

Pune District Education Association's Annasaheb Magar Mahavidyalaya

Hadapsar, Pune-411028

Affiliated to Savitribai Phule Pune University, Pune



Self Study Report: 2024 (4th Cycle)



Curricular Aspects

Key Indicator- 1.3 Curriculum Enrichment

Metric: 1.3.1(QlM)

Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability in transacting the Curriculum







Crosscutting issues: Professional Ethics







LIST OF THE COURSES THAT INTEGRATE PROFESSIONAL ETHICS

Sr. No.	Program	Name of the Department	Page Number
1.	B.A.	Economics	04-18
2.	B.VOC.	B.VOC (Tourism and Service Industry)	19-25
3.	B.A.	Geography	26-29
4.	B.A. M.A	Political science	30-57
5.	B.A.	Democracy(Political science)	58-66
6.	B.A.	Commerce	67-102
7.	B.A. , M.A.	I.A. Marathi	
8.	B.Sc.	Mathematics	123-140
9.	B.Sc.	Computer science	141-159
10.	BCA	BCA Comp. Sci.	160-162
11.	B.VOC (SD)	B.VOC. Mathematics	163-165
12.	B.Sc.	Computer science BCA	166-178
13.	B.Sc.	Computer science BCS	179-199
14.	BBA	BBA	200-208
15	Links to SPPU Syllabi	All	209-212















SYBA ECONOMICS

Sr/N o.	Crosscutt ing issue	Progr am	subject	class	Name of the	Contentintheco urse:	Outcome
					course		
1	Professio	BA	Econom	SYB	Financial	UNIT: 1,2,3,4	Students
	nal ethics		ics	Α	system I	UNIT: 1,2,3,4	will be able
					& II		to
							understand
							the concept
							of
							professional
							ism in
							banking
							sector. How
							banks
							work?, their characteristi
							c,
							responsibili
							ties etc.
					Skill	UNIT: 3	Students
					Enhancem	UNIT: 3	will be able
					ent Basic		to
					Concept		understand
					of		the concept
					Research		of research,
					Methodol		professional
					ogy		ethics in
					Course		data
					(SEC): I		collection
					SEC -2B -		and report
					Skill		writing.
					Enhancem		
					ent		
					Course (SEC) II		
					(SEC)-II		() No. (1987)





- Students will be able to understand the concept of professionalism in banking sector. How banks work?their characteristic, responsibilities etc.
- Students will be able to understand the concept of research, professional ethics in data collection and report writing.

Semester III CC-1C - Financial System I

Unit	Name and Contents	Number of Lectures
1	Indian Financial System	Lectures
1.1	Introduction: Meaning, Nature, Role and Importance of Indian	
1.1	Financial System.	
1.2	Structure of Indian Financial System.	12
1.3	Characteristics and Functions of Components of Indian Financial	
1.5	System.	
2	Banking in India	
2.1	Commercial Banks (Public Sector Banks, Private Sector Banks,	
2.1	Foreign Banks): Management, Organization and Functions.	
	Regional Rural Banks and Co-operative Banks: Evolution,	10
2.2	Management and Organization, Loan Management, Functions,	
	Problems and Measures to solve the problem.	
3	Financial Markets in India	
3.1	Classification of Financial Market.	
3.2	Indian Money Market: Features, Functions and Instruments.	12
3.3	Indian Capital Market: Features, Functions and Instruments.	
3.4	Foreign Exchange Market: Role and Importance.	
4	Important Financial Institutions	
4.1	Meaning and Importance of Financial Institutions.	
4.2	Stock Markets: NSE and BSE: Meaning & Functions.	l
4.3	Non-Banking Financial Intermediaries: Meaning and Functions.	14
4.4	Role and Functions of Financial Institutions in India with reference	1
4.4	to UTI, LIC, GIC	







Semester IV CC -1D - Financial System II

Unit	Name and Contents	Number of Lectures
1	Reserve Bank of India	Lectures
1.1	Structure and Role of RBI in Indian Economy	1
1.2	Major Functions of RBI.	12
1.3	Monetary Policy: Tools and their Limitations.	1
2	Other Financial Regulators in India	
2.1	SEBI: Role and Functions.	10
2.2	IRDA: Role and Functions.	1
3	International Financial Institution	14
3.1	Role, Structure, Objectives and Functions of IMF.	1
3.2	Role, Structure, Objectives and Functions of World Bank.	1
3.3	Role, Structure, Objectives and Functions of Asian Development	1
	Bank.	
3.4	Role, Structure, Objectives and Functions of BRICS Bank.	
4	Recent Developments in Indian Financial Sector	
4.1	Objectives and Outcomes of Changing Landscape of Banking	1
4.1	Sector in India.	
4.2	Insolvency and Bankruptcy Code.	12
4.3	Alternate Source of Finance.	1
4.4	Risk Management in Banking Sector.	1

Basic Reading List:

- The Indian Financial System, Markets, Institutions and Services, Bharati V.Pathak, Kindle Edition.
- Indian Financial System, Jaydeb Sarkhel, Seikh Salim, McGraw-Hill India Pvt. Ltd. Chennai, 2018.
- 3. Indian Banking, R. Parmehwaram & S. Natrajan , S. Chand Publishing, Delhi.







Semester III Skill Enhancement Course (SEC): I

SYBA (Economics) - SEC -2A Basic Concept of Research Methodology

Unit	Name and Contents	Number of
		Lectures
Unit 1	Introduction Of Research	10
1.1	Meaning and Definition of Research	_
1.2	Types Of Research	
	i)Basic or Pure or Fundamental Research	
	ii)Applied Research	
	iii)Action Research	_
1.3	Importance Of Economics Research	
Unit 2	Research Design	10
2.1	Meaning of Research Design	
2.2	Need of Research Design	
2.3	Types of Research Design	7
	i)Exploratory Design	
	ii)Descriptive Design	
	iii)Experimental Design	
2.4	Concepts of Hypothesis and Importance	\dashv
Unit 3	Data Collection	10
3.1	Meanings and Definition of Data Collection	- 10
3.2	Primary Data	\dashv
3.3	Secondary Data Sources	-
SKILL	SKILL DEVELOPMENT ACTIVITIES	15
DEVELOPMENT	Continuous Assessment - (C. A.):	
ACTIVITIES	To compete any Three Skill Development Activities	
	from the prescribed syllabus, each activity for 05 marks	
	SEMESTER- IV	'
	SEC -2B - Skill Enhancement Course (SEC)-II	
Unit 1	Data Analysis	
1.1	Meaning and Definition of Data Analysis	8
1.2	Nature And Importance	_
1.3	1.3.1 Graphs	_
	1.3.2 Tabulations	

19







Unit 2	Measures of Central Tendencies	
2.1	Definition of Mean]
2.2	Definition of Medium	8
2.3	Definition of Mode]
2.4	Meaning of Dispersion	1
	Definition -Range, Median Deviation, Quartile Derivation,	
	Standard Derivation	
2.5	Concept of Percentages	-
2.6	Concept of Percentages Concepts:-	-l
2.0	i) Frequency Distribution ii)Cumulative Frequency iii) Class	
	Boundaries iv) Midpoint v) Class Width	
	Boundaries IV) Wildpoint V) Class Wildii	1
Unit 3	Research Report	14
3.1	Meanings And Objective of Research Report	1
3.2	Concepts Of Case Study	1 1
3.3	Characteristics of Good Research Report Writing	1
3.4	Objective of Research Report	1
3.5	Types Of Research Report	1
3.6	Concepts of	1
	i)Appendices ii) Review Of Literature iii)Bibliography And	
	References iv)Recommendation v)Hypothesis Testing	
SKILL	SKILL DEVELOPMENT ACTIVITIES	15
DEVELOPMENT	Continuous Assessment - (C. A.):	
ACTIVITIES	To compete any Three Skill Development Activities	
	from the prescribed syllabus, each activity for 05 marks	
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Recommended Books:

- P.H. Karmel and M. Polasek (1978), Applied Statistics for Economists, 4th edition, Pitman.
- M.R. Spiegel (2003), Theory and Problems of Probability and Statistics (Schaum Series).
- Cochran, William, G. (2008), Sampling Techniques, Third Edition, Wiley-India, ISBN 978-81-265-1524-0. Reprint: 2008.
- Bethlehem, J. (2009), Applied Survey Methods: A Statistical Perspective, Wiley.
- Khandare V.B. and S.Yadav (2015) ,Statistical Methods, Chinmay Publication, Aurangabad.







TYBA ECONOMICS

Sr/N o.	Crosscutt ing issue	Program me	Subject	class	Name of the course	Content in the course:	Outcome
1	Professio nal ethics	BA	ECONOM ICS	TYB	Indian Economic Developm ent-II	Unit1: 2	Students will be able to understand theworkin g of the NITI Ayog. There profession al ethics, responsibil ity, role in the country etc.
2					Internation al Economics II	UNIT:	Students will be able to learn and analyse various profession al working conditions





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	T	T	T	T	Т	T
						various regional and internation al corporatio n.
						11.
3				Public finance II	UNIT:2, 4	Student be will be able to understand the profession al working condition of Indian governme nt while making budget, allotting taxes, controlling public debt.
4				Skill Enhancem ent Course SEC 3A: Business Manageme nt-I	UNIT:2,3,4	Students will get the overall perspectiv e of business manageme nt. This course make
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								aware about the profession al ethics while taking business oriented decisions.
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SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

T.Y.B.A. Economics Syllabus

(Choice Based Credit System and Semester System)

Revised Syllabus will be implemented with effect from the academic year 2021-2022







T.Y.B.A. Economics General Paper- III: Indian Economic Development-II (Course Code:)

Semester VI

Preamble:

This course would take an overview of the process of Economic Planning and the Development Goals. The course aims to introduce the learner to the main concepts in Economic Planning, equip them with understanding of the planning process in India and changing in recent times and familiarize them to the Sustainable Development Goals. The Course also reviews the relation between Economic Development and Environment.

Course Learning Outcomes

At the end of the course the learner will have ability-

- · To describe and explain the process of Economic Planning.
- To describe and examine the changing structure of planning process in India.
- · To describe and explain the relation between Economic Development and Environment.

Unit No.	Name and Sub Titles of the Topic	No. of Lectures
	Economic Planning	
1	1.1 Economic Planning - Meaning, Definition and Features	12
١.	1.2 Need of Economic Planning	12
	1.3 Objectives of Economic Planning in India	
	National Institution for Transforming India Aayog	
	(NITI Aayog)	
2	2.1 NITI Aayog- Objectives and Structure	12
	2.2 Role of NITI Aayog	
	2.3 Difference between Planning Commission and NITI Aayog	
	Sustainable Development	
	3.1 Sustainable Development : Meaning and Importance	
3	3.2 17 SDGs (Sustainable Development Goals)	12
	3.3 Measures for Sustainable Development	
	3.4 Current Scenario of SDG in India	
	Environment and Economic Development	
	4.1 Relation between Environment and Economic Development	
	4.2 Environment and Sustainable Development	
4	4.3 Environmental Policies in India:	12
	4.3.1 National Conservation Strategy (1992) - Highlights	
	4.3.2 National Environmental Policy (2006) - Highlights	
	4.4 Global Warming	







T.Y.B.A. Economics
Special Paper - III: International Economics-II
(Course Code:)

Semester - VI

Preamble:

This course provides the students a thorough understanding and deep knowledge about India's foreign trade and trade policies. The contents of the paper spread over various modules, lay stress both on theory and applied nature of the subject that have registered rapid changes during the last few decade. Besides this, the contents prepare the students to know the foreign exchange market, provisions in FEMA and convertibility of rupee. The paper also covers the Indian government's policy towards foreign capital and role of multinational corporations in India and regional and international co-operation. This paper has become relatively more relevant from the policy point of view under the present waves of globalization and liberalization.

Course Learning Outcomes:

At the end of the course, the learner will have-

- · Ability to relate and explain the concept of Exchange Rate and Foreign Exchange Market.
- Ability to describe the trends in Growth, Composition and Direction of India's Foreign Trade.
- Ability to comprehend the issues relating to Foreign Capital and Regional and International Co-Operation.

Unit No.	Name and Sub Titles of the Topic	No. of Lectures		
	India's Foreign Trade and Policy			
	1.1 Role of Foreign Trade in Economic Development]		
1	1.2 India's Foreign Trade- Growth, Composition and Direction since 2000	12		
٠.	1.3 Free Trade v/s Protection - Case For and Case Against	12		
	1.4 Highlights of India's Foreign Trade policy Since 2015			
	1.5 Evaluation of Policy of Special Economic Zones in Export Promotion			
	Foreign Capital			
	2.1 Role of Foreign Capital in Economic Development	1		
2	2.2 Types of Foreign Investment	12		
	2.3 Foreign Investment Policy in India since 1991]		
	2.4 Problems of Foreign Capital			
	Foreign Exchange			
	3.1 Exchange Rate : Concept; Fixed & Flexible Exchange Rate -Merits and	1		
3	Demerits	12		
-	3.2 Foreign Exchange Market- Meaning, Structure and Functions]		
	3.3 Convertibility of the Rupee			
	3.4 Foreign Exchange Management Act, 1999, Main Provisions			
	Regional and International Co-operation: Nature and Functions of-	1		
4	4.1 South Asian Association for Regional Cooperation (SAARC)			
	4.2 Brazil, Russia, India, China and South Africa (BRICS)			
	4.3 European Economic Community (EEC)			
	4.4 World Trade Organization (WTO)			







T.Y.B.A. Economics
Special Paper – IV: Public Finance -II
(Course Code:)
Semester – VI

Objectives:

- 1. To make students able to analyze Budget process of India.
- 2. To make the students aware about Role and working of Finance Commission.
- 3. To make students competent to become success in competitive examination.

Course Learning Outcomes

At the end of the course the learner will have ability

- · To explain and assess the components and instruments of Fiscal Policy.
- To relate to the concepts of Budget and its components.
- To describe and analyze the concept of Deficit Financing and its effects.
- To describe and explain the Centre and State Financial Relationship.

Unit No.	Name and Sub Titles of the Topic	No. of Lectures			
	Fiscal Policy				
	1.1 Fiscal Policy- Meaning, Instruments and Objectives	7			
1	1.2 Fiscal Policy in Developing Countries	12			
	1.3 Limitations of Fiscal Policy				
	1.4 Review of Fiscal Policy in India Since 2011				
	Budget				
	2.1 Budget- Meaning, Nature and Objectives				
2	2.2 Classification of Budget	12			
	2.3 Preparation of Indian Central Budget				
	2.4 Gender Budget- Meaning and Importance.				
	Deficit Financing				
	3.1 Deficit Financing-Meaning and Objectives				
3	3.2 Role of Deficit Financing in Developing Countries	12			
	3.3 Trends in India's Deficit Financing Since 2011				
	3.4 Effects of Deficit Financing				
	Centre-State Financial Relationship	_			
4	4.1 Centre-State Financial Relationship: Constitutional Provisions				
	4.2 Conflict in the Centre-State Financial Relationship				
	4.3 Role of the Finance Commission				
	4.4 Recommendations of 15 th Finance Commission				







T.Y.B.A. Economics Skill Enhancement Course Business Management

Sem ester	CC Paper	Paper No.	Name of Paper	Lectures / Week	Total Lect.	CA Marks	ESE Marks	Total	No. of Credits
v	SEC-III SEC-3A		Business Management- I	03	30	15	35	50	2
VI	SEC-IV SEC-3A		Business Management - II Project	03	30	15	35	50	2

SEC -Skill Enhancement Course; CC -Core Course; CA - Continuous Assessment;

ESE -End of Semester Examination

T.Y.B.A. Economics Skill Enhancement Course SEC 3A: Business Management-I

(Course Code: Semester – V

Course Learning Outcomes:

At the end of the Course, the Learner will have the following skills:

- Management of Business.
- Business planning and decision making
- Leadership Skills- Ability to work in teams at the same time, ability to show leadership qualities

Unit No.	Name and Sub Titles of the Topic	No. of Lectures	Skill Enhancement Exercises
1	1.1 Nature and Scope of Management 1.2 Characteristics of Management 1.3 Need & Importance of Study of Management 1.4 Process of Management	6	Discussion/ Practical/ Field Study
2	2.1 Nature of Planning 2.2 Steps in Planning Process 2.3 Types of Business Planning 2.4 Study of Planning Process 2.5 Steps in Decisions Making Process 2.6 Factors affecting decision Making	6	Case Studies / Mini Projects / Individual /Team Presentations. Practical Exercises in Decision Making Process/ Problem Solving







3	Schemes of Government: Make in India Start-up India Stand up India Mudra Loans Dairy Management Scheme Fruits Management Development Programme Agriculture Products Sell Management	6 2+2 Guest Lecture	Visit to SSS/ Interview with Mudra Beneficiary. Study of Street Vendors/ Hawkers/ Mini Enterprises etc. Exhibitions Business Plan Ideas Competitor
4	Workshop: Workshop on Entrepreneurship Development Training Programme	8	2 -Half-Day Work - shops -4 hours each OR 1- One Day Workshop - 8 hours

Recommended Books

- 1. Stephen R. Covey, The 7 Habits of Highly effective People (1989), Guerilla Marketing.
- 2. Harvard Business Review, Management Tips, hbr.org/books.
- 3. Pandey, I.M. Financial Management, Persons 12th edn.
- 4. Saksena, S.C., Principles of Business Management (2019), Sahitya Bhawan Publi.Agra.
- 5. Kalkar Parag and Ajinath Doke, Vyavsay Vyavsthapan, Nirali Prakashan, Pune.
- 6. Vasistha, Neeru, Principles of Management, Taxmann.
- 7. Hannagan, Tim. Management Concepts and Practices, Macmillan India Ltd.
- 8. Government of India, Official Websites.







B.VOC (Tourism and Service industry)







FY B.VOC

Sr/No.	Crosscutting issue	Program	subject	class	Name of the course	Content in the course:	outcome
1	Professional ethics	BA	B.VOC tourism	B.VOC tourism	Ethical, Legal & Regulatory aspects of Tourism	UNIT: 1,2,3	Students will be able to understand the rules, regulation and acts surrounding tourism industry. This will enhance their professional skill in tourism industry.







Module TSI 109: Ethical, Legal & Regulatory aspects of Tourism

No. of Credits: 04 Assignments: 30 Marks Contact Hours / Week: 04 Semester Exam: 70 Marks

Unit-1

- A. Indian Contract Act; 1972
- B. Partnership Act; 1932
- C. Companies Act; 1956
- D. Agencies

Unit-2

- A. Consumer Protection Act & tourism
- B. MRTP Act, Applicable tourism as consumers C. FEMA 1999
- D. Foreigner's Act

Unit-3

- A. Passport Act
- B. Tourism bill of rights
- C. Travel insurance, passport, visa & health.

Unit-4

- A. Custom & currency regulations B. World cultural & natural heritage, 1972 UNESCO
- C. Ethics in touris, Barmuda Agreement

- Suggested Books:

 1. The Business of Travel agency Operation & administration D.L. Foster.

 2. The Indian Travel agents Malik, harish & Chandra







SY B.VOC

Sr/No	Crosscuttin g issue	Progra m	subjec t	class	Name of the course	Conten t in the course:	outcome
1	Professional ethics	BA	B.VO C touris m	SY B.VO C touris m	Touris m Impact Analysis	UNIT:	Students will be able to understand the ethical responsibilitie s professionally, that affect the tourism industry.







• Students will be able to understand the ethical responsibilities professionally, that affect the tourism industry.

Module TSI 120: Tourism Impact Analysis No. of Credits: 04 Assignments: 30 Marks Contact Hours/ Week: 04 Semester Exam: 70 Marks No of Unit No Topic Lectures 10 Economic Impact Positive impact. UNIT 1 Negative impact. Analysis/case study. Solutions/Assessment Socio-Cultural impact 10 1. 1)positive impact 2) Negative impact. UNIT 2 Analysis/case study. Solutions/assessment. 10 Environmental impact Negative impact. UNIT 3 Positive impact. Analysis/case study. Solutions/assessment. 10 Political impact 1. Negative impact. Positive impact. UNIT 4 Analysis/case study. Solutions/assessment. Tourism satellite accounting 1. Tourism Supply Tourism Demand UNIT 5 Tourism GDP 4. Tourism Employment TSA measures only direct effects on GDP Sustainable tourism Tourism 2. Definition UNIT 6 3. Importance 4. Examples Pillars

Reference books:

- Sustainable tourism development WTO
- Successful tourism management Pran Nath Seth
- 3) Tourism impact planning and management- Petes Maso
- Economic Impact and tourism development- <u>kunal chattopadyay</u>.







TY B.VOC

Sr/No.	Crosscutting	Program	subject	class	Name of	Content	outcome
	issue				the course	in the	
						course:	
1	Professional	BA	B.VOC	TY	Responsible	UNIT:	Students will
	ethics		tourism	B.VOC	Tourism And	1,4	be able to
				tourism	Destination		understand the
					Management		work ethics in
							the tourism
							industry and
							evaluate
							responsibilities
							related to the
							tourism.







