization subject to a budget constraint; Cost Minimization subject to an output constraint. Interpretation of the Lagrange multiplier as a shadow price. • Production Functions: Homogeneous production functions and returns to scale. Introduction to the Cobb-Douglas production function and its properties.

Module 2: Integral Calculus and Dynamic Analysis**(15 Hours)**

- Techniques of Integration: Integration by substitution and by parts, Definite integrals and the concept of area under a curve.
- Dynamic Economic Applications: Capital Formation - Finding the total capital stock from a net investment flow, Present Value of Cash Flows - Calculating the present value of a future sum and a continuous income stream, Consumer's and Producer's Surplus - Precise calculation using integration.
- Introduction to Differential Equations: Meaning and formation. Solving simple first-order differential equations. Application: The Harrod-Domar Growth Model.

Module 3: Statistical Inference and Regression Analysis**(15 Hours)**

- Introduction to Statistical Inference: Concept of a sampling distribution. Point and Interval Estimation.
- Hypothesis Testing: Formulating Null (H_0) and Alternative (H_1) hypotheses, Concepts of Type I and Type II errors, p-values, and level of significance, conducting a t-test for a single population mean.
- Simple Linear Regression: Moving beyond correlation to causation, The Classical Linear Regression Model (CLRM), Ordinary Least Squares (OLS) method: Derivation and interpretation of slope and intercept coefficients, Goodness-of-fit: Understanding and interpreting R-squared.

Module 4: Economic Indices and Applied Data Analysis:**(15 Hours)**

- Index Numbers: Construction of simple and weighted index numbers: Laspeyre's, Paasche's, and Fisher's Ideal Index. Consumer Price Index (CPI) and Wholesale Price Index (WPI): Uses and limitations. Concepts of splicing, deflating, and real income.
- Sampling Methods: Probability vs. non-probability sampling methods (Simple Random, Stratified, Systematic). The role of sampling theory in economic data collection.

10 Text Books**11 Reference Books:**

1. Chiang, A. C., & Wainwright, K. (2005). *Fundamental Methods of Mathematical Economics* (4th Edition). McGraw-Hill.
2. Sydsaeter, K., Hammond, P., Strom, A., & Carvajal, A. (2016). *Essential Mathematics for Economic Analysis*. Pearson.
3. Dowling, E. T. (2004). *Introduction to Mathematical Economics* (Schaum's Outline Series). Tata McGraw-Hill.
4. Gujarati, D. N., Porter, D. C., & Gunasekar, S. (2017). *Basic Econometrics* (5th Edition). McGraw-Hill.
5. Wooldridge, J. M. (2015). *Introductory Econometrics: A Modern Approach* (6th Ed.). Cengage Learning. (Chapters on Regression and Hypothesis Testing)
6. Gupta, S. C. & Gupta, A. (2022). *Statistical Methods* (Sultan Chand & Sons).
7. Sancheti, D.C. & Kapoor, V.K. (2014). *Statistics: Theory, Methods and Applications*. S. Chand.

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Name of the Course
ENVIRONMENTAL ECONOMICS
TYBA

SEMESTER-VI

(Credit 4)

Sr.No.	Heading	Particulars
1	Description of the Course:	Environmental Economics is an undergraduate course designed for TYBA students to understand the economic dimensions of environmental issues and sustainable development. The course examines the interrelationship between economic growth, natural resources, and environmental quality. It introduces key concepts such as externalities, market failure, resource depletion, and sustainable development. Students explore causes of environmental degradation, including population growth, industrialization, and urbanisation, with special reference to India and emerging economies. The course also covers environmental policies, economic instruments, and regulatory frameworks at national and global levels. Emphasis is given to contemporary issues such as climate change, biodiversity loss, pollution, green economy, and the Sustainable Development Goals, enabling students to critically analyze environmental challenges and policy responses.
2	Vertical:	Elective Course
3	Type:	Theory
4	Credit:	4 Credits
5	Hours Allotted:	60 Hours
6	Marks Allotted:	100 Marks
7	Course Objectives:	1. To introduce students to the basic concepts, scope, and significance of Environmental Economics. 2. To develop an understanding of the interrelationship between economic development and environmental sustainability. 3. To analyse causes and consequences of environmental degradation in the context of economic growth. 4. To familiarize students with environmental policies, economic instruments, and regulatory mechanisms. 5. To examine national and international environmental laws, agreements, and sustainable development goals. 6. To enable students to critically assess contemporary environmental and developmental challenges. 7. To promote awareness of sustainable development practices and green economic alternatives.
8	Course Outcomes:	1. Explain key concepts and principles of Environmental Economics and sustainable development 2. Identify and analyze market failures, externalities, and resource depletion issues related to the environment. 3. Evaluate the relationship between economic growth, poverty, population, and environmental degradation. 4. Apply economic tools such as cost–benefit analysis and market-based instruments to environmental issues. 5. Assess the role of government policies, institutions, and international agreements in environmental protection. 6. Analyze environmental challenges faced by India and emerging economies. 7. Demonstrate awareness of contemporary environmental issues such as climate change, pollution, and biodiversity loss.