MODULE TSI 132: RESPONSIBLE TOURISM AND DESTINATION MANAGEMENT

NO.OF.CREDIT: 04 INTERNAL: 30 MARKS
CONTACT HOURS/WEEKS: 04 SEMESTER EXAM: 70 MARKS

Unit No	Topic	No of Lectures
UNIT 1	Introduction - Role of destination management - Organizations & companies - Work ethics - Results	15
UNIT 2	Destination management - Destination mix - Sustainability - Destination enhancement - Destination marketing	10
UNIT 3	Responsible tourism Responsible tourism and destinations Shaping sustainable spaces into better places Guiding principles for economic responsibility Guiding principles for social responsibility Guiding principles for environmental responsibility	10
UNIT 4	Responsible tourism related architecture - Preserve & restore historic buildings, neighborhoods, & landscapes - Focus on the authentic - Ensure the tourism support facilities are compatible with their surroundings - Interpret the resource - Protect community gateways - Control outdoor signs - Enhance the journey as well as the destinations - Recognize that tourism has limits & must be managed	15
UNIT 5	Responsible tourism: concepts, theory, & practices Different concepts of tourism responsibilities and there Ethics ,Various theories and Practices in Responsible tourism	10

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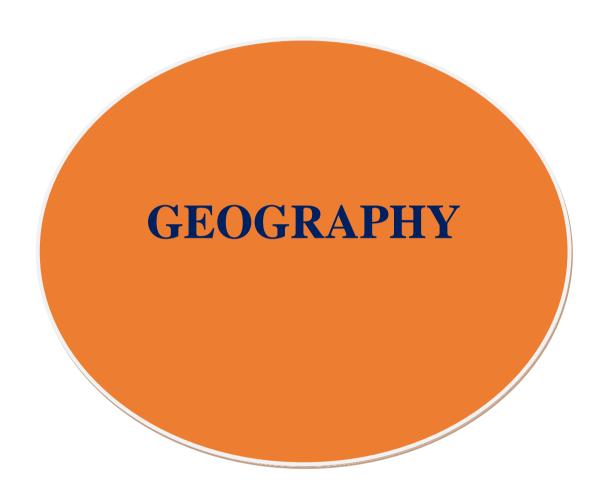
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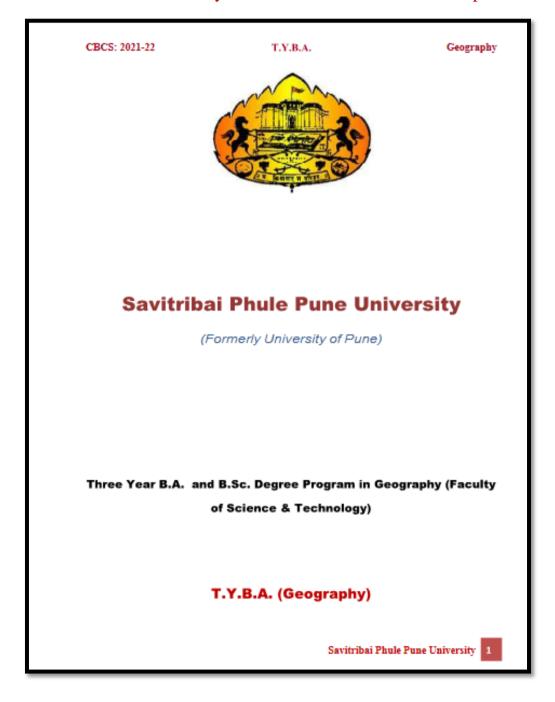
TYBA GEOGRAPHY

Sr/N o.	Crosscutti ng issue	Progra m me	Subject	class	Name of the course	Conte nt in the course :	Outcome
1	Profession al ethics	BA	GEOGRAP	TYB	Geograp hy of Tourism- II	UNIT 2: Impact of tourism	This course Introduce the students to the basic concepts in Tourism Geography . Students will get the insight of social cultural and economic impact of Professiona I ethics in tourism which is very much useful for all round developme nt.





• Students will get the insight of social cultural and economic impact of Professional ethics in tourism which is very much useful for all round development.









CBCS: 2021-22 T.Y.B.A. Geography

Geography of Tourism- II CC1F(No. of Credits: 03)

Objectives:

- To understand the activities of Tourism
- 2. To introduce the students to the basic concepts in Tourism Geography.
- 3. To understand the types of Tourism
- 4. To gain knowledge different aspects of Tourism Geography.

Course Outcome:

- Understand the accommodation types.
 The students should be able to integrate various factors of economic development and dynam aspect of tourism geography.
- 3. Understand the planning and policy of tourism word wide.
- 4. To make aware the students about some Hill Station, Historical and National Parks

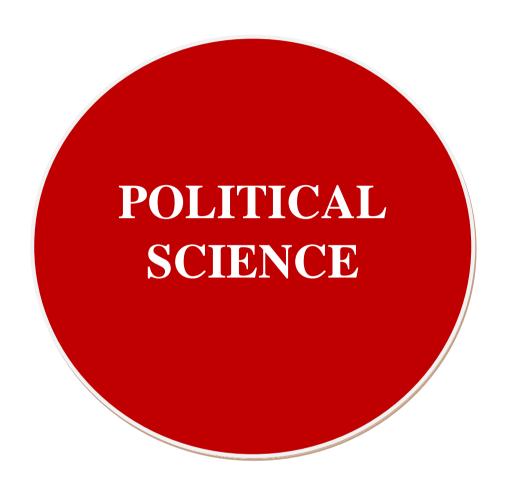
Sr. No.	Topic	Sub Topic & Learning Point	No. of
			Lectures
1.	Role of Accommodation in Tourism	a) Accommodation Types i. Hotels, Motels, Inn, Dharmashalas, Youth Hostel ii. Govt. Accommodation, Tourist Homes iii. Private accommodations and unrecognized accommodations b) Factors affecting choice of Accommodation c) Role of Accommodation in Tourism Development	12
2.)	Impact of Tourism	a) Economic impacts i. Effect on foreign exchange ii. Employment generation iii. Infrastructure development b) Physical and Environmental impacts i. Land Degradation ii. Impacts on Bio-diversity iii. Air and water pollution c) Social cultural impacts i. Crime and Gambling activities ii. Languages iii. Traditional arts	12
(3.)	Planning and Polices of tourism development	a) World Tourism Organization (WTO) b) India Tourism Development Corporation (ITDC) c) Maharashtra Tourism Development Corporation (MTDC)	12
4.	Case studies of Major Tourist Centers in India	a) Hill Station- Manali and Mahabaleshwar b) Historical- Tajmahal and Raigadh Fort c) National Parks- Kaziranga, Melghat d) Preparation of Tourist Plan on any of above tourist destination	12

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SYBA POLITICAL SCIENCE

Sr/N	Crosscutti	Progra	subjec	clas	Name of	Contentinthecou	outcome
0.	ng issue	m	t	S	the course	rse:	
1	Profession al ethics	BA	Politic al Scienc e	SY BA	Introductio nto Political science	Unit-3,5,6,7: 1. Basic concepts: The state, the market, the society. 2. Basic political values 3. Ideologies	Students will be able gain knowledg e about ethical working of the state, market, society which in turn build their personalit y and views towards society.
2					Western political thoughts	Unit: 1,2,3,4,5,6,7,8	Students will gain the insight of the political thoughts of various economis ts, political





			leaders
			etc.
			which
			will give
			them
			knowledg
			e about
			the
			professio
			nal ethics
			for
			working
			in the
			society.







• Students will be able gain knowledge about ethical working of the state, market, society which in turn build their personality and views towards society.

SAVITRIBAI PHULE PUNE UNIVERSITY (Formerly University of Pune)
S.Y.B.A. Political Science Syllabus (CREDIT & SEMESTER SYSTEM)
Revised Syllabus will be implemented with effect from the academic year 2020-2021







Savitribai Phule Pune University, Pune S. Y. B. A. Political Science (CBCS pattern to be implemented from 2020-2021) Core Course (C.C.)
AN INTRODUCTION TO POLITICAL SCIENCE

This course is designed to acquaint students with the -

- Important sub themes of Political Science as a discipline
 Approaches to study Political Science
 Basic Concepts and Values in Political Science

SEMESTER III CC-I C (3)	PERIOD
Unit 1: The Study of Political Science a) Definition	12
b) Nature	
e) Scope	
Unit 2: Approaches to Study Political Science a) Normative	11
b) Empirical	
e) Feminist	
Unit 3: Basic Concepts	- 11
a) The State	
b) The Market	
c) The Civil Society	
Unit 4: Democracy	11
a) Representative	
b) Deliberative	
c) Participatory	
SEMESTER IV	
CC-I D (3)	
Unit 5: Basic Political Values	12
a) Liberty	
b) Equality	
e) Justice	







		1
Def Typ	inition and Meaning	
	Renges	
		1
	ondom	
	iulism	
Fasc	cient	
Uni	ted Nations - Structures, Functions and Challenges ponal - EU, SAARC, OPEC, NATO	1
leadi	ngs:	
1.	वाचारी विचास, २०१९, राज्यसाख: कानले प्रवास क सुमित्रा, वानपुर, गरिमा प्रकारत.	
	Bhargava Rajeev and Ashok Acharya (eds.), 2006, Political Theory, Delhi, Pearson.	
	भार्मव राजीव आणि अलोक काचार्य (संपा), वनसोडे हंमंत (अन्.), राजकीय सिद्धाल्य, नवी दिल्ली, पि	াংলৰ মহাধাৰ,
	Christiano Thomas and John Christman (eds.), 2009, Contemporary Debates in Politica	
	Malden, MA, Wiley-Blackwell.	
5.	Daniel R Brower, 2005, The World Since 1945: A Brief History, Pearson Prentice Hall.	
6.	मायकवाड संबंध, २०१९ <i>, मार्क्स कंबेडकर परिवेश्यानुस शिक्षण काचि रीजवार</i> , पुणे, शब्दसंग प्रकास	t.
7.	Gaus Genild F., 2000, Political Concepts and Political Theories, Boulder, Westview Pres	u.
8.	Goodin Robert, Philip Petiti and Thomas Pogge (eds.), 2007, A Companion to Contempo Philosophy, Oxford, Blackwell.	rary Political
9.	Greensein Fred L and Pelsby Nelson W,1975, Handbook of Political Science, Ad- Longman.	dison Wesley
10	Gupta Sachdeo and Singh S K, 1987, Political Theory and Ideology, Delhi, Agusta Praka	dun.
11	. Henry D. Aiken, 1956, The Age of Ideology, New York, Mentor.	
12	. Heywood Andrew, Political Theory - An Introduction, 2004, Palgrave Bissingstoke.	
13	. बाहब तुबाराम,२०१७, <i>राजबीच विद्वांताची तींड मोताब</i> ,(Translation of O. P.Gaubo, An In	rroduction to
	Political Theory), Pune, K. Sagar.	
14	Kaviraj Sudipta and Khilmani Sunil, 2001, Cord Society, History and Possibilities	Cambridge,
	Cambridge University Press.	
15	Mackenzie I, Political Concepts, 2005, A Reader and Guide, Edinburg, Edinburg University	ity Press.
16	. पाटीनावी. वी., २०००, <i>राजवीय संकाणना</i> , कील्हापूर, फाके प्रकातन.	
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Savitribai Phule Pune University, Pune S. Y. B. A. Political Science (CBCS pattern to be implemented from 2020-2021) DISCIPLINE SPECIFIC ELECTIVE COURSE WESTERN POLITICAL THOUGHT

- Objectives:

 This course is designed to acquaint students with the —

 1. Major traditions of thought that have shaped political discourse in different parts of the world.

 2. The great diversity of social contexts and philosophical visions.

 3. The history of political thought as a series of critical, interconnected and open-ended conversations about the ends and means of the good life.

	SEMESTER III DSE-1A (3)	PERIOD
Unit 1: Plate	DSE-TA(3)	12
a) Ideal State		
b) View on Education		
e) Theory of Justice		
Unit 2: Aristotle		11
a) Classification of the State		
b) Views on Slavery		
c) Theory of Revolution		
Unit 3: Machiavelli		11
a) Human Nature		
b) Attitude towards Religion and Morality		
e) Views on State		
Unit 4: Locke		11
a) State of Nature		
b) Natural Rights		
e) Theory of Social Contract		
	SEMESTER IV	
Unit 5: Rousseau	DSE-1B (3)	12
a) State of Nature		12
b) General Will		
e) Theory of Social Contract		







Init 6: Hegel) Idealism	n
Theory of State	
) Views on Freedom	
Init 7: J. S. Mill) Views on Liberty	11
) Representative Government	
) Views on Utilitarianism	
Init 8: Karl Marx	11
) Historical Materialism) Class Struggle	
) Theory of State and Revolution	
teadings:	
1. Adams Ian and R.W.Dyson, 2004,Fifty G	ireat Political Thinkers, London, Rutledge.
 बोळ बाल्कर,१९५५, वाश्चिमान्य राजकीय विश् 	
	2011, Western Political Thought, Pune, Diamond Publication.
निमिटेड.	हेमेन्टर-3,ईपुन्तक), अमेशॉनएशिया-पैतिरिक होन्तिग्व प्रापन्तेट
 वेकरेस्टेन, २०२०, गाधिमात्यराजकीयविकास्य निर्मिटेव. 	हेमेस्टर-4, ईपुन्तक), अमेशाँनएशिका-पीतिकिक होस्टिंग्ज प्राप्पेहेट
 Parekh Bhiku and Thomas Pantham, 15 Political Thought, New Delhi, Sage. 	Political Thought, New Delhi, Manohar maght, Pearson Education Thought, Second Edition.New Delhi, Pearson Education 87. Political Discourse: Exploration in Indian and Western
11. Sabine G.H. 1971, A History of Political	
 साकारकर ई. आणि कैन अशोक, १९९०, पाछि W.F. (series editor), 1959, Masters of Pol 	litical Thought, (Vols. 2 and 3), London, George Harap& Co.
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	9







TYBA POLITICAL SCIENCE

Sr/No	Crosscuttin g issue	Progra m	subject	clas s	Name of the course	Contentinthecours e:	outcome
•	gissuc	111		S			
1	Professiona l ethics	BA	Politica 1 Science	TY BA	Public administratio n	Unit-3,4: Approaches to Public Administration Accountability and Control	Students will be able gain knowledge about ethical working approaches of the public administratio n.
2					International relations	Unit: 2	Students will gain the insight of the ethical approaches to international relations.









SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

T.Y.B.A. Political Science & Public Administration Syllabus

Revised Syllabus will be implemented with effect from the academic year 2021-2022

1







Savitribai Phule Pune University T.Y.B.A. Political Science

(CBCS pattern to be implemented from 2021-2022)
DISCIPLINE SPECIFIC ELECTIVE COURSE
PUBLIC ADMINISTRATION

Objectives:

This paper is an introductory course in Public Administration. The essence of Public Administration lies in its effectiveness in translating the governing philosophy into programmes, policies and activities and making it a part of community living. The paper covers personnel public administration in its historical context thereby proceeding to highlight several of its categories, which have developed administrative salience and capabilities to deal with the process of change. The recent developments and particularly the emergence of New Public Administrations are incorporated within the larger paradigm of democratic legitimacy. The importance of legislative and judicial control over administration is also highlighted

SEMESTER-V DSE 1 C (3)+1

DSE 1 C (3)+1	
	PERIOD
Unit 1: Public Administration	12
a) Meaning	
b) Nature	
c) Scope and Significance	
Unit 2: New Public Administration	12
a) Evolution	
b) Salient Features	
c) Goals	
Unit 3: Approaches to Public Administration	12
a) Traditional Approach	
b) Behavioral Approach	
c) System Approach	









Unit 4: Governance	12
a) Idea of Good Governance	
b) E-Governance	
e) Public Private Partnership	
SEMESTER-VI	
DSE 1 D (3)+1	
Unit 1: Bureaucracy	12
a) Meaning and Definitions	
b) Administrative Reforms	
Unit 2: Personnel Administration	12
a) Recruitment	
b) Training	
c) Promotion	
Unit 3: Budgeting	12
a) Meaning and types and Principles of sound Budget	
b) Budgetary Process in India	
c) Gender Budgeting	
Unit 4: Accountability and Control	12
a) Administrative Accountability	
b) Legislative Control	
c) Judicial Control	
Readings:	
1. Avasthi Amreshwar and Maheshwari Shriram, 1982, Public Ad	dministration, Agra,
Lakshmi Narran Aggrawal.	
 बेनके सुवर्णा ,२०१५ , लोकप्रशासन, जळगाव, प्रशांत पब्लिकेशन्स. 	

3. Bhagwan Vishnu and Bhushan Vidya, 2007, Public Administration, New Delhi, S Chand

and Company Ltd.







Savitribai Phule Pune University

T.Y.B.A. Political Science

(CBCS pattern to be implemented from 2021-2022)

DISCIPLINE SPECIFIC ELECTIVE COURSE

INTERNATIONAL RELATIONS

Objectives:

This paper deals with concepts and dimensions of International Relations and makes an analysis of different theories highlighting the major debates and differences within the different theoretical paradigms. The dominant theories of power and the question of equity and justice, the different aspects of balance of power leading to the present situation of a unipolar world are included. It's highlights various aspects of conflict and conflicts resolution, collective security and in the specificity of the long period of the post second world war phase of the cold war, of Detent and Deterrence leading to theories of rough parity in armaments.

SEMESTER-V

DSE 2 C (3)+1					
	PERIOD				
Init 1: Introduction to International Relations					
a) Development and Meaning					
b) Nature					
c) Scope					
Unit 2: Approaches to International Relations	12				
a) Idealism					
b) Realism – Neo realism					
c) System approach					
d) Marxism					
Unit 3: World War II and the Cold War	12				
a) Causes and Consequences of the world war II					
b) Emergence of the cold war and its phase					
c) End of cold war and the emerging world order					

12







Un	it 4: International Organizations	12
a)	The United Nations - its structure and peacekeeping Functions- Reforms of UN	
b)	International Financial institutions: World Bank, IMF, WTO	
c)	Regional Organizations : EU, SAARC, ASEAN, BRICS	
	SEMESTER-VI	
	DSE 2 D (3)+1	
Un	uit 1: The Theory of Non-Alignment	12
a)	Meaning and basic principles of Non-Alignment	
b)	Emergence of Non-Alignment	
c)	Non-Alignment as a Movement	
d)	Relevance of NAM In Post cold war period	
Un	it 2: Globalization	12
a)	Meaning of Globalization	
b)	Evolution and Impacts of Globalization	
c)	Limits of Globalization	
d)	Role of The state	
Un	nit 3: International Political Economy	12
a)	Neo-Colonialism	
b)	New International Economic Order	
c)	North-South Divide	
d)	South-South Co-operation	
Un	uit 4: Contemporary Global Issues	12
a)	International Terrorism	
b)	Environmental Issues	
c)	Poverty, Development and Hunger	
d)	Human Rights	







MA I POLITICAL SCIENCE

Sr/No.	Crosscutting issue	Program	subject	5	Name of the course	Contentinthecourse:	outcome
1	Professional ethics	BA	Political Science	MA	Western political thoughts	Unit-1,2,4	Students will gain the insight of the political thoughts of various economists, political leaders etc. which will give them knowledge about the professional ethics for working in the society.
2					Research methodology	Unit: 1	Students will gain the insight of the ethical working condition for research.
3					Comparative political analysis	Unit: 4	Students will be able to understand the state affairs indetails, ethics involved in its





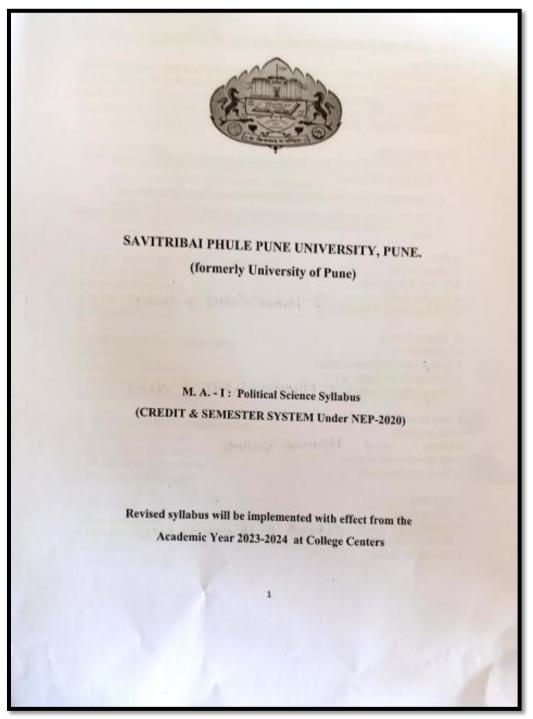


4			Social and political movement in India	Unit: 3	Students will gain the insight of the ethical working condition of various movement the had taken place in India
5			Administrative theory	Unit-1,2,4	Students will be able gain knowledge about ethical working approaches of the public administration















POL 501: Western Political Thought (4 Credits) This course is meant to serve as a window on the major thinkers have shaped political discourse in different parts of the world over the last three millennia. It stresses the great diversity of social contexts and philosophical visions that have informed the ideas of key political thinkers across epochs. The chief objective is to project the history of political thought as a series of critical, interconnected and open-ended conversations about the ends and means of the good life Learning Outcomes: • The students will be able to understand the plural traditions of thought in western world The students will comprehend the collective and fluid nature of political ideas The student shall develop critical perspectives in the field of history of western political 1. Plato a. Life and Works b. Concept of Ideal State c. Theory of Justice d. Views on System of Education + Human Natures & Ethics 2. Thomas Hobbes a. Life and Works b. Human Nature and State of Nature c. Views on Natural Rights d. Theory of Social Contract J- Human Values of Ethios 3. John Stuart Mill a. Life and Works Human Valyes c. Representative Government d. Views on Utilitarianism 4. Karl Marx a. Life and Works Ethics & Human Nuhrey. b. State and Class c. Historical Materialism d. Views on Revolution







POL 502: Administrative Theory (4 Credits)

Public Administration is an essential part of a society. In last few years the profession of Public Administration is going through changes. Present paper aims to make aware the students about Evolution & Importance of the Public Administration. Paper introduces changing trends in the field of Public Administration.

Learning Outcomes:

- The students will be demonstrate theoretical clarity of basic concepts, approaches and perspectives in the discipline of public administration.
- The students shall developed the skill analysing and synthesizing different strands of thought in the discipline.
- The students shall learn to assess and apply critical thinking to the public and private

I. Major Approaches to Public Administration

- a. Historical Approach
- e. Decision Making Approach J Ethics & Pertessional Ethics
- d. Ecological Approach.

2. Theories of Public Administration

- a. System Theory
- b. Rational Choice Theory
- c. Comparative Public Administration -> PEOLESSIONAL Ethica
- d. Development Administration

3. New Trends in Public Administration

- a. New Public Management
- b. Public Choice approach
- c. Challenges of Liberalization,
- d. Challenges of Privatization

4. Governance

- a. Good Governance
- b. Problems of Administrative Corruption
- c. Ombudsman
- d. Lok Pal, Lok Ayuktta

- Professional Ethics.









POL 503: Theoris and Issues in International Politics (4 Credits)

Objectives:

Students need a brief history of international politics to understand why we study the subject and how current scholarship is informed by what preceded it. Theories provide interpretative frameworks for understanding what is happening in the world and the levels of analysis. Competing theories are presented.

Learning Outcomes:

- · The students will be understand the major theories of international politics
- The students shall critically analyze international events from theoretical standpoint
- The students will learn the skill to interpret and evaluate the nature of international politics.

1. Approaches to International Politics

- a. Idealism
- b. Realism
 - Human Nalyes
- c. Liberalism
- d. Marxism

2. Geopolitical Issues

- a. Geopolitics: Meaning and evolution
- b. Alfred Mahan's theory of Sea Powers,
- c. Harford Mackinder's Heartland theory
- d. Contemporary Geopolitics

3. Changing International Political Order since World War II

- a. Rise of super powers; cold war and Detene
- b. Non-aligned movement: Origin, achievements and its relevance
- c. Collapse of the Soviet Union; Rise of American hegemony
- d. Features of Post-Cold War international politics

4. Contemporary concerns

- a. Terrorism
- Govironment b. Environment
- J- Human Valyes.







POL 531: Research Methodology (4 Credits)

Objectives

The course strives to make students aware about basics of research and various research methods in political science. It will help students to understand nature of social science research and its theoretical foundations. This will make students research oriented so they become equipped with skills to analyze issues in discipline and apply those skills to enrich their knowledge.

Learning Outcomes:

- The students will numberstand the methodological framework of research in social science (with focus on political science).
- It will help in the development of interpretive and analytical aptitude for framing
- The students shall acquire essential theoretical and practical skills to apply to ongoing or

1. What is research?

- a. What is research? Need, Objectives and motivations for research
- b. Types of Research (Qualitative-Quantitative, Conceptual-Empirical)
- c. Philosophical foundations of social sciences
- d. Nature of scientific research

2. Stages of Research-I

- a. Identifying research problem: formulating and analyzing problem (local to global).
- b. Theory and research: Deductive and inductive theory
- c. Literature review: Book, journals, Digital tools for literature search.
- d. Research data: Primary and secondary sources of data

3. Stages of research-II

- a, Variables: Types and features. Relation between Variable and Concept
- b. Hypothesis: Formulation, Types, Characteristics and its testing
- c. Methods of enquiry: Basic Quantitative tools-Survey Method, Data analysis.
- d. Basic Qualitative tools-Observation, Interview, Ethnography, Content analysis

4. Research Writing

- a. Designing research writing: Writing strategies for Thesis, dissertation, research article, book chapter, project report.
- Basic logical and analytical writing skills.
- c. Reference and citation: Bibliography, Annotated Bibliography, citation styles-MLA,
- d. Ethical issues: Plagiarism, scientific standards.







POL 551: Comparative Political Analysis (4 Credits)

Objectives:

The purpose of this course is to acquaint the student with the sub-discipline of comparative politics. It expects the students to understand the comparative methodology and dynamics of

Course Outcomes:

- The paper will provide a critical introduction to the discipline of comparative political
- The students shall understand major theoretical standpoints of comparative enquiry. The students will develop a critical and interpretive understanding for further

1. Comparative Politics

- a. Meaning and Nature
- b. Scope and Importance
- c. Old Comparative politics (Before Second World War)
- d. New Comparative politics (After Second World War)

2. Approaches to the study of Comparative Politics

- b. Institutional
- c. Systems Approach
- b. Structure-Functional

3. Parties and Pressure Groups

- a. Origin of political parties in modern era
- b. Classification of Party System
- c. Nature and types of pressure groups
- d. Role of Pressure Groups in different political systems

4. Non State Political Actors

- a. Origin and development of non-state political actors
- b. Features of non-state political actors
- c. Social Movements Ethics of Human Dalyes.







POL 561 : Social and Political Movements in India (4 Credits)

This course expects students to get introduced to the Phenomenos of Social momenta arising from collective mobilizations. Students are expected to also understand the relationship between competitive democratic politics and social movements. Movements by different sections are to be studied with specific reference to the experience of social movements that have taken place in postindependence India. The course also touches upon the issue of civil society initiations in contemporary India

Learning Outcomes:

- · The paper shall help students to understand assertions and collective mobilisations of different social groups in India.
- The students will be able to analyse types of social movements and its socio-political
- The will be able to evaluate the dynamic relationship between democracy and social movements.

1. Socio-Political Movement

- a. Meaning, Definition
- b. Nature and Scope of Movement
- c. Old and New Movements
- d. Impact and Important of Movements in India

2. Agrarian Movement

- a. Origin and Objectives of Agrarian Movement
- b. Issue of land reforms- Naxalites, Farmers Movement
- b. Bhudan Movement
- d. Landless Movement, Bhartiya Kisan Union

3. Caste and Community Movement

- a. Dalit-Movement, Dalit Panther
- b. Adiwasi Movement
- c. OBC Mobilization after Mandal Commission
- d. Movement of Minorities

4. Women Movement

- a. Origin and Objectives of Women Movement
- b. Historical Background of women in India.
- c. Issues of Sexual and Domestics Violence
- d. Reservation

Ethics & Human Dalyes

Human Values

30







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- b. Bhudan Movement
- d. Landless Movement, Bhartiya Kisan Union

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- b. Adiwasi Movement c. OBC Mobilization after Mandal Commission
- d. Movement of Minorities

4. Women Movement

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- b. Historical Background of women in India.
- c. Issues of Sexual and Domestics Violence
- d. Reservation

Ethics & Human Dalyes

Human Values

30







MA II POLITICAL SCIENCE

Sr/ No.	Crosscut ting issue	Progr am	subje ct	cla ss	Name of the course	Contentinthe course:	outcome
1	Professi onal ethics	MA	Politi cal Scien ce	M A	Political thoughts of Dr. BabasahebAm bedkar	Unit: 3	Students will be able to understand the thought process of Dr. BabasahebAm bedkar. This give new perception to students and develop ethics among them.
2					Fundamentals of Political theory	Unit: 3,4	Students will gain the insight of the evolution and importance of political theory. Ethics that learned from those theories
3					Politics and Society	Unit: 4,5	Students will gain the insight of the interface of politics with social structure. Professional ethics involved in them.







PO-O10 Political Thought of Dr. Babasaheb Ambedkar

Objectives: This course aims at training the students to study one political thinker in depth. It also expects students to know the anti-caste thinking in Indian context. The course is also expected to relate the thinking of Dr. Babasaheb Ambedkar to contemporary problems.

- I. Constitution Philosophy
- a) Role in the Constitution Assembly
- b) Views on the Indian Constitution
- 2. Views on Caste and Untouchability
- a) Critique of Varna System
- b) Annihilation of Caste Human Jalyes,
- 3. Thought on Social Democracy
- a) Liberty-Equality-Frotemity Human Jalyes
- b) Social Justice
- Ethics 4. Thought on Indian Economy
- a) Agricultural
- b) Industries
- 5. Views on Religion
- a) Critique of Hinduism
- b) Advocrosy Navyana

Readings:

- Ambedkar B. R., 1968, Annihilation of Caste, Jullundur Bhimpattrika.
 Ambedskar B. R., 1957, The Buddha and his Dhamma, Mumbai, Siddhart Publication.
- 3. Ambedkar B. R., 1947, State and Minorities: What are their Right and how to secure them in the Constitution of free India, Mumbai, Thakar and Company.
- भोळे भा. स., २००३, आधुनिक भारतातील राजकीय विचार, नागपुर, पिपंळापुरे प्रकाशन.
- गायकवाड संजय, २०१९, मानर्स-अंबेडकर समन्त्रयी परिप्रेक्यातून शिक्षण आणि रोजगार, पुणे, शब्दसंग प्रकाशन.
- 6. Jaffrelot Christophe, 2004, Dr. Ambedhar and Untouchability, New Delhi, Permanent
- कसबे रावसाहेब, १९८५, अविष्ठकर अणिमार्क्स, पुणे, मुनाबा प्रकाशन.
- कसबे रावसाहेब, २०१०, डॉ. ऑबेडकर खणि भारतीय राज्यघटना, पुणे, सुगाबा प्रकाशन.
- कीर धनंजय, १९६६, डॉ. बाबासाहेब आंबेडकर, मुंबई, पॉप्युनर प्रकाशन.
- बैरमोडे वा. म., २०११, डॉ. वावासाहेव आवेडकरः अस्पृथ्यांचा उद्धारकः पुणे, सुगावा प्रकाशन.
- मुन बसंत (संपा), १९९०, डॉ. वाबासाहेव आंबेडकर बांचे विहिष्कृत भारत आणि मुकनायक, मुंबई, शिक्षण विभाग महाराष्ट्र शासन.







PO-C10 Fundamentals of Political Theory

Objectives: This course introduces the students to the evolution, importance to the study of Political Theory. It introduces Political Theory as a distinctive area of inquiry. It is the integral area to the study of politics. It highlights debates in the field and places them in a historical perspective.

- 1. Political Theory: Meaning, Nature and Scope
- 2. Liberty, Equality and Fraternity Human Jalyes
- 3. Justice, Rights, Citizenship Human Values of othing
- 4. Power, Authority and Legitimacy -> GHics
- 5. State, Democracy, Civil Society

Readings:

- 1. Bhargava Rajeev and Ashok Acharya (ed), 2011, Rajakiya Siddhanta Delhi, Pearson.
- Goodwin Barbara, 2004. Using Political Ideas, Chichester, John Wiley & Sons.
- 3. Hampton Jean, 1998, Political Philosophy, New Delhi, Oxford University Press.
- Kamble Bal, Khandve Eknath and Jagtap Pradeep, 2014, Political Theory and Concepts, Nanded, Amaradha Publications.
- Kulkami Mangesh (ed), 2011, Interdisciplinary Perspectives in Political Theory, New Delhi/Thousand Ouks, Sage.
- Kymlicka Will, 2002, Contemporary Political Philosophy, Oxford, Oxford University Press.
- 7. Knowles Dudley, 2001, Political Philosophy, London, Routledge
- 8. Pierson Christopher, 2004, The Modern State, London, Routledge.
- 9. Rege M. P., 2005, Swatantrya, Samata ani Nyaya, Mumbai, Shanta Rege.
- Sayyad Yasin Gulabbhai, 2018, Fundamentals of Political Theory, Kanpur, International Publication.
- 11. Swift Adam, 2001, Political Philosophy, Cambridge, Polity.







Object	rtives: This Course expects students to understand the interface of politics with social ares and processes and how the nature of power is shaped by social factors. 1. Introduction
	a) Community
	b) Culture
	c) Religion
	2. Inter-relationship between Politics and Society
	a) Kole of State
	b) Nationalism
	c) Leadership
	3. Politics, Society and Economy
	a) Inequality - Human Valyes
	c) Caste - Human valyes
	4. Social Movements and Development
	a) Anti Corruption Movement & Halles
	b) Nirbhaya Movement — Human Daluet
	b) Northbaya Movement — Human Values of Ethics 5. Issues in Society and Politics
	5. Issues in Society and Politics
	a) The Bellian of Maria 1999 of
	b) Ethnicity and Gender
	b) Ethnicity and Gender J Ethics & Human valves
Read	Ings:
1.	Awari Vilas 2020, Rajyashasra: Badailte Pravah v Bhumika, Kanpur, Garima Prakashan
2.	Christenson R.et al, 1971, Ideologies in Modern Politics, Melbourne, Nelson.
3.	Dahi R.A., 1977, Modern Political Analysis. New Delhi Prentice Hall
4.	K. Samuel, 1974, Representative Bureaucracy, Englewood Cliffe, N. I. Bransing, U. D.
. 20	Millier Andrew, 1999, Class, London, Sage Publication
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DEMOCRACY,
ELECTION and
GOVERNANCE







F.Y.BA, F.Y.B.Com.andF.Y.B.Sc.

Sr/N o.	Crosscutt ing issue	Progr am	subje ct	class	Name of the course	Content intheco urse:	outcome
1.	Professio nal ethics	BA, BCO M, B.Sc.	Politi cal Scien ce	FYBA, FYBCO M, FY B.Sc.	Democr acy, election and governa nce	Unit-1,2	Students will understand the various approaches to study of democracy and governance which develops Professional ethics in them.
2.					Introduc tion to constitut ion	Unit: 3, 4	Students will gain the insight of the philosophy of Indian constitution which acquaint them with their freedom and responsibilities and develops their ethics to act in the society.
3.					Introduc tion to Human Rights and Duties.	Unit: 2,4	Students will be able to understand their fundamental rights provided by the government. This give new perception to students and develop Professional ethics among them.







4.			Human	Unit:4	Students will be
''			rights of		able to understand
			vulnerab		their fundamental
			le and		rights provided by
			disadvan		the government to
			taged		the vulnerable and
			_		
			groups.		disadvantaged
					group of the
					society. This give
					new perception to
					students and
					develop
					Professional ethics
					among them.
5.			Human	Unit:	Students will be
			Rights	1,3	able to understand
			and		their fundamental
			Duties in		rights provided by
			India		the government.
					This give new
					perception to
					students and
					develop
					Professional ethics
					among them.







• Students will understand the various approaches to study of democracy and governance which develops Professional ethics in them.

Savitribai Phule Pune University, Pune For All faculties 2 credit Compulsory course for all the First Year students in All **Faculties** Democracy, Election and Governance Objectives: 1. To introduce the students meaning of democracy and the role of the governance 2. To help them understand the various approaches to the study of democracy and governance Module 1 Democracy- Foundation and Dimensions a Constitution of India - Human Values, Ethics b. Evolution of Democracy- Different Models c. Dimensions of Democracy-Social, Economic, and Political Module 2 Decentralization a. Indian tradition of decentralization b. History of panchayat Raj institution in the lost independence period c. 73rd and 74th amendments d. Challenges of caste, gender, class, democracy and ethnicity. Module 3 Governance a. Meaning and concepts b. Government and governance e. Inclusion and exclusion References: Banerjee-Dube, I. (2014). A history of modern India. Cambridge University Basu, D. D. (1982). Introduction to the Constitution of India. Prentice Hall of 3. Bhargava, R. (2008). Political theory: An introduction. Pearson Education







INTRODUCTION TO CONSTITUTION

(TWO CREDITS)

Course Objectives: This course introduces students to the Constitution of India. The Constitution, being supreme law of the land, must be known to every citizen of India. It begins with the Preamble, which indicates the source and objects of it. We, the people of India, are the source of the Constitution and have resolved to constitute India into a sovereign, socialist, secular, democratic and republic. The Course has been designed for everyone to make acquaint themselves with their fundamental rights and of others. No right is absolute one, it is subject to others right, as well. Directive Principles of State Policy are nothing but rights, though not enforceable by any court. These Directive Principles are basically Fundamental Principles' in the governance of the country. Powers and freedoms come with responsibility. State's responsibility to implement Directive Principles and entirens must perform their duties towards others, society and nation.

Expected Course Outcomes:

To introduce the philosophy of Constitution of India to students. To acquaint them with their freedoms and responsibilities.

UNIT 1: PHILOSOPHY OF THE INDIAN CONSTITUTION (5 Hours)

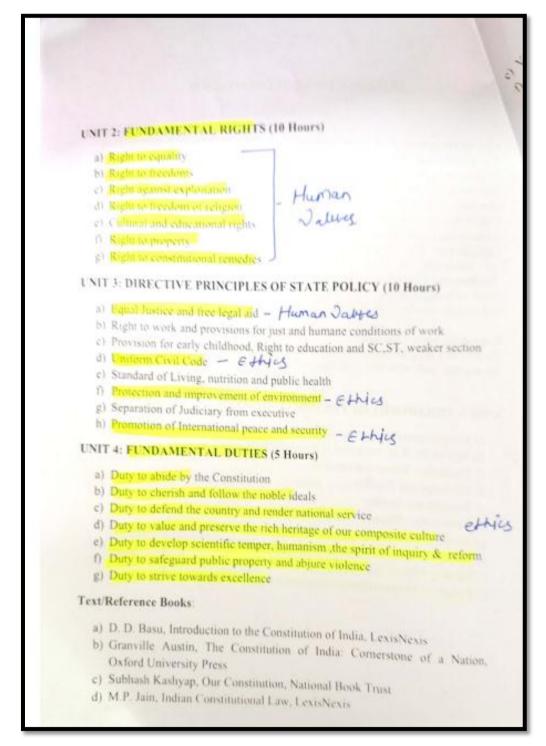
- a) Constitutional History of India
- b) Role of Dr. B.R. Ambedkar in Constituent Assembly
- e) Preamble Source and Objects
- d) Sovereign and Republic
- e) Socialist and Secular
- f) Democratic Social and Economic Democracy
- g) Justice Social, Economic and Political
- h) Liberty Thought, Expression, Belief, Faith and Worship
- i) Equality Status and Opportunity
- j) Fraternity, Human Dignity, Unity and Integrity of the Nation

Hymun Values.













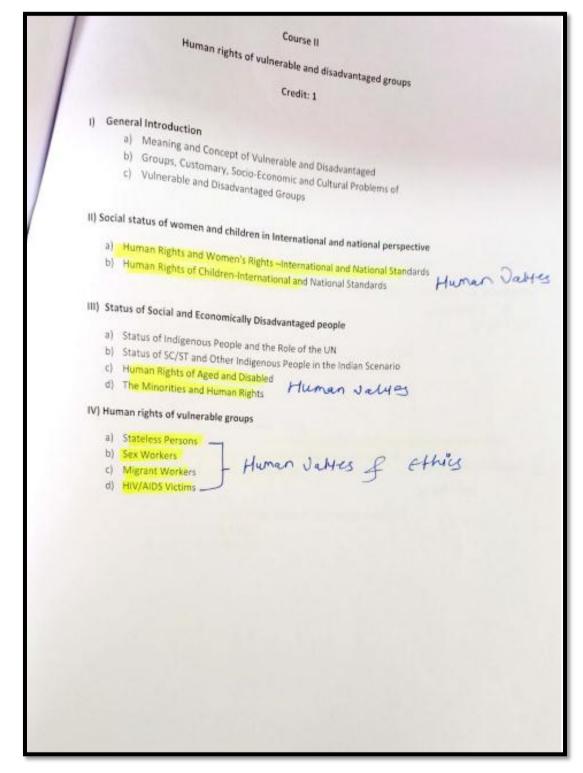


	The syllabus
	Course I
	Introduction to Human Rights and Duties
	Credit: 1
1)	Basic Concept a) Human Values: Dignity, Liberty, Equality, Justice, Unity in Diversity, Ethics and Morals b) Meaning and significance of Human Rights Education
m)	Perspectives of Rights and Duties a) Rights: Inherent-Inalienable-Universal-Individual and Groups — Human Jaly b) Nature and concept of Duties — E-Hrics c) Interrelationship of Rights and Duties — E-Hrics
III)	Introduction to Terminology of Various Legal Instruments a) Meaning of Legal Instrument- Binding Nature b) Types of Instruments: Covenant-Charter-Declaration-Treaty-Convention-Protocol- Executive Orders and Statutes
IV)	United Nations And Human Rights a) Brief History of Human Rights- International and National Perspectives b) Provision of the charters of United Nations c) Universal Declaration of Human Rights- Significance-Preamble Universal Declaration of Human Rights- Significance-Preamble Civil and Political Rights- (Art. 1-21) Economic, Social and Cultural Rights- (Art. 22-28) Dutles and Limitations- (Art. 29) E) Final Provision (Art. 30)















	Human Rights and Dutles in India: Law, Policy, Society and En	
	and Dutles in India: Law, Policy, Society and S	
	Mechanism	forcement
	Credit: 1	
P.	Human Rights in Indian Context	
	of Indian Bill of Rights And Human Ja	lyea
	b) Preamble-Fundamental Rights- Directive Principles-Fundamental	
	Rights- Directive Principles-Fundam	nental Duties - Human
11.	rights- Enforcement Man-1	Values of ethics
	- Figure Rights Act. 1993	ethics
	Judicial Organs- Supreme Court (5 + 22) 4	
		5)
	The state of the s	
	e) Survey of International Mechanism	
101.	Human Rights Violations and Indian Polity	
	Inequalities in society-population-illiteracy-poverty-caster-inacce Abuse of Fearuries D.	
	b) Abuse of Executive Power-Corruption-Nepotism and favoritism	
	c) Human Rights and Good Governance	Human Valtes -
	d)	
IV.	Role of Advocacy Groups	Ethics.
	a) Professional Bodies: Press, Media, Role of Lawyers-Legal Aid	
	b) Educational Institutions	
	c) Role of Corporate Sector	
	d) NGO's	







COMMERCE







F.Y.BCOM

Sr.	Crossc	Progra	Subje		Name of the	Contentinthe	Outcome
No	utting issue	mme	ct	ass	course	course:	
1	Professiona I Ethics	BCOM	Com merce	F.Y . B Co m	FinancialAccounting	UnitNos:1 and4	Students will be able to understand various principles of financial accounting which are highly useful in in accountingpractice. Professional ethics involved in accounting practice.
					BusinessEconomics	UnitNos:1 and2	Students will be able to understand economic and non-economic goals of the firm and how ethically they can be achieved. Student will gain insight of the consumer behavior.
					OrganizationalSkillD evelopment	Unit Nos- 1, 2 and 3:	Students will be able to understand internal and external factors of office environment. Professional ethics involved in modem office.
					Banking and finance	Unit Nos – 2, 3 and 4:	Students will be able to understand professional ethics involved in the working of commercial banks.







		Marketing and	Unit Nos-1	, 2, Students will be
		salesmanship	3 and 4:	able to understand
				professional ethics
				involved in the
				working of market.
		Consumer prot		, 2, This course will
		and business et	thics 3 and 4:	develop general
				awareness of
				consumerism among
				the students.
				Students will be
				able to understand
				professional ethics
				involved in the
				existing law on
				consumer protection
				in India.







• Students will be able to understand various principles of financial accounting which are highly useful in in accounting practice. Professional ethics involved in accounting practice.

Savitribai Phule Pune University
Faculty of Commerce & Management
Structure for Three - Year
B.Com. Degree course (Choice Based Credit System)
(2019 Pattern)
With effect from June 2019

Preamble:-

Commerce education is that area of education, which develops the required knowledge, skills and attitudes for the handling of Trade, Commerce and Industry. Commerce education is entirely different from other disciplines. Hence, it must charter Course routes to service the aspirations of the nation. To meet the growing needs of the business society, there is greater demand for sound development of commerce education. The relevance of commerce education has become more imperative, this means a marked change in the way commerce and management education is perceived in India. The Commerce education is dedicated to developing tomorrow's leaders, managers, and professionals.

The existing education system of imparting commerce education needs to be more dynamic to incorporate all local and global changes in the field of trade and commerce. The curriculum needs to be restructured accordingly. The learning inputs are required to be more update, skill based and with appropriate applications. This will be achieved through the introduction of Choice based Credit System at undergraduate level.

The choice based credit system offers a cafeteria approach where the students have the liberty to choose courses of their own choice. The credit system allows students to opt for additional courses where he /she can score more than the required credits. The system will focus on student centric learning methods, which include use of Information and Communication Technology, innovative methods of teaching and learning and emphasis on industry interaction to enable the learners to take up professional challenges more effectively.