9	Module 1: Introduction to Environmental Economics (15 Hours) Nature and scope of Environmental Economics – Economy–environment relationship – Concepts of sustainable development – Environmental values: use value, non-use value – Market failure and environment – Externalities: types and implications – Tragedy of commons – Property rights and Coase theorem (basic understanding). Module 2: Environmental Degradation and Economic Growth (15 Hours) Population, poverty, and environmental degradation – Industrialization and urbanization – Environmental Kuznets Curve (EKC) – Natural resource economics: renewable and non-renewable resources – Resource depletion and conservation – Climate change: economic causes and impacts – Role of technology in environmental protection. Module 3: Environmental Policy and Economic Instruments (15 Hours) Environmental policy objectives – Command and control instruments – Market-based instruments: taxes, subsidies, tradable permits – Cost–benefit analysis and environmental decision-making – Environmental impact assessment (EIA) – Role of government, market, and institutions in environmental management. Module 4: Environment, Development and Contemporary Issues (15 Hours) Environment and development debate – Sustainable development goals (SDGs) and environment – Environmental laws and policies in India – Role of international agreements: Kyoto Protocol, Paris Agreement – Green economy and circular economy – Contemporary environmental issues: air and water pollution, waste management, biodiversity loss.
10	Text Books
11	Reference Books: 1. Tietenberg, T. & Lewis, L. (2021). <i>Environmental and Natural Resource Economics</i>. Routledge. 2. Hanley, N., Shogren, J., & White, B. (2019). <i>Environmental Economics in Theory and Practice</i>. Palgrave Macmillan. 3. Perman, R., Ma, Y., McGilvray, J., & Common, M. (2018). <i>Natural Resource and Environmental Economics</i>. Pearson. 4. Bhattacharya, R. (2020). <i>Environmental Economics: An Indian Perspective</i>. Oxford University Press. 5. Barry Field and Martha k Field: (2017), <i>Environmental Economics</i>, McGraw Hill International Edition. 6. Bennear, Lori Snyder, and Cary Coglianese (2004), <i>Evaluating Environmental Policies</i>, KSG Faculty Research Working Paper Series RWP04-049, USA. 7. Charles Kolstad : <i>Environmental Economics</i>, Oxford University Press, New York, 2000. 8. Hanley Nick, Shogren Jason and White Ben: <i>Introduction to Environmental Economics</i>, Oxford University Press, 2001. 9. Mickwitz, Per. (2003). <i>A Framework for Evaluating Environmental Policy Instruments Context and Key Concepts</i>. Evaluation. 10. Smith Stephen: <i>Environmental Economics: A very Short Introduction</i>, 1st Edition, Oxford University Press, New York, 2011. 11. M. L. Jhingan, C. K. Sharma (2009): <i>Environmental Economics : Theory, Management and Policy</i>, Vrinda Publications.

	Reports and Policy Documents 1. United Nations (2023). <i>Sustainable Development Goals Report</i>. 2. World Bank (2022). <i>World Development Report: Climate Change and Development</i>. 3. Government of India (2021). <i>India's Nationally Determined Contributions (NDCs)</i>. 4. Ministry of Environment, Forest and Climate Change (MoEFCC). <i>India State of Forest Report</i> (latest edition).																	
12	Internal Continuous Assessment: 40	60 marks Semester-end Examination																
13	Internal Assessment: 40 marks (Internal Assessment- without Practical Courses) <table border="1"> <thead> <tr> <th>Sr. No.</th><th>Particular</th><th>Marks</th></tr> </thead> <tbody> <tr> <td>01</td><td>One periodical class test / online examination is to be conducted in the given semester</td><td>20 Marks</td></tr> <tr> <td rowspan="3">02</td><td colspan="2">One Project with a presentation based on the curriculum to be assessed by the teacher concerned</td></tr> <tr> <td>Presentation</td><td>05 Marks</td></tr> <tr> <td>Written Document</td><td>05 Marks</td></tr> <tr> <td>03</td><td>Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism, articulation and exhibit leadership qualities in organizing related academic activities</td><td>10 Marks</td></tr> </tbody> </table>		Sr. No.	Particular	Marks	01	One periodical class test / online examination is to be conducted in the given semester	20 Marks	02	One Project with a presentation based on the curriculum to be assessed by the teacher concerned		Presentation	05 Marks	Written Document	05 Marks	03	Active participation in routine class instructional deliveries and overall conduct as a responsible learner, mannerism, articulation and exhibit leadership qualities in organizing related academic activities	10 Marks
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Letter Grades and Grade Points:

Semester GPA/ Programme CGPA Semester/ Programme	% of Marks	Alpha-Sign/ Letter Grade Result	Grading Point
9.00 - 10.00	90.0 - 100	O (Outstanding)	10
8.00 - < 9.00	80.0 - < 90.0	A+ (Excellent)	9
7.00 - < 8.00	70.0 - < 80.0	A (Very Good)	8
6.00 - < 7.00	60.0 - < 70.0	B+ (Good)	7
5.50 - < 6.00	55.0 - < 60.0	B (Above Average)	6
5.00 - < 5.50	50.0 - < 55.0	C (Average)	5
4.00 - < 5.00	40.0 - < 50.0	P (Pass)	4
Below 4.00	Below 40.0	F (Fail)	0
Ab (Absent)	-	Ab (Absent)	0

Sd/-

**Sign of BOS
Chairman
Prof. Suresh Maind
Board of Studies in
Economics**

Sd/-

**Sign of the Offg. Prof
Manisha Karne
Associate Dean
Faculty of Humanities**

Sd/-

**Sign of the Offg. Dr.
Suchitra Naik
Associate Dean
Faculty of Humanities**

Sd/-

**Sign of the Dean
Prof. Dr Anil Singh
Faculty of Humanities**