1. INTRODUCTION

The B.Com Degree Course (2019 pattern) will be introduced in the following order:-

a. First Year B.Com. 2019-2020 b. Second Year B.Com. 2020-2021 c. Third Year B.Com. 2021-2022







Revised syllabi (2019Pattern) for three years F.Y. B. Com. Degree course (CBCS)

Semester: I

Financial Accounting- I

Course Code - 112

No. of Credits :- 03 and for practical - 01

Objective of the Course:-

- 1. To impart knowledge of basic accounting concepts
- 2. To create awareness about application of these concepts in business world
- 3. To impart skills regarding Computerised Accounting
- 4. To impart knowledge regarding finalization of accounts of various establishments.

Unit No.	Unit Title	Contents	Purposed Skills to be developed
1	Accounting Concepts, Conventions and Principles and an overview of Emerging Trends in Accounting	(A) Accounting Concepts, Conventions and Principles 1. Money Measurement 2. Business Entity 3. Dual Aspect 4. Periodicity Concept 5. Realization Concept 6. Matching Concept 7. Accrual / Cash Concept 8. Consistency Concept 9. Conservatism Principle 10. Materiality Concept 11. Going Concern Concept 12. Historical Cost Concept (B) Emerging Trends in Accounting 1. Inflation Accounting 2. Creative Accounting	Knowledge about various accounting Concepts, Conventions and Principles. Understanding emerging trends in accounting and its effect on accounting Practices.







		Environmental Accounting Human Resource Accounting Forensic Accounting	
2	Piecemeal Distribution of Cash	Surplus Capital Method only, Asset taken over by a partner, Treatment of past profits or past losses in	 Knowledge about process of dissolution of partnership firm.
		the Balance sheet,	
		 Contingent liabilities 	
		 Realization expenses/amount kept aside for expenses 	
		adjustment of actual, Treatment of secured liabilities,	
		 Treatment of preferential liabilities like Govt. dues/labour dues etc., Excluding: Insolvency of partner and Maximum Loss Method. 	
3	Accounts from Incomplete Records (Single Entry System)	Meaning of single entry system Features of Single Entry System Conversion of Single Entry into Double Entry	Knowledge about single entry systems. Purpose and advantages of double entry system
			 Process of conversion of single entry into double entry system.
4	Introduction to Goods and Services Tax laws and Accounting	 Constitutional Background of GST, Concepts and definition of GST. 	Knowledge about conceptual framework of the GST Knowledge about various
		IGST, CGST and SGST	components of GST.
		3. Input and Output Tax credit	 Types of taxes under GST
		Procedure for registration under GST	 Registration process under GST for business establishments.







Revised syllabi (2019Pattern) for three years F.Y. B. Com. Degree course (CBCS)

Semester-I Business Economics (Micro) - I

Course Code - 113 No. of s

Objectives of the course:-

- 1. To impart knowledge of business economics
- 2. To clarify micro economic concepts
- 3. To analyze and interpret charts and graphs
- 4. To understand basic theories, concepts of micro economics and their application

Unit No.	Unit Title	Contents	Purpose & skills to be developed
(1)	Introduction and Basic Concepts	1.1 Meaning, Nature, Scope and Importance of Business Economics 1.2 Concept of Micro and Macro Economics 1.3 Tools for Economic Analysis-Functional Relationship, Schedules, Graphs and Equations 1.4 Basic Concepts: Household, Consumer, Firm, Plant and Industry 1.5 Goals of Firms- Economic and Non-Economic	To make the students aware of concepts in micro To help the students understand the difference be micro and macro economics To make the students understand economic and n economic goals of firms. Skills: Analyze and think critically, develop writing
2	Consumer Behavior	Utility: Concept and Types 2.2 Cardinal Approach: Law of Diminishing Marginal Utility and Law of Equi Marginal Utility 2.3 Consumer Surplus: Concept and Measurement 2.4 Ordinal Approach: Indifference curve Analysis- Concept, Characteristics, Consumer Equilibrium	To help the students understand the concept of uti To impart knowledge of cardinal and ordinal appi To make them understand the concept of consum Skills: Understanding complex theories and concepts Geometrical skills, mathematical aptitude, writing sk

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Revised syllabi (2019Pattern) for three years F.Y. B. Com. Degree course (CBCS)

Semester: I

Organizational Skills Development- I

Course Code = 115 - A No. of Credits :- 03

Objectives of the course

- 1. To introduce the students to the emerging changes in the modern office environment
- To develop the conceptual, analytical, technical and managerial skills of students efficient office organization and records management
- 3. To develop the organizational skills of students
- To develop Technical skills among the students for designing and developing effective means to manage records, consistency
 and efficiency of work flow in the administrative section of an organisation
- 5. To develop employability skills among the students

Depth of the program - Fundamental Knowledge

Unit	Unit Title	Contents	Purpose Skills to be developed
No.			
1	Concept of Modern Office	Modem Office : Definition, Characteristics, importance and functions Office environment:- Meaning and Importance Office Location :-Meaning, Principles and factors affecting Office location Office Layout :-Meaning, Principles and factors affecting Office Layout	Conceptual Clarity on the meaning of a modern office Developing understanding on the internal and external factors of an office environment Developing analytical and technical skills to contribute towards planning office location and layout
2	Office	 a. Office Organisation : Definition, Importance, 	
	Organisation and	Principles and Types of Organisation	Conceptual clarity on the meaning of
	Management	 Office Management: Definition, Functions 	Scientific office management
		 Scientific Office Management :- Meaning, Aims, 	2. Development of understanding in various
		Techniques of Scientific Office Management and	techniques for scientific management
		Steps for installation of Scientific Office Management	

SPPU/ B.Com. Structure/CBCS/ 2019-20 onwards

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3	Office Records Management	a. Office Records Management - Definition, Objectives, Scope of Records Management, Significance, Principles of Records management. b. Digitalization of records:- Advantages and Problems of Digitalization c. Form Design:- Objectives, types of forms, Significance, Principles of form designing d. Office Manual – Definition, Contents Types, benefits and limitations	Introduction to concept of digitalization of records Technical skills and critical analysis skills for designing of various office documents for effective records creation and maintenance
4	Office work	Office work :-Meaning and Characteristics, Flow of work :- Significance, Features of Ideal flow of work ,benefits of flow of work ,problems in smooth flow of work , suggestions for even flow of work	Analytical skills for process improvement in office work.

Teaching Methodology

Topic No.	Total Lectures	Innovative methods to be used	Film shows and AV Applications	Project	Expected Outcome
1	12	Power Point Presentation	Online Videos	Making a model of office layout in groups	Conceptual Clarity on meaning of Modern Office, internal and external factors of an office environment
2	12	Power Point Presentation			Conceptual clarity on the meaning of Scientific office management and understanding various techniques for scientific management







Semester: I

BANKING & FINANCE-1

(Fundamentals of Banking I)

Course Code = 115 - B No. of Credits :- 03

Objectives -

- · To provide knowledge of fundamentals of Banking
- · To create awareness about various banking concepts
- To conceptualize banking operations.

Unit	Unit Title	Contents	Purpose Skills to be developed
No.			
1.	Evolution of Banking	Meaning, Definition and Origin of 'Bank' Evolution of Banking in Europe and Asia Evolution of Banking in India Structure of Indian Banking System	Knowledge of evolution of banking. Understanding structure of Indian Banking
2.	Functions of Bank	Primary Functions: • Accepting Deposits: i. Demand Deposits - Current Deposit and Savings Deposits; ii. Time Deposits - Fixed Deposit and Recurring Flexi Deposits (Auto Sweep) • Granting Loans and Advances- i. Short Term Loan- Overdraft Facility, Cash Credit Facility, Purchasing and Discounting of Bills, ii. Term Loan	Understanding primary and secondary functions of a bank. Understanding the concepts related to lending and ratios.

SPPU/ B.Com. Structure/CBCS/ 2019-20 onwards

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- A. Agency Functions- Payment and Collection of a Cheque, Bill and Promissory Note, Execution of standing instructions, Acting as a Trustee and Executor
- B. General Utility Functions- Safe Custody, Safe Deposit Vaults, Remittance of funds, Pension payments, Acting as a Dealer in Foreign Exchange (FOREX) Market.
- C. Distribution of Third Party Products, Bancassurance, Mutual Funds, Issuance of Credit Card and Debit Card
- D. Non Fund Based Credit Facilities- Letter of Credit, Bank Guarantee and Deferred Payment.
- E. Government Business Collecting GST, Stamp Duty, Excise Payment, etc.
- Concepts of Priority and non- priority sector lending Security Based and Purpose Oriented Lending, Bridge Loans, Reserve Ratios- CRR and SLR. Credit Appraisal and Credit Monitoring







3. Procedure for Opening and Operating of Deposit Account

Procedure for Opening of Deposit Account: Know Your Customer Norms, (KYC Norms), Application Form, Introduction, Proof of Residence, Specimen Signature, and Nomination Facility: Their Importance. No Frill Account

Procedure for Operating Deposit Account: Pay-in-slip, Withdrawal slip, Issue of Pass Book, (Current, Savings or Recurring Deposit), Issue of Cheque Book, Issue of Fixed Deposit Receipt, Premature encashment of a Fixed Deposit and Loan against Fixed Deposit. Recurring Deposit: Premature encashment and Ioan against Recurring Deposit.

- a) Closure of Account
- b) Transfer of Account
- c) Death Claim Procedure

Types of Account Holders

- a) Individual Account Holders- Individual Account, Joint Account, Illiterate, Minor, Married Woman, Pardahnashin Woman, Non-Resident Account
- b) Institutional Account Holders- Sole Proprietorship,
 Partnership Firm, Joint Stock Company, Hindu Undivided Family, Clubs, Associations, Societies and Trusts.

- Understanding the process of opening and operating procedure of bank accounts.
- Understanding various types of bank accounts holders







4	Methods of Remittance	Demand Draft, Bankers' Cheque Electronic Funds Transfer (EFT) = Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT), Procedure of fund transfer through NEFT/ RTGS, Society for Worldwide Interbank Financial Telecommunication (SWIFT) Immediate Payment Service (IMPS) - Interbank (Bank to	Understanding various methods of remittance.
		Immediate Payment Service (IMPS) - Interbank (Bank to Bank) and Intra Bank (Branch to Branch) Fund Transfer	







Revised syllabi (2019 Pattern) for three years B.com Degree course (CBCS)

Semester - I

Marketing and Salesmanship-I

(Fundamentals of Marketing)

Course Code = 116 - C No. of Credits := 03

Objectives of the Course

- 1. To introduce the basic concepts in Marketing.
- 2. To give the insight of the basic knowledge of Market Segmentation and Marketing Mix
- 3. To impart knowledge on Product and Price Mix.
- 4. To establish link between commerce, business and marketing.
- 5. To understand the segmentation of markets and Marketing Mix.
- 6. To enable students to apply this knowledge in practicality by enhancing their skills in the field of Marketing.

Unit	Unit Title	Contents	Purposed Skills To Be
No.			Developed
1	Introduction to Market	1.1 Meaning and Definition of Market	The basic knowledge of Market
	and Marketing	1.2 Classification of Markets	and Marketing will be
		1.3 Marketing Concept: Traditional and Modern	developed amongst students.
		1.4 Importance of Marketing	
		1.5 Functions of Marketing:	
		Buying, Selling, Assembling, Storage, Transportation,	
		Standardization, Grading, Branding, Advertising,	
		Packaging, Risk Bearing, Insurance, Marketing	
		Finance, Market Research and Marketing Information.	
		1.6 Selling vs. Marketing	







2	Market Segmentation	2.1 Market Segmentation: -	Students will develop the
	and Marketing Mix	2.1.1 Introduction	Marketing Segmentation
		2.1.2 Meaning and Definition	knowledge along with the basic
		2.1.3 Importance	concept of Marketing Mix.
		2.1.4 Limitations	
		2.1.5 Bases for Segmentation	
		2.2 Marketing Mix	
		2.2.1 Introduction	
		2.2.2 Meaning & Definition	
		2.2.3 Elements of Marketing Mix- Product, Price, Place	
		and Promotion	
		2.2.4 Importance of Marketing Mix	
3	Product Mix and Price	3.2 Product Mix	Students will get proper insight
	Mix	3.2.1 Meaning and Definition	of Product and Price Mix.
		3.2.2 Product Line and Product Mix	
		3.2.3 Product Classification	
		3.2.4 Product Life Cycle	
		3.2.5 Factors Considered for Product Management	
		3.3 Price Mix	
		3.3.1 Meaning and Definition	
		3.3.2 Pricing Objectives	
		3.3.3 Factors Affecting Pricing Decision	
		3.3.4 Pricing Methods	







4.	Place Mix and	a. Place Mix	Students will develop the skills
6.10	Promotion Mix	i. Meaning and Definition of Place Mix	of promoting a product along
		ii. Importance	with gaining knowledge about
		iii. Types of Distribution Channels - consumer	the distribution channels.
		goods and Industrial Goods	
		iv. Factors Influencing selection of Channels	
		4.2 Promotion Mix	
		4.2.1 Meaning of Promotion Mix	
		4.2.2 Elements of Promotion Mix- Personal Selling,	
		Public Relation and Sales Promotion	
		4.23 Factors Affecting Market Promotion Mix	
		4.2.4 Promotion Techniques or Methods	







Semester - I

Consumer Protection and Business Ethics - I

Course Code = 116 - D No. of Credits :- 03

Objectives of the Program

- 1. To develop general awareness of consumerism among the students.
- 2. To understand the consumers rights, responsibility and role of United Nations.
- To have a comprehensive understanding about the existing law on consumer protection in ladia.
- 4. To create awareness among the students about dispute redresses machinery and basic procedures for handling consumer dispute.
- 5. To understand the issues relating to e-commerce, e-Banking emerging issues and internet regulations.

Unit	Unit Title	Contents	Purpose Skills to be developed
No.			
1	Consumer	Consumerism- Meaning, Evolution, Rational, Need and	understand the concept of
	Protection -	Importance of Consumerism,	consumerism
	An Overview	Consumer protection- objectives, scope and importance,	Equip the students with knowledge
		Consumer rights and Standardization	the evolution, need and
		United Nations guideline on consumer protection-	importance, of consumerism
		Objectives, scope of application , general principles and	Understand the role of United
		framework for consumer protection	Nations to protect consumer's
		-	interest.
2	Consumer	Consumer education-Need and importance, Consumer	Handling the emerging issues
	Education and	Responsibility	about consumer protection
	Awareness	Role of consumer Association and Councils in consumer	•
		education and Awareness- Voluntary organization,	Acquaint knowledge and skills for
		Consumer protection councils, Media, Educational Institute	career opportunity.
		and Government	
		Skills required for career in Consumer studies field	







5.	en de la constante de la const	Consumer Protection Movement in India	Compressive understanding about
	Protection.	Consumer Protection Act 1986- Overview features,	W B
	Law in India *	important definitions-consumers, Goods, services, Defect,	Act 1986.
		Deficiency, unfair trade practices, Dispute, Complaint -	Apply the Law for consumer
		Objectives, Consumer Disputes Redressal Agencies.	protection
		(Composition, Jurisdiction, Powers and Functions.)	
		Procedure of filling complaint and Procedure to deal with	
		complain.	
6.	E -Commerce	E Commerce- scope and limitations, Need and importance	Understand the concept of E
		of E commerce, Prospects and challenges of Ecommerce	
	Protection	and its effect on consumer	Protection
		Need and importance of E-Education	Acquaint students about various
		consumer Protection in E-Banking	issues of E commerce.
		Recent Emerging Issues in E-Commerce	Able to appreciate the emerging
		* *	questions and policy issues







SY BCOM

Sr.N o	Crosscuttin g issue	Programm e	Clas s	Subject	Name of the course	Content in the course:	Outcome
1	Professional Ethics	BCOM	F.Y. B Com	Commerc e	Business communication	UnitNos:1, 3 and 4	Students will be develop skills in various types of communicatio n. Ethics involved in them is also learned.
					BusinessEconomi cs	UnitNos:1 and2	Students will be able to understand professional ethics involved while calculating national income.
					Business management.	Unit Nos -1, 2,3,4	Students will be able to understand ethics involved in the managerial job.
					Business administration	Unit Nos— 1, 2, 3 and 4:	Students will be able to understand professional ethics involved in themanaging various types of business







Savitribai Phule Pune University

Faculty of Commerce & Management S Y B Com (Semester III) (Choice Based Credit System) Revised Syllabus (2019 Pattern)

CORE COURSE - I

Subject: Business Communication-I Course Code: 231

Total Credits: 04 (Theory 03 + Practical 01-04)

1. Objectives of the Course:

- To understand the concept, process and importance of communication.
- To acquire and develop good communication skills requisite for business correspondence.
- To develop awareness regarding new trends in business communication.
- d. To provide knowledge of various media of communication.
- e. To develop business communication skills through the application and exercises.

Medium of Instruction: English

	Medium of Instruction: English					
Unit	Unit Title	Contents		Skills to be		
No.				developed		
1	Introduction of	1.1 Introduction,	i.	Conceptual		
	Business	Meaning, Definition.		Clarity and		
	Communication	 1.2 Characteristics, 		understanding		
		Importance of		the Meaning,		
		communication.		Characteristics		
		1.3 Principles of		and Importance		
		communication,		of		
		Process of		communication.		
		communication	ii.	To understand		
		1.4 Barriers to		the Principles		
		communication &		and Process of		
		Remedies.		communication		
		1.5 Methods and	iii.	To understand		
		Channels of		Barriers to		
		Communication.		communication		
2	Business	2.1 Meaning and	i.	To understand		
	Letters	Importance		the importance		
		2.2 Qualities or		of business		
		Essentials, Physical		letters.		
		Appearance	ii.	To understand		
		2.3 Layout of Business		Essentials		







		Letter		Qualities of business letters.
3,	Soft skills	3.1 Meaning, Need, Importance. 3.2 Elements of soft skills. a) Manners & Etiquettes, Grooming. b) Effective Listening & Speaking c) Interview Skills. d) Presentation e) Group Discussion. f) Problem-solving skills G)Time management abilities	i.	To acquire the fundamental knowledge about soft skills To understand the Elements of Soft Skills
4	Resume writing & Job Application letters	4.1 Introduction, essential elements of Bio data, Resume writing, Curriculum Vitae. 4.2 Meaning & Drafting of Job Application letter.		To understand Resume writing and Job application letter.







CORE COURSE - III

Subject: BUSINESS ECONOMICS (MACRO) Course Code: 233

Total Credits: 03

Preamble:

An approach to Macro Economics is to examine the economy as a whole. This paper aims to provide knowledge about macroeconomics that includes macro-economic variables and theories. It also aims to make students familiar about the various concepts of macro-economics, national income, macro-economic theories and its implications in the economy.

Scope of the programme -

Basic Knowledge of Macro Economics

Objectives -

- To familiarize the students to the basic theories and concepts of Macro Economics and their application.
- To study the relationship amongst broad aggregates.
- To impart knowledge of business economics.
- To understand macroeconomic concepts.
- To introduce the various concepts of National Income.

Unit	Name and Content of the Chapter	Purpose & Skills to be Developed
Unit 1	Introduction to Macro Economics 1.1 Meaning and Definition of Macro Economics. 1.2 Nature of Macro Economics. 1.3 Scope of Macro Economics. 1.4 Significance of Macro Economics. 1.5 Limitations of Macro Economics. 1.6 Macro Economic Objectives.	Purpose: To make the students aware of concepts in macroeconomics Skills: Analyze & think critically, develop writing skills.
Unit 2	National Income 2.1 Meaning and Importance of National Income. 2.2 Concepts: 2.2.1 Gross National Product (GNP) 2.2.2 Net National Product (NNP) 2.2.3 Gross Domestic Product (GDP) 2.2.4 Per Capita Income (PCI) 2.2.5 Personal Income (PI) 2.2.6 Disposable Income (DI) 2.3 Measurement of National Income:	Purpose: To make the students aware of basic concepts in national income Skills: Analyze & think critically, quantitative aptitude and develop writing skills.







	Methods and Difficulties	
	2.4 Circular Flow of Income: Two sector model	
Unit 3	Theories of Output and Employment: 3.1 The Classical Theory of Employment: J.B.Say 3.2 Keynes Criticism on Classical Theories of Employment.	Purpose: To help the students to understand the concept of Employmentand theory Output. Skills: Understanding,
	3.3 Keynesian Theory of Employment.	writing skills, critical thinking.
-	Consumption, Saving and Investment: 4.1 The Consumption Function: 4.1.1 Meaning	
	4.1.2 Marginal Propensity to Consume (MPC) 4.1.3 Keynes's Psychological Law of Consumption. 4.1.4 Determinants of Consumption.	Purpose: To understand the concepts of Multiplier and
Unit 4	4.2 The Saving Function: 4.2.1 Meaning, 4.2.2 Marginal Propensity to Save (MPS) 4.2.3 Determinants of Savings 4.2.4 Relationship between	Accelerator. To impart knowledge of Consumption Function, Saving and Investment Function
	Consumption and Saving Function (MPC and MPS) 4.3 Meaning and Types of Investment: Gross, Net, Induced and Autonomous.	Skills: Understanding, ability to analyze, quantitative aptitude and writing skills.
	4.4 Marginal Efficiency of Capital and its Determinants. 4.5 Concepts of Investment Multiplier	
	and Acceleration Principal.	







CORE COURSE - IV

Subject: BUSINESS MANAGEMENT -I Course Code: 234

Total Credits: 03

1. Objectives of the course

- To provide basic knowledge and understanding about various concepts of Business Management.
- To help the students to develop cognizance of the importance of management principles.
- c. To provide an understanding about various functions of management.
- To provide them tools and techniques to be used in the performance of the managerial job.
- 2. Depth of the program fundamental Knowledge

Unit No.	Unit Title	Contents	Purpose / Skills to be developed
1	Management :	Meaning definition of Management Need for Management study Process and levels of management Functions of management Contribution of F.W. Taylor, Henry Fayol, Peter Drucker, Mintzberg and Michel Porter in development of management thoughts	Understanding how management works Developing thought process as a manger Understanding functions of Management Understand the role of Management Thinkers in development of modern management process
2	Understanding Management : Planning and Decision Making	Meaning, definition and nature of Planning Forms and types of Planning Steps in Planning Limitations of Planning Meaning and techniques of Forecasting Meaning, Types and Steps in Decision Making	How to plan various management activities, programmes and events Developing of decision making skills to evaluate various alternatives and situations Understanding the concept of forecasting
Unit No.	Unit Title	Contents	Skills to be developed







**.	Management at Work: The process of organizing and staffing	Meaning, Process and Principles of Organizing Concept of Authority and Responsibility Delegation of Authority Difficulties in Delegation of Authority Need and importance of Staffing Recruitment: Sources and Methods	Understanding the importance and process of organisation Understanding authority and process of delegation of authority Understanding process of recruitment
<mark>4.</mark>	Result orientation :Direction an d Te am Work	Meaning, Elements, Principles, Techniques and Importance of Direction. Concept of Team Work, Group Dynamics and principles regarding interpersonal communication and Group Behaviour	How to direct a group / team? Team building skills Wining confidence of group members How to initiate healthy discussions to achieve consensus?







SPECIAL ELECTIVE COURSE - VI

Subject: Business Administration Course Code: 236(A)

Total Credits: 04 (Theory 03 + Practical 01=04)

1. Objectives of the Course:

a. To provide basic knowledge about various forms of business organizations

b. To acquaint the students about business environment and its implications thereon.

c. To make them aware about the recent trends in business.

2. Depth of the program - fundamental Knowledge

UNIT No.	Unit title	Contents	Purpose/skills to be developed
1	Introduction to Business Administration	Business-Definition, Characteristics, Scope Objectives of Business-Economic & Social Perspectives. Commerce-Meaning, Concept, Trade & Aids to trade- Meaning & Definition of the Terms- Administration, Management and Organisation, Functions of Administration	To understand the concept of Business To understand the various perspectives to business To know the various functions of Business Administration
2	Types of Business Organisations	Sole Proprietorship, Partnership Firm, Limited Liability Partnership, Joint Stock Company, Non-Profit Joint Stock Company under Section 25 of the Companies Act, NGO, One Person Company, MNC, MSME Unorganised (informal)v/s Organized sector(registered/incorporated) Entrepreneurship: Meaning, definition and importance, objectives, skills and qualities required of an entrepreneur, case study of a successful local entrepreneur.	To study the various forms of business organisations To understand the meaning and importance of organized and unorganized sector To introduce the concept of Entrepreneurship as a form of business
3	Business Environment	Meaning of Business Environment Constituents of Business Environment-	To understand the concept of Business Environment







	Economic, Social, Legal, Cultural, Educational, Political, Technological, Natural and international. Impact of New Policies on Business Administration	To study the various aspects of business environment To understand its impact on business
Business Promotion and development	Business unit- Promotion, Concept, Stages in business promotion, Business development: Concept, process. Business components to be focused for development like markets, customers and relationships.	To study the various stages in business promotion To understand how to develop a business To study the important factors to be emphasized for Business development







TY BCOM

Sr.N o	Crosscuttin g issue	Programm e	Name of the	Clas s	Subject	Contentinthecourse :	Outcome
J	Sissue	C	cours	B		•	
			e				
1	Professional Ethics	BCOM		T.Y. B Com	Business Regulatory framework	UnitNos: 1,2, 3 and 4	gain conceptual knowledge about the framework of business Law in India. Students will learn the ethical way which business law
					Advanced accounting - I	UnitNos:1,3 and 4	works. Students will be able to understand professional ethics involved in the working of banking companies
					Internationa 1 economics	Unit Nos- 2,3,4	Students will be able to understand ethics involved in trade around the internationa I frontiers.







Savitribai Phule Pune University, Pune

Revised syllabi (2019 Pattern) for three years B. Com. Degree course

Credit Base Choice System (CBCS)

Syllabus for T.Y.B. Com. Semester -V

Subject Name: Business Regulatory Framework

Course code: - 351 Credit - 3

Depth of the program - Fundamental Knowledge

Preamble

Savitribai Phule Pune University and UGC has initiated several measures to bring efficiency and quality education to the students. The important measures taken to enhance academic standards and quality in higher education include innovation and improvements in curriculum, teaching-learning process, examination and evaluation systems, besides governance and other matters.

The Business Regulatory framework course provides the student with basic information about the Indian legal system and dispute resolution, and their impact on business. The understanding of legal system is a prerequisite for better decision making. The course gives exposure to students in the areas of legal principles of business contract, aspects in the formation, running and winding up of partnership and LLP, the scope and the issues associated with partnerships, application of sale of goods act and E Contract regulations in India. This course focuses on orientation of students to legal studies from the point of view of basic concepts of business law and legal system in India. The course will be useful to the commerce students to understand and apply the business laws in commercial situations.

Objectives of the Program

- To provide conceptual knowledge about the framework of business Law in India.
- To orient the students about the legal aspect of business.
- 3. To create awareness among the students about legal environment relating to the Contract Law, Partnership Act, Sale of Goods Act in India.
- 4. To understand the emerging issues relating to e-commerce, e-transaction issues and E Contracts

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- 5. To seek the career opportunity in corporate sector relating to business law in India.
- 6. To acquaint students with the basic concepts, terms & provisions of Mercantile and Business Laws.

Course Contents

nit No	Unit Title	Contents	Purpose Skills to be developed
1	The Indian Contract Act, 1872.	The nature of the contract, General Principles Definitions and elements of Contract- consideration, other essential elements of a valid contract, Legality of object and consideration. , Void Agreements. , Discharge of contract.	Understand the concept of Contract and its contents. Equip the students with knowledge of nature and performance and breach of Contracts.
		remedies (Including damages, meaning, kinds and rules for ascertaining damages)	
2	The Indian Partnership Act, 1932	General Nature of Partnership , Rights, and duties of partners, Types of partner Registration and dissolution of a firm Limited Liability Partnership Act 2008: Limited Liability Partnership (LLP); Concept, Nature and Advantages, Difference between LLP and Partnership Firm, Difference between LLP and company	Understand the nature of partnership ,Rights and duties of Partner Handling the registration and dissolution of the partnership. Aquint Knowledge about LLP
		Disclosure by LLP, Contributions (Section 32), Assignments and Transfer of Partnership Rights (Section 42) Conversation to LLP (Section 55), Winding-up and	







		dissolution (Section 63 & 64)	
3	The Sale of Goods. Act, 1930	Formation of the contract of sale , Concept and Essentials. Sale and agreement to sale. Goods – Concept and kinds , Conditions and Warranties Transfer of ownership and delivery of goods Unpaid seller and his rights and Remedial Measures.	Compressive understanding about the sale of Goods Act. Acquaint knowledge about ownership and delivery of goods.
4.	Arbitration and Conciliation:	Concept of Arbitration & Conciliation. Definition & Essentials of Arbitration Agreement. Power and Duties of Arbitration. Conciliation proceeding. (Provisions of Arbitration & Conciliation Act, 1996 in nutshell with Amendment of 2021to be covered.)	To give Comprehensive insight about the emerging trend of Arbitration and conciliation and its regulatory mechanism







Revised Syllabus (2019 Pattern) for three years B. Com. Degree Course (CBCS)

T. Y. B. Com. (Semester- V)

Paper: ADVANCED ACCOUNTING - I

Code: 352 No. of lectures: 48

Preamble

In today's modern age, the Corporate, Banking and Investment sectors are the major contributors towards development of Indian Economy. In the last two decades, these sectors have seen the largest and fastest growing sectors and enormous growth in Indian economy. In this growth, accounting plays an energetic role and to ensure safeguard of the interest of the stakeholders and the society. It is, therefore, important to educate the students of commerce in the accounting practices adopted by different organizations. It helps stakeholders make better business decisions and deal with problems by providing them with accurate financial information. By studying the Learning Path in Accounting – Advance Concepts you will gain a deeper understanding of the accounting process and what it involves.

Objectives of the course

- 1. To acquaint the student with knowledge about various concepts, objectives, and applicability of some important accounting standards.
- 2. To develop the knowledge among the students about reorganization of business regarding restructuring the capital.
- To update the students with knowledge for preparation of final accounts of a Banking Companies with the provisions of Banking Regulation Act 1949.
- 4. To empower to students with skills to prepare the investment account in simple and summarized manner.

Objectives of the Program

To instill the knowledge about accounting procedures, methods and techniques.

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CONTENTS

Unit No.	Unit Title	Contents	Purpose skills to be developed
1	Accounting Standards & Financial Reporting	Brief Review of Indian Accounting Standards Introduction to AS= 3, AS=12 and AS=19 with simple numerical. Introduction to IFRS - Fair Value Accounting.	 To develop conceptual understanding about various Accounting Standards and its applicability and also introduce the students about IFRS – Fair Value Accounting.
2	Accounting for Capital Restructuring (Internal Reconstruction)	Meaning and Concept of Capital Restructuring, Types of Capital Restructuring, Meaning & of Internal Reconstruction Accounting Entries: Alteration of Share Capital, Reduction of Share Capital, Reduction in Liabilities, Cancellation of Expenses, Losses etc. Preparation of Balance Sheet after Internal Reconstruction	To develop conceptual understanding about accounting for capital restructuring in the form of internal reconstruction. To develop the skill & uperade the knowledge.
3)	Final Accounts of Banking Companies	 Introduction of Banking Company, Legal Provisions regarding Non-Performing Assets (NPA) - Reserve Fund - Acceptance, Endorsements & Other Obligations - Bills for Collection - Rebate on Bills Discounted - Provision for Bad and Doubtful Debts Vertical form of Final Accounts as per Banking Regulation Act 1949. Simple Numerical on Preparation of Profit & Loss A/c and 	banking companies. To understand the procedure regarding preparation of final accounts of banking companies.

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F				
			Balance Sheet in vertical form.	
-	_		March & Landard Market of Statement	The section of the section of
		 	 Meaning & Introduction, Classification of Investments, 	- To understand the meaning of different costs
	4	Investment	- Meaning & Calculation of the Concept of Acquisition Cost	incurred in investment business.
	•	Accounting	& Carrying Cost of Investment,	- To develop the knowledge and skill regarding
			 Calculation of Profit/loss on disposal of investments. 	Investment Accounting.

Semester - V Subject: International Econon

Course Code: 353 Total Credits: 3

Preamble:

An approach to International Economics is to examine the International Trade on the basis of trade theories. International Economics ever dynamic and relevant in the current context. International Economics provides a framework on international trade and theoretical context, along with economic analysis as well as practical applications. This paper aims to provide knowledge abo Economics that includes trade theories, trade practices and their implications. It also aims to make students familiar about the vari international economics, international tradeand other concepts related to international economics







Scope of the Programme:

Knowledge of trade theories, trade policies and other subject matters related to international economics.

Objectives:

- To acquaint the students with the basic theories of international trade and international economics.
- To help the students evaluate the working and functions of international organizations and institutions.
- 3. To develop a foundation in the subject that will help the students in their future academic and professional ventures.

Course Outcomes:

- 1.Students will be able to understand present Economic Scenario of Indian Economy as well as World Economy.
- Students will understand the working of foreign trade market and foreign exchange market.
- 3. Students will be able to comprehend trade policies and concepts related to trade policies.
- 4. Students will be able to use the subject knowledge in their future academic and professional ventures.

Unit No.	Topic	Purpose & Skills to be Developed	
Unit 1	International Economics 1.1 Meaning and Scope of International Economics 1.2 Importance of International Economics 1.3 Inter-regional Trade and International Trade 1.4 Role of International Trade in Economic Development 1.5 Trade Problems Facing LDC's	Purpose: To make the students aware of concepts in international economics Skills: Analyze & think critically, developing writing skills.	
Unit 2	Theories of International Trade 2.1 Theory of Absolute Cost Advantage 2.2 Theory of Comparative Cost Advantage 2.3 Theory of Factor Endowment (Heckscher-Ohlin)	Purpose: To give the knowledge to students about trade theories in international economics Skills: understand theories of international trade,	







	2.4 Leontief Paradox	developing writing skills.		
	2.5 Recent Development in Theories- 2.5.1 New Trade Theory (Zeala- Harrison) 2.5.2 Product Life Cycle Theory (Vernon)			
	Trade Policy			
Unit 3	3.1 Free Trade Policy – Meaning, Arguments for and Against 3.2 Protection Policy – Meaning, Arguments for and Against	Purpose: To give the knowledge about trade policies. Skills: Analyze & think critically, developing writin skills.		
	3.3 Tools of Protection: Meaning and Types 3.3.1 Tariffs 3.3.2 Quotas 3.4 Dumping: Concept and its Effects			
	Terms of Trade			
Unit 4	4.1 Meaning and Importance of Terms of Trade 4.2 Types of Terms of Trade A) Gross Barter Terms of Trade B) Net Barter Terms of Trade C) Income Terms of Trade D) Single Factorial Terms of Trade 4.3 Factors affecting Terms of Trade 4.4 Causes of Unfavourable Terms of Trade to Developing Countries	Purpose: To make the students aware of concept of terms of trade. Skills: Analyze & think critically, developing writin skills.		















FYBCOM- MARATHI

Sr. No	Crosscu tting issue	Progra mme	Subject	Class	Name of the course	Contentinthecourse	Course Outcome
1	Professiona l Ethics	BA	Marathi	FYBCO M	Bhasha, SahityaAani Kaushlyavik as	 Arjlekhan v Patralekhan Prashasanik Marathi Pragatbhashik Kaushalya 	Chatromeivayavsa yik andbhashakaushala yavadhvtoh. It increases linguistic skills in the students which are highly useful for developing professional ethics in them.







• It increases linguistic skills in the students which are highly useful for developing professional ethics in them.

	विषयाचे नाव – भाषा आणि कीर	ाल्यविकास (११७)	
	(Ability Enhancement	t Course)	
	Proper	signal and L	anguage Skill
SEE.	तपशील	शेवांक	militar
1	अर्जलेखन व पमलेखन : १. अर्जलेखन : अर्जाचे विविध नमुने - विनंती अर्ज, नोकरीसाठी अर्ज, माहितीच्या अधिकारातील अर्ज, संगमकीय अर्जलेखन- बुनिकोडमपून मायक्रोसॉफ्ट वर्डमध्ये अर्ज. २. प्रशासन : खासगी पत्रव्यवहार, प्रशासनिक प्रज्यवहार, व्यावसायिक पत्रव्यवहार, इ- मेत.	ŧ	8%
2	प्रशासनिक मराठी :- १. इतिवृत्त लेखन २. माहितीपत्रक ३. जाडीर निवेदन ४. वाणिज्य व माहिती तंत्रज्ञानविषयक पारिभाषिक संज्ञा		*4
78	प्रगत भाषिक कीशल्ये : १. सारांशलेखन २. भाषांतर-(इंग्लिश - मराठी) जाहिरातलेखन : १. आकाशभाणी २. वृत्तपत्र ३. द्रिधिश्रभाणी	8	44







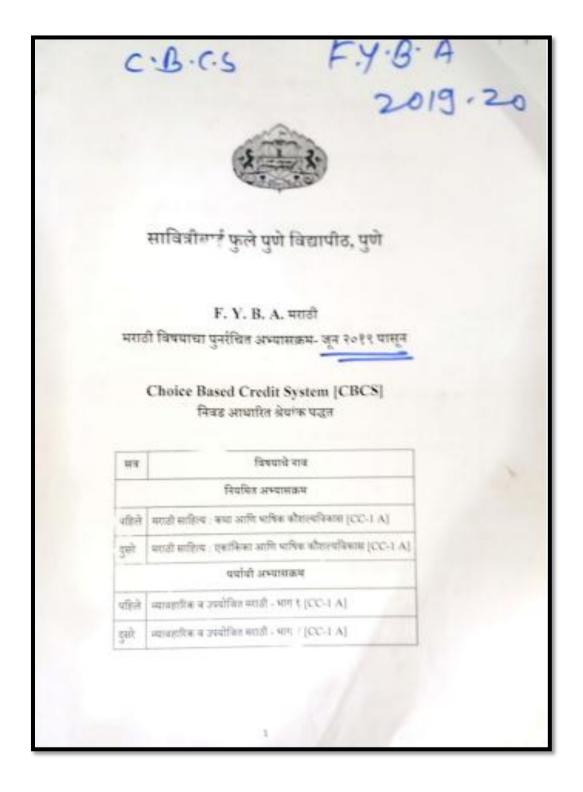
FYBA MARATHI

Sr. No	Crosscutting issue	Program me	Subject	Class	Name of the course	Contentinthecours e	Course Outcome
1	Professional Ethics		Marathi Marathi	FYB A	Marathi sahitya: kathaanibhash ikkaushalvikas Marathi sahitya: ekankikaani bhashikkausha lvikas	 Katha: svaroopanivaa tchall Sankalin Marathi katha Bhashikkaush alvikas Ekankika: svaroop, ghatak Pustak: Marathi ekankika 	Chatromeivaya vsayik andbhahakaush alayavadhvtoh. It increases linguistic skills in the students which are highly useful for developing professional ethics in them. It increases linguistic skills in the students which are highly useful for developing professional ethics in them.















F.Y.B.A. (then set more)

finer, आधारित केंग्रोक पदात (Choice Based Credit System)

पहिले सप्र

विषयाचे नाव : भराठी साहित्य : कथा आणि भाषिक कौशल्यविकास (CC-1 A)

अभ्यातासम्बद्धी परिष्टे :

- कथा या साहित्यप्रकाराची ओळख करूप देशे.
- क्या या साहित्यप्रकाराचे स्वरूप, घटक आणि प्रकार वांची ओळख करून देवे.
- विकिय साहित्यप्रवाहांमधील कथा या साहित्यप्रवस्तर्गल निवडक कथाने अध्यवर करणे.
- माधिक कौशल्यविकास करने.

पहिले सत्र :

	नगोत -	शेयांक	वासिक्स
*	कथा : स्वश्य आणि बाटबाल कथा : पटक कथा : प्रकार (रचनादकार आणि प्रवाह)	4	19
9	अभ्यासपुरतक : सम्बकालीन मराठी कथा अस्तवंध प्रकाशन, पुणे संपादक : प्रा. डॉ. शिरीव लंडगे, प्रा. डॉ. दिलीव पवार, प्रा. डॉ. संदीय सांगळे	3	89
4	भाषिक कोशल्यविकाम वैसर्गिक : आकलनामह अवन आर्तित : संभाषण, वायन, लेखर, इ-संबाद कौशत्स प्रगत : साराहण, सार्गशलेखन		14

संदर्भ ग्रंथ

- १. भराती सक्तित्य : प्रेरणा आणि स्वरूप, संपादक दी. गो. मा. पवार, वी. म. द. हातकणंत्रलेकर
- २. वाहित्यमृत्य आणि अभिक्षी, डी. गो. या. पनार
- काही साहित्यक : काही साहित्यकृती, डॉ. भीमताव कुलकर्णी
- साहित्य अध्यापन आणि प्रकार, वा. ल. कुलकाणी गीरव प्रंथ, संचादक थी. पु. भागवत, वॉ. सुधीर रसाळ कव्य : संकटना आणि समीक्षा, सुध्य जोशी, मीत प्रकाशन
- 📞 मगुडी कथा : विसाने शतक, संवादक के. ज. फुरेटित, सुध्य नोजी

4







	उ	CC-I	VI.
सभ्यास १ स १ स	ह्मणाची उद्दिहे : शक्तिका या साहित्यप्रकाराची ओडाव करून देशे. शक्तिका या साहित्यप्रकाराचे स्वरूप, धटक आणि प्रकार यांची ओडाव करून देशे. शक्तिका या साहित्यप्रकाराचे स्वरूप, धटक आणि प्रकार यांची ओडाव करून देशे. शक्तिका वीशस्यविकास करणे	. 3	Language 5
18	विक्र बारात्पावकार परण	श्रेपांक	वाधिका
पटक	एकांक्रिका : स्वरूप एकांक्रिका : पटन	3	84
*	अध्यातपुरतकः पराठी एकाकिका (विञ्चल तो आला आला – पु. ल. देशपांडे, हंडाभर चांदण्या – दत्ता पाटील) प्रवर्गया प्रकाशन, पुणे संपादकः प्रा. डो. शिरीय लांडगे, प्रा. डो. बाळकृष्ण लांडील, प्रा. डी. धारकर डोके	ŧ	74
1	धाषा उदयोजनाची विविध आविष्कार रूपे संबादलेखन अरूपनाविस्तार घोषवाक्य लेखन भाषांतर	*	15







SYBA

Sr. No	Crosscu tting issue	Prog ram me	Subject	Class	Name of the course	Contentinthecourse	Course Outcome
	Professiona I Ethics	B.A.	Marathi	SYB	Sahitya vichar Sahitya samiks ha Prakas hnvyav haraani sanpad n	 Sahityache swarupaani prayojan Sahityachi nirmitiprak riya Sahityachi samajikta v bhasha samiksha: Sankalpan aaaniswaru p sahityaaani samikshay ancheparas parsamban dh Prakas hansan stha 	Chatromeivayavsayik andbhahakaushalayavadhvtoh. It increases linguistic skills in the students which are highly useful for developing professional ethics in them.







द्वितीय वर्ष कला (S. Y. B. A.)

पहिले सब

विषयाचे नाव

साहित्यविचार |DSE 2 A (3)|

अभ्यासक्रमाची उद्दिष्टे :

- भारतीय आणि पाश्चात्य साहित्यविचाराच्या आधारे साहित्याची संकल्पना, स्वरूप आणि प्रयोजनविचार समजायुन पेणे.
- २. साहित्याची निर्मितिप्रक्रिया समजावून येणे.
- साहित्याची भाषा आणि शैली विषवक विचार समजावून येणे.

पटक	तपशील	श्रेयांक	तासिका
*	 साहित्वाचे स्वरूप आणि प्रवोजन साहित्वाची संकल्पना (भारतीय, पाद्यात्यांच्या व्याख्या), साहित्यातील अनुभवाचे विशेष : वास्तव आणि कल्पित वांचा संबंध, संवेदनात्मकता, भावनात्मकता, वैचारिकता, सेन्द्रीयत्व, सूचकता, विशिष्ट आणि विश्वात्मकता प्रयोजन म्हणजे काय? मम्मटाची प्रयोजने; तसेच इच्छापूर्ती, विज्ञासातृत्री, विरेचन, आत्माविष्कार, अनुभवविश्वाची समृद्री, स्वप्तरंजन, उद्दोधन, प्रचार, मनोरंजन, आनंद या प्रयोजनांचा विचार. 	a-1	æ, y
œ	 साहित्याची निर्मितीप्रक्रिया प्रतिभा, स्फूर्ती, कल्पना, चमत्कृती यांचे स्वरूप, संकल्पना आणि कार्य; साहित्यिकाचे व्यक्तिमत्त्व : संवेदनक्षमता, शैशवयृती, अनुभवसम्बद्धी व विद्वता, साहित्यिकाचा जीवनविषयक आणि साहित्य विषयक दृष्टिकोन. 	146	84
	 साहित्वाची सामाजिकता व भाषा साहित्व आणि समाज, जीवनमूल्ये आणि साहित्व मूल्ये, साहित्ववाचनाची प्रक्रिया व आवश्यकता साहित्वाची भाषा : शब्दाधाँचा वक्रव्यापार; वक्रोक्ती, अलंकार, प्रतिमा, प्रतीक, प्राक्कथा शैली विषयक स्थूल चर्चा - लेखक, आशय, साहित्वप्रकार या अनुरोधाने चर्चा 	r.	*4







दितीय सव

विषवाचे नाव

साहित्य समीक्षा [DSE 2 B(3)]

अध्यासक्रमाची उदिहे :

- १. साहित्य समीक्षेची संकल्पना, स्वरूप यांचा परिचय करून घेणे.
- २. साहित्य आणि समीक्षा यांचे परस्पर संबंध समजावृत येणे व अभ्वासणे .
- साहित्यप्रकारानुसार समीक्षेचे स्वरूप समजावृन पेणे व अभ्यासणे .
- ग्रंथ परिचय, परीक्षण य समीक्षण यातील फरक समजावृन पेणे.

पटक	तपशील	शेयांक	तासिका
٩	समीक्षा : संकल्पना आणि स्वरूप समीक्षा : संकल्पना, स्वरूप आणि प्रयोजन समीक्षा : व्याप्ती आणि प्रकार साहित्यविचार आणि समीक्षा वातील अनुवंध साहित्यव्यवहारातील समीक्षेचे स्थान व कार्य	**	*
٧	साहित्य आणि समीक्षा यांचे परस्पर संबंध साहित्यकृती आणि याचक साहित्यकृती आणि समीक्षक समीक्षेतील साहित्याच्या आकलन, आस्याद, विश्लेषण, अर्थनिर्णयन, मृत्यमापन आणि शब्दांकन यांचे स्थान व कार्यं	**	*4
*	 समीक्षकाचे गुण व पाळावयाची पथ्ये समीक्षकाचे गुण : रसिकता, प्रज्ञा, तुलनाक्षमता, चिकित्सकता, मृत्यविवेक, विश्लेषकता, व्युत्पन्त्रता, तुलनाक्षमता इ. समीक्षकाने पाळावयाची पथ्ये : समीक्षाविषयाचे अवधान व तारतम्य, निक्याचे तारतम्य, व्यक्तिनिष्ठता व वस्तुनिष्ठता यांचे तारतम्य, मांडणी व शैली यांचे तारतम्य, संगती व सुसूत्रता यांचे भान, नेमकेपणा व तार्किकता वा संबंधीचा विवेक, वाक्ष्यीन मृत्ये व वीवनमृत्ये यांचा परस्परसंबंध आणि त्यांच्या वापराबाबत करावयाचा विवेक. भाषिक, साहित्यक, सांस्कृतिक संकेत आणि मृत्यव्यवहार उपयोजीत समीक्षा : ग्रंथ परिचय, ग्रंथ परीक्षण, ग्रंथ सनीक्षा 	**	ž

संदर्भग्रेश :

- १. साहित्व : स्वरूप आणि समीक्षा, वा. ल. कुलकर्णी
- २. समीक्षामीमांसा, गंगाधर पाटील
- मराठीचे साहित्यशास्त्र, मा. गो. देशमुख
- ४. टीका आणि टीकाकार, वा. भा. पाठक
- साहित्वविचार आणि सौंदर्वशाख, रा. भा. पाटणकर







द्वितीय वर्ष कला (S. Y. B. A.)

कौशल्याधिष्ठित अध्यासक्रम

पहिले सप्र विषयाचे नाव

प्रकाशनव्यवहार आणि संपादन (SEC 2 A (2))

अभ्यासक्रमाची उदिष्टे :

- १. प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त करणे.
- प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक प्रशिक्षण येगे.
- प्रकाशनव्यवहार आणि संपादन यासाठी प्रात्यक्षिकासह उपयोजनाची कौशल्ये प्राप्त करणे.
- प्रकाशन संस्था, जाहिरात संस्था, छापखाने, वृत्तपत्र कार्यालये, वितरण संस्था, ग्रंथ विक्री दुकाने, फ्लेक्स निर्मिती केंद्र, वार्ताहर यांना भेटी देऊन प्रशिक्षण येणे.

घटक		तपशील	श्रेयांक	नासिका
	*	प्रकाशन संस्था : स्वरूप, कार्यप्रणाली, कॉपीगईट कायद्याची लॉडओलख, प्रचविक्री, वितरण, वाहिरात, वाचकसंवाद		
3	a	प्रथनिर्मिती प्रक्रिया, ग्रंथ प्रकार : ललित, माहितीपर, शास्त्रीय, संदर्भग्रंथ इ.; प्रथनिर्मिती : संहिता संपादन, संपादकीय संस्कार, लेखक संयाद, मुखपृष्ठ, मुद्रणप्रत, छपाई, ग्रंथ योधणी.	80	84
2	*	मुद्रितशोधन : लेखनविषयक नियम, मुद्रितशोधन खुणा, किरामविन्ते, अवतरणे, संक्षेप, मजकुराची मांडणी, चित्र रेखाटन योजना, सूची, संदर्भग्रंथसूची, परिशिष्टे, दर्शनीय स्वरूप, आकार.	*	44

संदर्भ ग्रंथ :

- १ पॉप्युलर रीतिपुस्तक, रामदास भटकळ, मृदुला जोशी
- २ सुगम मराठी व्याकरण व लेखन मो.रा. वाळवे
- मराठीचे व्याकरण, डॉ. लीला गोविलकर
- ४ मराठी लेखन मार्गदर्शिका, वास्मिन शेख
- ५ मुद्रित-शोधन, य. ए. धायगुढे
- ६ शुद्ध शब्दकोश, डॉ. स्नेहल तायरे
- मराठी शुद्धलेखन नियमावली, डॉ. स्नेहल तावरे
- ८ मराठी लेखन कोश, अरुग फडके
- ९ शद्धलेखन मार्गप्रदीय, अस्य फडके
- ९० उपयोजित मराठी, संपादक डॉ. केतकी मोडक, संतीय शेगई, सुजाता शेणई







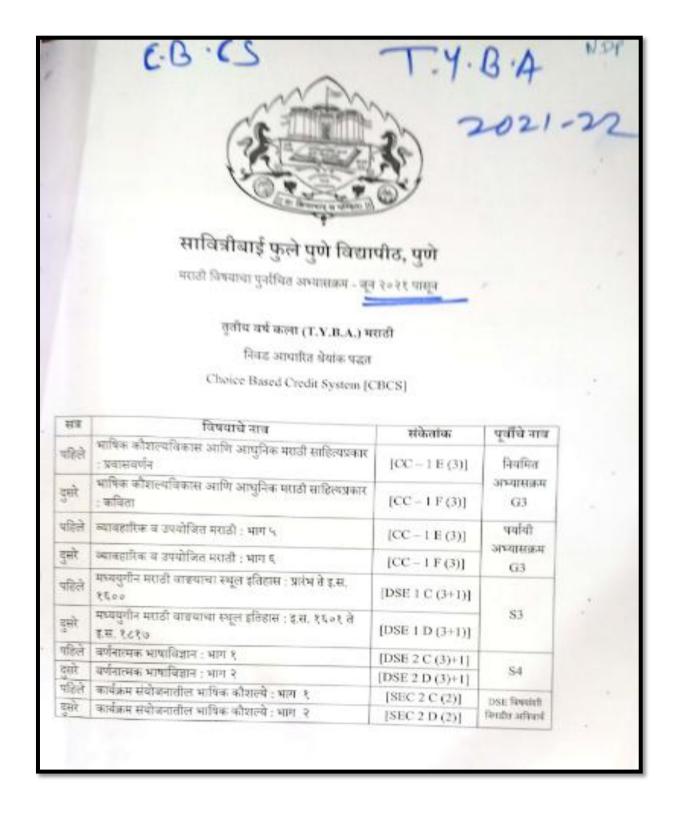
TYBA

Sr. No	Crosscu tting issue	Prog ram me	Subject	Class	Name of the course	Contentinthecourse	Course Outcome
	Professiona l Ethics	B.A.	Marathi	TYB A	Bhashikkaushakvikasa niaadhunik Marathi sahityaprakar: prakashvaran	 Prakashvaran: svaroop, ghatak, prakaranivaatc hal Teen mulanche char divas 	Chatromei manavimul yehvadhavt oh. It increases linguistic skills in the students
					Bhashikkaushakvikasa niaadhunik Marathi sahityaprakar: kavita	 kavita:svaroop , ghatak, prakaranivaatc hal roop: kavitavhe 	which are highly useful for developing professiona l ethics in them.















तृतीय वर्ष कला (T. Y. B. A.)

नियमित अध्यासक्रम पहिले सत्र

विषयाचे नाव

भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : प्रवासवर्णन (CC – 1 E (3))

अध्यासक्रमाची उद्दिष्टे :

- मुद्रित माध्यमांसाठी लेखन कौशल्ये आत्मसात करणे.
- ३ प्रवासवर्णन या साहित्यप्रकाराचे स्वरूप, प्रेरणा, प्रयोजने, वैशिष्ट्वे आणि वाटचाल समजून येणे.

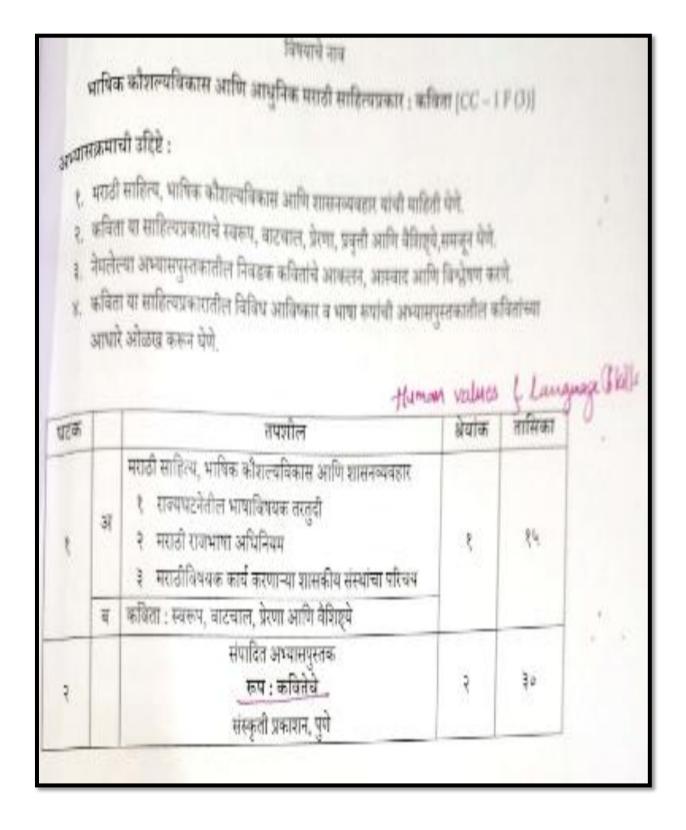
वेमलेल्या प्रवासवर्णनाचे आकलन,आस्वाद आणि विश्लेषण करणे.

	_	Truman values		A CONTRACTOR	364111
घटक		तपशील	श्रेयांक	वासिका	
2	अ	मुद्रित माध्यमांसाठी लेखन कौशल्ये : १ ज्तलेख : स्वरूप व वैशिष्ट्ये २ अप्रलेख : स्वरूप व वैशिष्ट्ये ३ सदर लेखन : स्वरूप व वैशिष्ट्ये ४ परीक्षण : स्वरूप व वैशिष्ट्ये	3	ę.	3
	व	प्रवासवर्णन साहित्यप्रकार : स्वरूप, प्रेरणा, प्रयोजने, वाटचाल आणि वैशिष्ट्ये			
?		अभ्यासपुस्तक <u>भीन मुलांचे चार दिवस</u> आदर्श पाटील, विकास बाळके, श्रीकृष्ण शेळके साधना प्रकाशन, पुणे	٩	30	-















MA PART I MARATHI

Sr/ No.	Crossc utting issue	Prog ram	subjec t	cla ss	Name of the course	Content in the course	outcome
1	Professi onal Ethics	MA	MAR ATHI	M A PA RT I	Bhashavyavaharan ikaushalaya	n • Arjalekhanani partalrkan	Chatromeivayavsa yik andbhahakaushala yavadhvtoh. It increases linguistic skills in
2					Bhashavyavaharan ikaushalaya	anuvadlekhan • Nivedankaush alaya	the students which are highly useful for developing professional ethics in them.
3					Samajbhashavigya n	UNIT-1,2,3.4	
					Ethihasikbhasha vi gyan	UNIT-1,2,3.4	







	निवड आधारित श्रेमांक पदत (Choice Based Credit System) जून २०१९ चासून विषयाचे नाव : भाषाव्यवहार आणि भाषिक कौशल्ये भाग १ (CC-1)
	पहिले सत्र
चुटक १.	मराठीच्या प्रमाणभाषे चे लेखन व मुद्रितशोधन १.१ प्रमाणभाषा : संकल्पना, स्वरूप आणि आवश्यकता १.२ प्रमाणभाषाविषयक लेखननियम : परिचय १.३ प्रमाणभाषाविषयक लेखननियमांचे उपयोजन (उताऱ्याचे लेखननियमांनुसार लेखन) १.४ मुद्रितशोधन : संकल्पना, स्वरूप आणि आवश्यकता १.५ मुद्रितशोधनाच्या खुणा, चिन्हे
घटक रे.	१.६ मुद्रितशोधन : उपयोजन (उताऱ्याचे मुद्रित शोधन) १५ तास १ अयोक वाद्वयीन उपवहार व प्रकाशन व्यवसाय २.१ विविध साहित्यसंस्था थ त्यांचे वाद् मयीन कार्य
	 साहित्यसंस्था व त्यांची मुखपत्र साहित्यसंस्थांकडून आयोजित केली जाणारी साहित्यसंगेलने अ वाङ् मयीन नियतकालिके व अनियतकालिके. प्रिवाळी अंक, विशेषांक, स्मरणिका, संशोधनपत्रिका इ. चे संपादन, मांडणी, जाहिरात आणि
	ISSN विषयक माहिती. २.६ प्रकाशन व्यवसाय, प्रकाशन संस्था, पुस्तक प्रकाशन २.७ ग्रंथ संहिता निवड, ग्रंथमांडणी व सकावट, मुखपृष्ट, मलपृष्ठ, वांधणी, क्राहिरात, वितरण आणि ISBN विषयक माहिती. १५ तास १ क्षेयोक
पटक 3.	मुलाखतः स्वरूप, तंत्र व कौशल्ये ३.१ मुलाखतीचे प्रयोजन व स्वरूप ३.२ मुलाखतीचे प्रकार ३.३ मुलाखतीची पूर्वतयारी





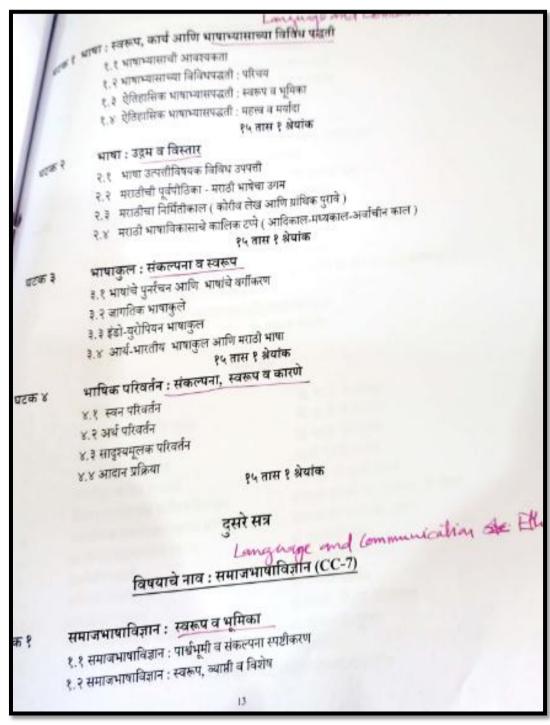


	३.४ मुलाखनीसाठीची प्रश्नसूची
	इ.५. माध्यमनिहाय मुलाखती
	३,६ प्रासंगिक मुलाखती
	३.७ मुलाखत लेखन
	१५ तास १ श्रेयांक
	अर्जलेखन व पत्रलेखन
8.	४,१ अर्जाचे स्वरूप व प्रकार
	४.२ पत्रलेखनाचे विविध प्रकार
	४.३ संगणकीय पत्रव्यवहाराचे तंत्र
	४.४ प्रशासनिक पत्रव्यवहार
	४.५ प्रशासनिक परिभाषा
	१५ तास १ श्रेयांक टी हो दि वार्य
	guit HA Professional Skills
	दसरे सत्र है । जन्म कर्म दिस्सी पर
	The sound
	विषयाचे नाव : भाषाव्यवहार आणि भाषिक कौशल्ये भाग-२ (CC-5)
ę.	भाषांतर व अनुवाद लेखन
27	१,१ भाषांतराचे स्वरूप
	१,२ भाषांतराची आवश्यकता च महत्व
	१,३ भाषांतराचे विविध प्रकार
	१ x भाषांतर, अनुवाद, भावानुवाद आणि रूपांतर वातील साम्य-भद
	३ ६ इंग्लिका उतान्याचे मराठात भाषातर करण
	 इ. किंसी जनाज्याचे मराठीत भाषांतर करणे.
	१५ तास १ अपाक
2	निवेदन कौशल्पे
	२.१ निवेदनाची आवश्यकता व स्वरूप
	२.२ निषेदमाची तंत्रे, निवेदनाची शैली
	E IN Contract republicati
	२.३ विविध कार्यक्रमाचे नियेदन आणि सूत्रसंचालन (सांस्कृतिक कार्यक्रम, जाहीर कार्यक्रम २.४ विविध कार्यक्रमाचे नियेदन आणि सूत्रसंचालन (सांस्कृतिक कार्यक्रम, जाहीर कार्यक्रम
	आकाशवाणी व द्रदरनिवरील कायक्रम)
	क्यानी विजेत्याचे गर्णावेशिष
	हेंद वाल र अचन
3	जनसंपर्क : संकल्पना व स्वरूप
	३.१ जनसंपकवि स्वरूप व आवश्यकता
	३.१ जनसंपर्क कौशल्याची तंत्रे, जनसंपर्क कौशल्याची भाषा ३.२ जनसंपर्क कौशल्याची तंत्रे, जनसंपर्क कौशल्याची भाषा
	३.३ माहिती व जनसंपर्क अधिकारी ३.४ शासन, विद्यापीठे, शैक्षणिक संस्था, बँका, कंपन्यांसाठी जनसंपर्काचे महत्त्व व आवश्यकता
	३.४ शासन, विद्यापीठे, शैक्षणिक संस्था, बंकी, कंपन्याकाठा जनस्थान । १५ तास १ श्रेयांक
	रूप ताल र अचाचा















	१,३ भाषिकसापेश्वतावादाचा सिद्धांत					
	१,३ भाषा, बोली आणि समाज यांचा परस्परसंबंध १,४ भाषा,					
	१५ तास १	श्रेयांक				
	भाषाउपयोजनातील वैविध्य : स्वरूप व मार					
16 P	२.१ समाजातील भाषा उपयोजनातील विविधता					
	२.२ भाषा आणि विविध व्यवसायक्षेत्रे : परस्परसंबंध					
	२,३ भाषा आणि आर्थिक वर्गन्यवस्था : परस्परसंबंध					
	२,३ भाषा आणि आणिक वर्गान्यवस्था : परस्परस्था					
	२,४ भाषा,भाषिक भांडार आणि लघुक्षेत्रे : विशिष्ट ४ १५ तास १	श्रीयांक्य व क्षेत्रांक्य				
		(अयोक				
~3	भाषा आणि संस्कृती : परस्परसंबंध					
医趣 身	३.१भाषेचे संस्कृतीसापेक्षत्व : स्वरूप चर्चा	and the state of t				
	३.२ भाषा आणि सांस्कृतिकञ्चवस्था, सांस्कृतिक प	गंपरा : परस्पस्सवेष				
	३.३ विविध सामाजिक स्तर आणि भाषा : सहसंबंध	T .				
	३.४ भाषेचा लिंगसापेक्षविचार : स्वियांची भाषा आ	चि पुरुषांची भाषा				
	१५ तास	१ श्रेयांक				
S SECTION	विविध नवञ्यवस्था : बदलती भाषारूपे					
ace o	४.१ समाजांतर्गत निर्माण झालेल्या नवन्यवस्था : स्थूल परिचय					
	्र चार्चार्वार्वात प्रवासकार । आविषकारपदिती व भाषारूपे					
	४.३ प्रमाण भाषा आणि परभाषा संपर्क विजिन(Pic	igin)आणि क्रिऑल (Creol) भाषाच्या				
	निर्मितीच्या संदर्भोतील सिद्धातन.					
	u u mariania विशिष्ठ नवस्थातस्था आणि परिष	गायेचा बानर				
	१५ तास	१ श्रेचीक				
	संदर्भ ग्रंथ					
		इं. मा.गो. कालेलकर				
1.	ध्वनिविचार भाषाः इतिहास आणि भूगोल	डॉ. न.गो. कालेलकर				
₹,	भाषाः इतिहास जान्य नूनारः भाषा आणि संस्कृती	डॉ. ना.मी. कालेलकर				
3.	মানা আলি মাধায়গুৰ	डो श्री,न गर्नेडगडकर				
W.	मगडीचा भाषिक अध्यास	संपादक डॉ. मु.बी.कामडे				
4	विज्ञानः वर्णनात्मक आणि ऐतिहासिक	संपादक मालशे, डॉ. इनामदार, डॉ.सोमण				
,	वणगीत्मक भाषाविज्ञानःस्वरूप आणि पदती	संशदक डॉ. काळे, डॉ. सोमण डॉ.स्डॉसिनी लदद्				
	मराठीच्या प्रमाधभाषेचे स्वरूप	हा.सुहासना तत्त्वू श.स्प्रेश घॉगडे				
	अर्जाचीन मराठी	द्वारामा वाग्य द्वारामा बोगळेका				
	(o.) প্রমিন্ত শাষাবিকান	डॉ.मालरो, डॉ.पुंडे, डॉ.सोमग				
	११. भाषाचित्रान परिचय १२. मणडी भाषान्यवस्था आणि अध्यापन	डॉ. बंद्रकांत इंदाप्तकर				
	Company of the second s	त्मेश वस्त्रेडे				
	 समाज भाषाविज्ञानः एक नवे अभ्यासधेत्र मर 	हरी संशोधनगत्रिका,मार्च १९७४				
	14					







MATHEMATICS







F.Y.B.Sc MATHEMATICS







FY.BSC - Mathematics

Sr.N o	Crosscutti ng issue	Program me	Subject	Class	Name of the course	Contentin thecourse	Course Outcome
	Professional Ethics	FYBSC	MT 123: Mathemati cs Practical	FYBS C	MT 123: Mathemat ics Practical	2. L' Hospital Rule and Successive Differentiati on	Technolo gy skills: Using computer software maxima and graphing calculator whenever possible develops professio nal skills in students.







• Technology skills: Using computer software maxima and graphing calculator whenever possible develops professional skills in students.

Modalities For Conducting The Practical and The Practical Examination:

- 1) There will be one 3 hour practical session for each batch of 15 students per week.
- 2) The College will conduct the Practical Examination at least 15 days before the commencement of the Main Theory Examination. The practical examination will consist of written examination of 20 marks, 10 marks on maxima software and oral examination of 05 marks.
- There will be no external examiner, the practical exam will be of the duration of 3 hours.
- 4) The subject teacher will set a question paper based on pattern as follows:
 - Q1. Any 2 out of 4 each question of 5 marks on paper I.
 - Q2. Any 2 out of 4 each question of 5 marks on paper II.
 - Q3. (a) Any 1 out of 2 each question of 5 marks on maxima software from paper – I.
 - (b) Any 1 out of 2 each question of 5 marks on maxima software from paper II.
- Each student will maintain a journal to be provided by the college.
- The internal 15 marks will be given on the basis of journal prepared by student and the cumulative performance of student at practical.
- 8) It is recommended that concept may be illustrated using computer software maxima and graphing calculators wherever possible.
- Study tours may be arranged at places having important mathematical institutes or historical places.

10) Special Instruction:

- a) There should be well equipped mathematics practical laboratory of size 20 X 20 sq. fts containing at least 10 computers.
- Examiners should set separate question papers, solutions and scheme of marking for each batch and claim the remuneration as per rule.
- c) Before starting each practical necessary introduction, basic definitions, intuitive inspiring ideas and prerequisites must be discussed.







S.Y.B.Sc MATHEMATICS







SY.BSC - Mathematics

Sr.N o	Crosscutti ng issue	Program me	Subject	Class	Name of the course	Contenti n thecours e	Course Outcome
1	Professional Ethics	SYBSc	MT 243: Mathemati cs Practical		MT 243: Mathematics Practical	Maxima Software	Technolog y skills: Using computer software maxima and graphing calculator whenever possible develops profession al skills in students.







Practical 6: Problems on Unit 3 and Unit 4 from MT-241 using maxima software.

Practical 7: Problems on Unit 1 (Written) from MT-242.

Practical 8: Problems on Unit 2 (Written) from MT-242.

Practical 9: Problems on Unit 3(Written) from MT-242.

Practical 10: Problems on Unit 4(Written) from MT-242.

Practical 11: Problems on unit 1 and Unit 2 from MT-242 using maxima software.

Practical 12: Problems on Unit 3 and Unit 4 from MT-242 using maxima software.

Note:

- 1 The soft copy of practical on maxima software will be prepared and provided by the Board of Studies in mathematics.
- 2. Practicals on maxima software shall be performed on computer only...
- 3.Practical examination 25 marks on written problems, 10 marks for problems on maxima software (5 marks for writing syntax and 5 marks to perform the same on computer only).

Modalities For Conducting The Practical and The Practical Examination:

- There will be one 4 hour 10 minutes (250 minutes) practical session for each batch of 15 students per week.
- 2) The College will conduct the Practical Examination at least 15 days before the commencement of the Main Theory Examination. The practical examination will consist of written examination of 20 marks, 10 marks on maxima software and oral examination of 05 marks.
- There will be external examiner; the practical exam will be of the duration of 3hours.
- 4) The teacher will set a question paper at the time of paper setting meeting conducted by Savitribai Phule Pune University, Pune based on pattern as follows
 - Q1. Any 2 out of 4 each question of 5 marks on paper I.
 - Q2. Any 2 out of 4 each question of 5 marks on paper II.
 - Q3. (a) Any 1 out of 2 each question of 5 marks on maxima software from paper 1.
 - (b) Any 1 out of 2 each question of 5 marks on maxima software from paper II.
- 5) Each student will maintain a journal to be provided by the college.
- The internal 15 marks will be given on the basis of journal prepared by student and the cumulative performance of student at practical.
- 8) It is recommended that concept may be illustrated using computer software maxima and graphing calculators wherever possible.







T.Y.B.Sc MATHEMATICS







TYBSC – Mathematics

Sr.N o	Crosscutti ng issue	Program me	Subject	Class	Name of the course	Contentin thecourse	Course Outcom e
	Professional Ethics	TYBSC	Machine Learning(A)	TYBS	Machine Learning(A)	1. Introducti on to machine Learning	1. Gain knowled ge about basic concepts of Machine Learning. 2. Identify machine learning techniqu es suitable for a given problem. 3. Solve the problems using various machine learning techniqu es.







DSE-3B: MT-356(A): Machine Learning-I (2 credits)

Course Objectives:

Students will try to learn:

- To introduce students to the basic concepts and techniques of Machine Learning.
- To become familiar with introduction to NumPy Array and Matrices.
- To become familiar with discover and visualize data to gain insights.
- To become familiar with Fine-tuning the model Grid Search, Randomized Search.
- To develop the ability to write database applications in Python.

Course Learning Outcomes:

Upon successful completion of this course the student will be able to:

- Gain knowledge about basic concepts of Machine Learning.
- Identify machine learning techniques suitable for a given problem.
- Solve the problems using various machine learning techniques.

Course Contents:

Unit 1: Introduction to Machine Learning

[08 Lectures]

- 1.1 What & why behind machine learning
- 1.2 Types of Machine Learning Supervised vs Unsupervised
- 1.3 Model Based Training
- 1.4 Main challenges of Machine Learning
- 1.5. Testing and Validating

Unit 2: Introduction to Python

08 Lectures

- 2.1 The Way Of The Program
- 2.2 Variables, Expressions and Statements







TYBSC - Mathematics

Sr.N o	Crosscutti ng issue	Program me	Subject	Class	Name of the course	Contenti n thecours e	Outcome
	Professional Ethics	TYBSC	SEC-I: MT -3510: Programmi ng in Python–I	C	Progra mming in Python –I	Unit 1: Introduct ion to Python	 To understand why Python is a useful scripting language for developers. 4. To acquire programmin g skills in core Python. The student will be able to explain basic principles of Python programmin g language.







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SEC-I: MT -3510: Programming in Python-I (2 credits)

Course Objectives:

- 1. To understand why Python is a useful scripting language for developers.
- 2. To learn how to use lists, tuples, and dictionaries in Python programs.

- 3. To learn and understand python looping, control statements and string manipulations.
- 4. To acquire programming skills in core Python.

Course Learning Outcomes: At the end of the course:

- The student will be able to explain basic principles of Python programming language.
- 2. The student will implement object oriented concepts.

Course Contents:

Unit 1: Introduction to Python

[06 Lectures]

- 1.1 Installation of Python
- 1.2 Values and types: int, float and str,
- 1.3 The Print Function: Print basics
- 1.4 Variables: assignment statements, printing variable values, types of variables.
- 1.5 Mathematical Operators, operands and precedence:+, -, /, *, ***, % PEMDAS (Rules of precedence)
- 1.6 String operations: + : Concatenation, * : Repetition
- 1.7 Boolean operator:
 - 1.7.1 Comparison operators: ==, !=, >, =, <=
 - 1.7.2 Logical operators: and, or, not
- 1.8 Mathematical functions from math, emath modules, random module
- 1.9 Keyboard input: input() statement
- 1.10 Calculus: Differentiation, Integration, Limit and Series

Unit 2: String, list, tuple

[06 Lectures]

- 2.1 Strings:
 - 2.1.1 Length (Len function)
 - 2.1.2 String traversal: Using while statement, Using for statement
 - 2.1.3 String slice
 - 2.1.4 Comparison operators (>, <, ==)
- 2.2 Lists:
 - 2.2.1 List operations
 - 2.2.2 Use of range function
 - 2.2.3 Accessing list elements
 - 2.2.4 List membership and for loop







TYBSC - Mathematics

Sr.N o	Crosscutti ng issue	Program me	Subject	Class	Name of the course	Contentin thecourse	Course Outcome
	Professional Ethics	TYBSC	SEC-II: MT- 3511: LaTeX for Scientif ic Writing	TYBS	LaTeX for Scientif ic Writing	1.Introducti on to LaTeX	i) To provide an understanding of the basicmechanis ms of LaTeX, using plain text as a vehicle ii) To acquaint students with the latest typesetting skills, which shall enable them to prepare high quality typesetting







SEC-II: MT-3511: LaTeX for Scientific Writing (2 credits)

Course Objectives: The purpose of this course is

- To provide an understanding of the basicmechanisms of LaTeX, using plain text as a vehicle
- To acquaint students with the latest typesetting skills, which shall enable them to prepare high quality typesetting.

Course Learning Outcomes: After studying this course the student will be able to:

- i) Write a simple LaTeX input document based on the article class.
- ii) Turn the input document into pdf with the pdflatex program.
- iii) Format Words, Lines, and Paragraphs.
- iv) Understand how to present data using tables.

Course Contents:

Unit 1. Introduction to LaTeX

[06 Lectures]

- 1.1 Definition and application of LaTeX
- 1.2 Preparation and Compilation of LaTeX input file
- 1.3 LaTeX Syntax
- 1.4 Keyboard Characters in LaTeX

Unit 2. Formatting Words, Lines, and Paragraphs

[09 Lectures]

- Text and Math Mode Fonts.
- 2.2 Emphasized and Colored Fonts







TYBSC - Mathematics

Sr.N o	Crosscutti ng issue	Program me	Subject	Class	Name of the course	Contentin thecourse	Course Outcome
	Professional Ethics	TYBSC	Machin e Learnin g-2	TYBS C	Machin e Learnin g-2	1. Classificati on MNIST dataset	The study of modern computing big data technologi es and scaling up machine learning techniques focusing on industry applications.







DSE-6B: MT-366(A): Machine Learning-II (2 Credits)

Course Objectives:

The main goal of this course is to help students learn, understand, and practice machine learning approaches, which include the study of modern computing big data technologies and scaling up machine learning techniques focusing on industry applications.

Course Learning Outcomes:

The students learning outcomes are designed to specify what the students will be able to perform after completion of the course: Ability to select and implement machine learning techniques and computing environment that are suitable for the applications under consideration.

Course Contents:

Unit 1: Classification of MNIST dataset

[10 Lectures]

- 1.1 MNIST
- 1.2 Training a Binary Classifier
- 1.3 Performance Measures Measuring accuracy using Cross Validation, Confusion Matrix, Precision and Recall
- 1.4 Multiclass Classification
- 1.5 Multilabel Classification

Unit 2: Linear Regression

[10 Lectures]

- 2.1 Linear Regression
 - 1. The Normal Equation
- 2.2 Gradient Descent
 - 1. Batch Gradient Descent
 - 2. Stochastic Gradient Descent
 - 3. Mini-batch Gradient Descent







TYBSC - Mathematics

Sr.N o	Crossc utting issue	Progra mme	Subject	Cla ss	Name of the course	Contenti n thecours e	Course Outcome
1	Profession al Ethics	TYBSC	SEC-III: MT -3610: Programmi ng in Python–II	TY BS C	Programmi ng in Python—II	Unit 1: Graphics	1. Demonstrate the use of Python in Mathematics such as operations research and computational Geometry etc. 2. Study graphics and design and implement a program to solve a real world problem. 3. The students will implement the concepts of data with python and database connectivity.







SEC-III: MT-3610: Programming in Python –II(2 Credits)

Course Objectives:

- To acquire Object Oriented Skills in Python.
- To develop the skill of designing Graphical user Interfaces in Python.
- To learn and understand Python programming basics and paradigm.
- To learn the concepts of visualization of data and database connectivity.
- To develop the ability to write database applications in Python.

Course Learning Outcomes:

Upon successful completion of this course the student will be able to:

- Demonstrate the use of Python in Mathematics such as operations research and computational Geometry etc.
- Study graphics and design and implement a program to solve a real world problem.
- The students will implement the concepts of data with python and database connectivity.

Course Contents:

Unit 1: Graphics

[06 Lectures]

- 1.1 Turtle Graphics: Overview of Turtle Graphics , Turtle Operations, Object Instantiation and the turtle graphics Module.
- 1.2 Drawing Two-Dimensional Shapes
- 1.3 Taking a Random Walk
- 1.4 Colors and the RGB System
- 1.5 Drawing with Random Colors
- 1.6 Using the str Function with Objects.

Unit 2: Data Visualization with Python

[04 Lectures]

- 2.1 Seaborn
- 2.2 Matplotlib
- 2.3 Plotly
- 2.4 MayaVI







COMPUTER SCIENCE: MATHEMATICS







FYBCS MATHEMATICS







FY BCS- Matrix Algebra

Sr.N o	Crosscuttin g issue	Programm e	Subjec t	Clas s	Name of the course	Contentin thecourse	Course Outcome
	Professional Ethics	BCS	Matrix Algebr a	F.Y. BCS	Matrix Algebr a	Introductio n to matrix Algebra	Professional Development : Ethical professionals engage in continuous learning and professional development to stay up-to- date with the latest advancements in matrix algebra and related fields. This ensures that they provide the best possible service to their clients or employers.







• Students engage in continuous learning and professional skill development to stay up-to-date with the latest advancements in matrix algebra and related fields. This ensures that they provide the best possible service to their clients or employers.

Deta	ıiled	Syl	labı	us:

Semester - I

MTC-111: Matrix Algebra

Unit 1 : Introduction (4 lectures)

- 1.1 Matrix Operations
- 1.2 The Inverse of a Matrix
- 1.3 Characterization of invertible matrices

Unit 2 : Linear Equations in Linear Algebra-I (12 lectures)

- 2.1 System of Linear equations
- 2.2 Row reduction and echelon forms
- 2.3 Vector equations
- 2.4 The matrix equation Ax=b
- 2.5 Solution sets of linear systems

Unit 3 : Linear Equations in Linear Algebra -II (12 lectures)

- 3.1 Partitioned Matrices
- 3.2 Matrix factorization [Lu decomposition]
- 3.3 Linear Independence
- 3.4 Introduction to linear transformation
- 3.5 The matrix of linear transformation
- 3.6 Subspaces of Rⁿ
- 3.7 Dimension and Rank







FY BCS- Linear Algebra

Sr. No	Crosscu tting issue	Progr am	Subject	Class	Name of the course	Contenti n thecours e	Course Outcome
1	Professiona l ethics	BCS	Linear Algebra	F.Y. BCS	Linear Algebr a	Orthogon ality and Symmetri c Matrices	Professional Ethics Connection: Different ethical principles in a professional context should be orthogonal, meaning they should not conflict or interfere with each other. For example, the principle of honesty should not contradict the principle of confidentiality. Each ethical principle should operate independently, allowing professionals
							to adhere to multiple ethical standards without conflicts.







Semester -II

MTC-121: Linear Algebra

Unit 1: Vector Spaces

(10 lectures)

- 1.1 Vector spaces and subspaces
- 1.2 Null spaces, column spaces and linear tranformations.
- 1.3 Linearly independent sets: Bases
- 1.4 Coordinate systems
- 1.5 The dimension of a vector space
- 1.6 Rank

Unit 2: Eigen values and Eigen vectors

(10 lectures)

- 2.1 Eigen values and Eigen vectors
- 2.2 The characteristic equation
- 2.3 Diagonalization
- 2.4 Eigen vectors and Linear transformations

Unit 3:Orthogonality and Symmetric Matrices

(10 lectures)

- 3.1 Inner product, length and orthogonality
- 3.2 Orthogonal sets
- 3.3 Orthogonal Projections
- 3.4 Diagonalization of Symmetric Matrices
- 3.5 Quadratic forms

Unit 4: The Geometry of vector spaces

(6lectures)

- 4.1 Affine combinations
- 4.2 Affine independence
- 4.3 Convex combinations

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FY BCS- Graph Theory

Sr.N o	Crosscuttin g issue	Programm e	Subjec t	Clas s	Name of the course	Contenti n thecourse	Course Outcome
1	Professional ethics	BCS	Graph Theory	F.Y. BCS	Graph Theor y	Euler and Hamilton path.	Hamiltonian paths represent a comprehensive e route, visiting each node (stakeholder or ethical consideration) exactly once. In professional ethics, this signifies addressing the concerns of all stakeholders, making ethical decisions that consider long-term effects and the interests of everyone involved.







MTC-122: Graph Theory

Unit 1: An Introduction to graph

(10 lectures)

- Definitions, Basic terminologies and properties of graph, Graph models.
- Special types of graphs, basic terminologies, properties and examples of directed graphs. Types of diagraphs.
- Some applications of special types of graph.
- Matrix representation and elementary results, Isomorphism of graphs.

Unit 2: Connected graph

(8 lectures)

- Walk, trail, path, cycle, elementary properties of connectedness. Counting paths between vertices (by Warshall's algorithm).
- Cut edge (Bridge), Cut vertex, cut set, vertex connectivity, edge connectivity, and Properties.
- Shortest path problem, Dijkstra's algorithm.

Unit 3. Euler and Hamilton path.

(8 lectures)

- The Konigsberg bridge problem, Euler trail, path, circuit and tour, elementary properties and Fleury's algorithm.
- Hamilton path, circuit, elementary properties and examples.
- Introduction of Travelling salesman problem, Chinese postman problem.

Unit 4. Trees (10 lectures)

- Definitions, basic terminologies, properties and applications of trees.
- 4.2. Weighted graph, definition and properties of spanning tree, shortest spanning tree, Kruskal's algorithm, Prim's algorithm.

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CBCS: 2019-2020

F. Y. B. Sc.

Mathematics (Computer Science)

4.3. M-ary tree, binary tree, definitions and properties, tree traversal: preorder, inorder, postorder, infix, prefix, postfix notations and examples.







F.Y.B.CS.-Discrete Mathematics

Sr.N o	Crosscutti ng issue	Program me	Subject	Clas s	Name of the course	Contenti n thecours e	Course Outcome
	Professional	BCS	Discrete	F.Y.	Discrete	1.Logic	То
	ethics		Mathemati	BCS	Mathemati		understand
			cs		cs		the concept
							of logic
							which is
							very much
							useful in
							developme
							nt
							professiona
							1 ethics.







MTC 112: Discrete Mathematics

UNIT 1 : LOGIC (7 Lectures)

- 1.1 Revision: Propositional Logic, Propositional Equivalences.
- 1.2 Rules of Inference : Argument in propositional Logic, Validity Argument(Direct and Indirect methods) Rules of Inference for Propositional Logic, Building Arguments.
- 1.3 Predicates and Quantifiers: Predicate, n-Place Predicate or ,n-ary Predicate, Quantification and Quantifiers, Universal Quantifier, Existential Quantifier, Quantifiers with restricted domains, Logical Equivalences involving Quantifiers.

Unit 2 : Lattices and Boolean Algebra (13 Lectures)

- 2.1 Relations, types of relations, equivalence relations, Partial ordering relations
- 2.2 Digraphs of relations, matrix representation and composition of relations.
- 2.3 Transitive closure and Warshall's Algorithm
- 2.3 Poset, Hasse diagram.
- 2.4 Lattices, Complemented lattice, Bounded lattice and Distributive lattice.
- 2.5 Boolean Functions: Introduction, Boolean variable, Boolean Function of degree n, Boolean identities, Definition of Boolean Algebra.
- 2.6 Representation of Boolean Functions : Minterm, Maxterm Disjunctive normal form, Conjunctive normal Form.

Unit 3 : Counting Principles (7 Lectures)

- 3.1 Cardinality of Set: Cardinality of a finite set.
- 3.2 Basics of Counting: The Product Rule, The Sum Rule, The Inclusion-Exclusion Principle.
- 3.3 The Pigeonhole Principle: Statement, the Generalized Pigeonhole Principle, Its Applications.







SYBCS MATHEMATICS







SY BCS- Numerical Techniques

Sr.N o	Crosscutti ng issue	Program me	Subject	Clas s	Name of the course	Contentin thecourse	Course Outcome
	Professional ethics	BCS	Numerica 1 Techniqu es	S.Y. BCS	Numerica 1 Techniqu es	Calculus of Finite Difference s and Interpolati on	Professiona Is have an ethical responsibili ty to ensure the accuracy and precision of their numerical solutions.







Unit 1: Algebraic and Transcendental Equation	[04 Lectures]
1.1 Introduction to Errors	
1.2 False Position Method	
1.3 Newton-Raphson Method	
Unit 2: Calculus of Finite Differences and Interpolation	[16 Lectures]
2.1 Differences	
2.2. Forward Differences	
2.3 Backward Differences	
2.4 Central Differences	
2.5 Other Differences (δ, μ operators)	
2.6 Properties of Operators	
2.7 Relation between Operators	
2.8 Newton's Gregory Formula for Forward Interpolation	
2.9 Newton's Gregory Formula for Backward Interpolation	
2.10 Lagrange's Interpolation Formula	
2.11 Divided Difference	
2.12 Newton's Divided Difference Formula	
Unit 3: Numerical Integration	[08 Lectures]
3.1 General Quadrature Formula	
3.2 Trapezoidal Rule	
3.3 Simpson's one-Third Rule	
3.4 Simpson's Three-Eight Rule	
Unit 4: Numerical Solution of Ordinary Differential Equation	[08 Lectures]
4.1 Euler's Method	

4.2 Euler's Modified Method 4.3 Runge-Kutta Methods







S.Y.B.CS.-Computational Geometry

Sr.N o	Crosscutti ng issue	Program me	Subject	Cla ss	Name of the course	Content in thecour se	Course Outcome
	Professional ethics	BCS	Computatio nal Geometry	S.Y. BC S	Computatio nal Geometry	Projection	.Profession als have an ethical responsibility to ensure the accuracy and precision of their orthographic projections, especially in fields like engineering and architecture where accuracy is crucial.







MTC-241: Computational Geometry

Unit 1. Two dimensional transformations:

[12 Lectures]

- 1.1 Introduction.
- 1.2 Representation of points.
- 1.3 Transformations and matrices.
- 1.4 Transformation of points.
- 1.5 Transformation of straight lines
- 1.6 Midpoint Transformation
- 1.7 Transformation of parallel lines
- 1.8 Transformation of intersecting lines
- 1.5 Transformation: rotations, reflections, scaling, shearing.
- 1.6 Combined transformations.
- 1.7 Transformation of a unit square.
- 1.8 Solid body transformations.
- 1.9 Translations and homogeneous coordinates.
- 1.10 Rotation about an arbitrary point.
- 1.11 Reflection through an arbitrary line.

Unit 2. Three dimensional transformations:

[08 Lectures]

- 2.1 Introduction.
- 2.2 Three dimensional Scaling, shearing, rotation, reflection, translation.
- 2.3 Multiple transformations.
- 2.4 Rotation about an axis parallel to coordinate axes, an arbitrary line
- 2.5 Reflection through coordinate planes, planes parallel to coordinate planes, an arbitrary plane

Unit 3. Projection

[08 Lectures]

- 3.1 Orthographic projections.
- 3.2 Axonometric projections.
- 3.3 Oblique projections
- 3.4 Single point perspective projection

Unit 4. Plane and space Curves:

4.1 Introduction.

[08 Lectures]







SY BCS-Operations Research

	Program	Subject	Clas	Name of	Conte	Course Outcome
ng issue	me		S	the	ntin	
				course		
D	DCC	Omanatia	C V	Onanatia		Es masslata a
	BCS	-		_		
ethics		-	BCS		_	linear
		Research		Research	mmin	programming model that
					g	includes
					Proble	economic
					m I	objectives (such
						as GDP growth)
						and
						environmental
						constraints (such
						as carbon
						emissions,
						deforestation
						rates). Decision-
						makers can
						optimize resource
						allocation to
						maximize economic
						development
						while minimizing
						environmental
						impact,
						promoting the
						value of
						sustainability.
	Professional ethics	Professional BCS	Professional BCS Operatio	Professional BCS Operatio S.Y. ethics BCS	Professional BCS Operatio S.Y. Operatio ethics BCS ns	Professional ethics BCS Operatio ns Research Research Course theco urse S.Y. Operatio ns Progra Research Research g Proble





MTC-242: Operations Research

Unit 1: Linear Programming Problem I

[12 Lectures]

- 1.1 Introduction Definition and Examples
- 1.2 Problem solving using Graphical method
- 1.3 Theory of Linear Programming, Slack and surplus variables, Standard form of LPP, Some important definitions, Assumptions in LPP, Limitations of Linear programming, Applications of Linear programming, Advantages of Linear programming Techniques
- 1.4 Simplex method, Big- M-method

Unit 2: Linear Programming Problem II

[08 Lectures]

- 2.1 Special cases of LPP: Alternative solution, Unbounded solution, Infeasible solution
- 2.2 Duality in Linear Programming, Primal to dual conversion, Examples

Unit 3: Assignment Models

[06 Lectures]

- 3.1 Assignment Model -Introduction
- 3.2 Hungerian method for Assignment problem

Unit 4: Transportation Models

[10 Lectures]

4.1 Introduction, Tabular representation

- 4.2 Methods of IBFS (North-West rule, Matrix-minima, Vogel's Approximation), Algorithms
- 4.3 The Optimality Test of Transportation Model (MODI method only)







S.Y.B.CS.-Groups and Coding Theory

Sr.No	Crosscutting issue	Programme	Subject	Class	Name of the course	Contentin thecourse	
	Professional ethics	BCS	Groups and Coding Theory	S.Y. BCS	Groups and Coding Theory	4. Groups and Coding Theory	To understand the concept of group and coding.







Semester III

MTC-231: Groups and Coding Theory

Unit 1. Integers [05 Lectures]

- 1.1 Division Algorithm (without Proof)
- 1.2 G.C.D. using division algorithm and expressing it as linear combination
- 1.3 Euclid's lemma
- 1.4 Equivalence relation (revision), Congruence relation on set of integers, Equivalence class partition

Unit 2. Groups

[03 Lectures]

- 2.1 Binary Operation
- 2.2 Group: Definition and Examples
- 2.3 Elementary Properties of Groups

Unit 3. Finite Groups and Subgroups

[10 Lectures]

- 3.1 Order of a group, order of an element
- 3.2 Examples (Zn, +) and (U(n), *)
- 3.3 Subgroup definition, Finite subgroup test, subgroups of Zn
- 3.4 Generator, cyclic group, finding generators of Zn(Corollary 3,4 without proof)
- 3.5 Permutation group, definition, composition of two permutations, representation as product of disjoint cycles, inverse and order of a permutation, even/odd permutation
- 3.6 Cosets: Definition, Examples and Properties, Lagrange Theorem(without Proof)

Unit 4. Groups and Coding Theory

[18 Lectures]

- 4.1 Coding of Binary Information and Error detection
- 4.2 Decoding and Error Correction
- 4.3 Public Key Cryptography







BCA(SCIENCE) MATHEMATICS







F.Y.B.CA.(SCI)-Applied Mathematics

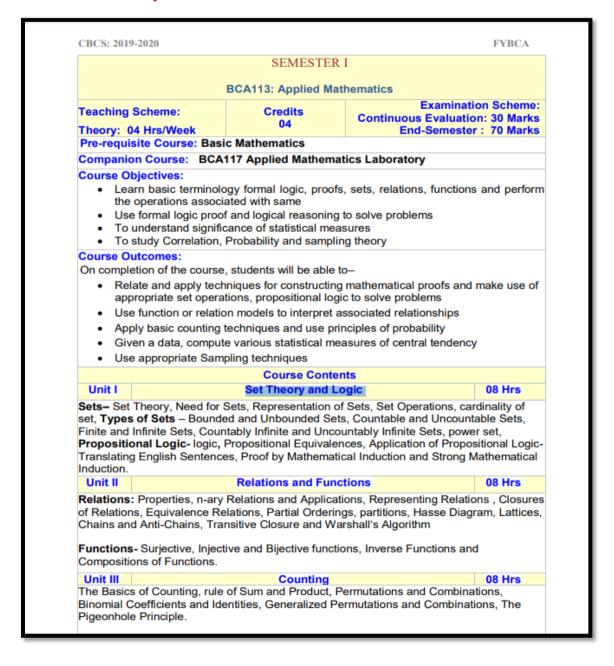
Sr.N o	Crosscutt ing issue	Program me	Subject	Class	Name of the course	Content in thecour se	Course Outcome
1	Professional ethics	BCA	Applied Mathemat ics	FYBCA(S CI)	Applied Mathemat ics	Set Theory and logic	Student learn structured approach to organizing and understand ing the principles that guide professiona l ethics, aiding professiona ls in upholding high ethical standards in their practice.







• Student learn structured approach to organizing and understanding the principles that guide professional ethics, aiding professionals in upholding high ethical standards in their practice.









BVOC (SD) MATHEMATICS







F.Y.B.Voc. (SD)-MATHEMATICS

Sr.N o	Crosscuttin g issue	Programm e	Subject	Class	Name of the course	Contenti n thecours e	Course Outcome
1	Professional ethics	BVOC (SD)	Mathematics	FY BVO C (SD)	Mathematics	Graphs	Students learn Hamiltonian paths which represent a comprehensiv e route, visiting each node (stakeholder or ethical consideration) exactly once. In professional ethics, this signifies addressing the concerns of all stakeholders, making ethical decisions that consider long-term effects and the interests of everyone involved.







• Students learn Hamiltonian paths which represent a comprehensive route, visiting each node (stakeholder or ethical consideration) exactly once. In professional ethics, this signifies addressing the concerns of all stakeholders, making ethical decisions that consider long-term effects and the interests of everyone involved.

Gi M	relations. 2.6 Definition of function as relation, types of functions (one-one, onto and bijective) 2.7 Graphical representation of functions and its convergence. Graphs 4.1 Definition, Elementary terminologies and results, Graphs as Models. 4.2 Special types of graphs. 4.3 Isomorphism. 4.4 Adjacency and Incidence Matrix of a Graph. 4.5 Subgraphs, induced subgraphs, Vertex delition, Edge delition. 4.6 Complement of a graph and self-complementary graphs.	
	4.7 Union, Intersection and Product of graphs. 4.8 Fusion of vertices. 4.9 Walk, Trail, Path, Cycle: Definitions and elementary properties. 4.10 Connected Graphs: definition and properties. 4.11 Distance between two vertices, eccentricity, center, radius and diameter of a graph. 4.12 Isthmus, Cutvetex: Definition and properties. 4.13 Cutset, edge-connectivity, vertex connectivity. 4.14 Weighted Graph and Dijkstra's Algorithm. 4.15 Definition, Examples Elementary Terminologies and properties. 4.16 Special Types of Digraphs. 4.17 Connectedness of digraphs. shortest path algorithm directed acyclic graph 4.18 Network and Flows: definition and examples. 4.19 Topological sort	1
6 Uı	Unit 5 Complex Mapping	0
	5.1 Fractals, grammars, language and automata5.2 Introduction to Matlab5.3 Matrices, linear algebra, graphical operations	1

Reference Books:

- 1. Text book of Discrete Mathematics, Prepared by B.O.S. in Mathematics,
- 2. Text book of Algebra and Calculus, Prepared by B.O.S. in Mathematics,

P.D.E.A.'s Annasaheb Magar College, Hadapsar

25







COMPUTER SCIENCE: BCA(SCIENCE)







S.Y.B.C.A.(Science)-Computer Network







S.Y.B.C.A.(Science)- Computer Network

S1 .N o		Pro gra mm e	Su bje ct	Clas s	Na me of th e	Contenti n thecourse	Course Outcome
4	e	D.C.		C V	co ur se	Notwor	Ctudonto will be able
1	Profess ional Ethics	BC A	Co mp uter Net wor k	` ,	Co mp ute r Ne tw or k		s which helps to develop professional ethics in them. Tostudydifferenttechniquesforframing,erro rcontrol,flowcontrolandrouting. Tolearnroleofprotocolsatvariouslayersinth eprotocolstacks. Todevelopanunderstandingofmodernnetwor karchitecturesfromadesignandperformancep erspective







• Students will be able tounderstandthefundamentalconceptsofnetworkingstandards,protocolsandtechnolog ies which helps to develop professional ethics in them

	SEI	MESTERIII		
	В	CA233: Comput	terNetworks	
Scheme:Tl	ching H:05Hours/ eek	Credits 04	Exam Scheme:ContinuousEva arksEnd-Semester:	
	Pre	erequisiteCourses:	BCA-111&BCA-121	
Co	mpanionCourse:B	CA-236 Computer	r Networks andWebProgrammin	ıg Lab
		CourseOb	ojectives:	
•	Tounderstandthefund	damentalconceptsofi	networkingstandards,protocolsandted	chnologies.
	•	-	ning,errorcontrol,flowcontrolandrou	ting.
		•	rariouslayersintheprotocolstacks.	
• Tod	evelopanunderstandi	C	architecturesfromadesignandperforn ctive	nanceperspe
		-	letionofthiscourse,learnerwillbeabl	
•			rganization and select appropriate no nissionmediumsandtechnologies.	etwork
• Ana			Application, Transportand Network La	yerProtoc
	·		ls.	
	•	Illustrateapplication	onsofComputerNetwork.	
	 Compa 	reandcontrastdiffere	entroutingandswitchingalgorithms	
		CourseC	ontents	
UnitI	Int	roduction to Da	nta	8 Hrs
	C	communications (Computer	
		Networl	•	







1.1 Datacommunications, Characteristics of DataCommunication

1.2 Components of Data communication

1.3 DataRepresentation-Text, Numbers, Images, Audio, Video

1.4 TypesofDataflow–Simplex,HalfDuplex,FullDuplex

1.5 ComputerNetworksapplications –BusinessApplication,HomeApplication,MobileUser 1.6 Broadcastandpoint-to-point networks

1.7 NetworkTopologies-Bus,Star,Ring,Mesh

1.8 NetworkTypes- LAN,MAN,WAN,PAN,WirelessNetworks,HomeNetworks,internetworks

1.9 Protocolsandstandards – Definitionofa Protocol, Protocolstandards: Defacto and Dejure

UnitII NetworkModels

2.1.OSIModel—layeredarchitecture,peer-to-peerprocesses,encapsulation
2.2 TCP/IPModel—layersandProtocolSuite
2.3 Addressing-Physical, Logical,Portaddresses,Specificaddresses

UnitIII PhysicalLayer 10 Hrs

- 3.1 AnalogandDigitaldata,AnalogandDigitalsignals,DigitalSignals-Bitrate,Bitlength 3.2 BasebandTransmission,BroadbandTransmission
 - 3.3 Transmission Impairments—Attenuation, Distortion and Noise
- 3.4 DataRate Limits-Noiselesschannel:Nyquist'sbitrate,noisychannel:Shannon'slaw
- 3.4 Performance of the Network Bandwidth, Throughput, Latency (Delay), Bandwidth DelayProduct,Jitters
- 3.4 LineCodingCharacteristics, LineCodingSchemes—Unipolar-NRZ, Polar-NRZ-I, NRZ-I

L,RZ,Manchester and Differential Manchester, Problems

 $3.5\,Transmission Modes, Parallel Transmission and Serial Transmission -$

AsynchronousandSynchronousandIsochronous

3.6 MultiplexingFDMandTDM

3.7 Switching-CircuitSwitching, MessageSwitchingandPacketSwitching.







UnitI DataLinkLayer 10 Hrs

Framing-Concept, Methods - Character Count, Flag bytes with Byte

Stuffing, Starting&endingFlagswith Bit Stuffing

4.2 Errordetectioncode—HammingDistance,CRC

Elementary data link protocols - Simplex stop & wait protocol, Simplex protocol for noisychannel, PPP, HDLC

Sliding Window Protocols – 1-bit sliding window protocols, Pipelining – Go-Back N and Selective Repeat

Random Access Protocols - ALOHA – pure and slotted, CSMA-1 - persistent, p-persistent and non-persistent CSMA/CD, CSMA/CA

- 4.6 ControlledAccess- Reservation, Pollingand TokenPassing
- 4.7 Channelization—Definitions—FDMA,TDMAandCDMA

UnitV NetworkLayer 10 Hrs

IPv4 addresses: Address space, Notation, Classful addressing,

Classlessaddressing, NAT,

Subnetting, Supernetting

- 5.2 IPv4:Datagram, Fragmentation, checksum, options
- 5.3 IPv6 addresses:Structure,addressspace
- 5.4 IPv6:packetformat, Extensionheaders

UnitVI TransportandApplicationLayer 12 Hrs

- 6.1. Process-to-ProcessDelivery, Multiplexing and De-multiplexing
- 6.2. User Datagram Protocol (UDP) Datagram Format, Checksum, UDP operations,

UseofUDP6.3.TransmissionControlProtocol(TCP)-TCPServices—Processto-

ProcessCommunication,Stream DeliveryService,SendingandReceivingBuffers,Segments,Full

-DuplexCommunication,Connectionorientedservice,Reliableservice

6.4.TCPFeatures–

NumberingSystem,ByteNumber,SequenceNumber,AcknowledgementNumber,FlowControl,ErrorControl,Congestion Control

- 6.5 TCPSegmentFormat
- 6.6 TCPVsUDP
- 6.6 Domain NameSystem (DNS)- DistributionofName Space, DNS in the Internet
- 6.7 E-MAIL- Architecture, User Agent, Message Transfer Agent-SMTP, Web Based Mail
- 6.8 WWW–Architecture
- 6.9 HTTP- HTTPTransaction

ReferenceBooks:

- 1. Data Communications and Networking by BehrouzForouzan, Fifth Edition, ISBN 978-0-07-337622-6McGraw Hill.
- 2. Computer Networks, ANDREW S. Tanenbaum, Fifth Edition, ISBN-13: 978-0-13-212695-3, Pearson

E-Books







1) ComputerNetworks—

AndrewS.Tenenbaum<a href="https://books.google.co.in/books?id=b2HyGSu46lQC&printsec=frontcover&dq=Computer+Networks+ebook&hl=en&sa=X&ved=0ahUKEwj9woKylKLpAhWlH7cAHR6_BKAQ6AEILjAB#v=onepage&q=Computer%20Networks%20ebook&f=false

2) Computer Networks — Behrouz A. ForouZan and

FirouzMosharrafhttps://books.google.co.in/books?id=o8CjAgAAQBAJ&printsec=frontcover&dq=Computer+Networks+ebook&hl=en&sa=X&ved=0ahUKEwj9woKylKLpAhWlH7cAHR6_BKAQ6AEINzAC#v=onepage&q&f=false

3) Computer Networks – V.S.Bagad and I.A.

Dhotrehttps://books.google.co.in/books?id=KpOb37EHETcC&printsec=frontcover&dq=Computer+Networks+ebook&hl=en&sa=X&ved=0ahUKEwj9woKylKLpAhWlH7cAHR6_BKAQ6AEIWjAG#v=onepage&q&f=false





T.Y.B.C.A.(Science)- Data Mining and Data Science

Sr .N o	Cro sscu ttin	Pro gra mm e	S ub je ct	Class	Name of the course	Contentin thecourse	Course Outcome
1	issu e Profess	ВС	D	T.Y.	Data	DataMiningTech	Identifythe
	ional Ethics	A	at a M in in g an d D at a Sc ie nc e	BCA(Sci)	Mining and Data Science	niques, DataPreprocessin g, DataWarehouse, Data Mart, MachineLearning , DecisionTree, Regression, ClusterAnalysis	Identifythe keyprocesses of datamining, data warehousingand knowledgediscovery. Designdatawareh ousewithdimensionalmodelinganda pplyOLAPoperations. Identifyappropriatedata miningalgorithms tosolverealworldproblems.





SEMESTERV				
BCA352:DSEII-DataMin	BCA352:DSEII-DataMining andData Science			
Teaching	Credits	ExaminationScheme:		
Scheme:Theory:05Hrs./W	04	ContinuousEvaluation:30MarksE		
eek		nd-Semester:70Marks		

Pre-requisiteCourse:

- BCA117AppliedMathematicsLaboratory
- BCA232DatabaseManagementSystems-II

CompanionCourse:

• BCA357DSE- IILaboratory(DataMining)

CourseObjectives:

- TointroducestudentstothebasicconceptsandtechniquesofDataMiningandDataScience
- To studydata miningalgorithms for solving practical problems.
- Tounderstanddatavisualization and exploratory analysis.

CourseOutcomes:

Aftersuccessfulcompletionofthiscourse, learner will beableto:

- Identifythe keyprocesses of datamining, data warehousingand knowledgediscovery
- DesigndatawarehousewithdimensionalmodelingandapplyOLAPoperations.
- Identifyappropriatedata miningalgorithmstosolverealworldproblems
- Compareandevaluatedifferentdataminingtechniqueslikeclassification,prediction,clusteringa nd association rulemining
- Chooseanappropriatemethod toperformexploratoryanalysis.
- Interpretresults by carrying outdatavisualization and formal inference procedures

	CourseContents	
UnitI	IntroductiontoData Mining	10 Hrs





	2.3.2 DifferencebetweenOLTPandOLAP	
	2.3.1 Introduction	
	2.3 DataModelingwithOLAP	
	2.2 DataWarehouseArchitectureanditscomponents	
	2.1 Introductionto DataWarehouse	
UnitII	DataWarehousing	08 Hrs
	1.7.4 DataDiscretization	
	1.7.3 DataReduction	
	1.7.2 DataTransformation	
	1.7.1 DataCleaning	
	1.7 DataPre-processing	
	1.6 Applications of Datamining	
	1.5 KnowledgeRepresentationMethods	
	1.4 DataMiningTechniques/Tasks	
	1.3 StagesoftheDataMiningProcess(KDD)	
	1.2 DataMiningissues	
	1.1 DefinitionDatamining	

	2.3.3 DataMart	
	2.3.4 FactTable,DimensionTable,OLAPcube	
	2.3.5 DifferentOLAPOperations	
	2.4 SchemaDesign	
	2.4.1 Introduction	
	2.4.2 Starandsnow-FlakeSchema	
	2.5 Introductionto Machine Learning	
	2.6 IntroductiontoPatternMatching	
	2.7 Casestudybasedon SchemaDesign	
UnitIII	Classification	12 Hrs





a	PDEA
अण्ण	पुणे जिल्ला विकास प्रकारों. गसाहेब मगर महाविद्यालय
	हडपसर पुणे ४११०२८

	3.1 Introduction, Definition	
	3.2 DecisionTree	
	3.2.1 Introduction	
	3.2.2 ConstructionPrinciple	
	3.2.3 AttributeSelectionMeasures	
	3.2.4 TreePruning	
	3.3 Rule-BasedClassification	
	3.3.1 UsingIF-THENRulesforClassification	
	3.3.2 RuleExtractionfromaDecisionTree	
	3.4 BayesClassificationMethods	
	3.4.1 Bayes" Theorem	
	3.4.2 NaiveBayesianClassification	
	3.5 BayesianNetworks	
	3.6 Parameterandstructurelearning	
	3.7 Linearclassifier	
	3.8 Perceptron	
	3.9 k-Nearest-NeighborClassifiers	
	3.10 SVMclassifiers	
	3.10.1 Introduction	
	3.10.2 TypesofSVM	
	3.10.3 WorkingofSVM	
	3.11 Regression	
	3.11.1 LinearRegression	
	3.11.2 NonlinearRegression	
	3.12 IntroductiontoPrediction	
UnitIV	Clusteringand AssociationRuleMining	10 Hrs
	4.1 ClusterAnalysis	
	4.1.1 Introduction	
	4.1.2 RequirementsforClusterAnalysis	
	4.2 HierarchicalMethods	
	4.2.1 AgglomerativeHierarchicalClustering	
	4.2.2.DivisiveHierarchicalClustering	
	4.3 PartitioningMethods	
	4.3.1 k-Means:ACentroid-BasedTechnique	
	4.3.2 k-Medoids:ARepresentativeObject-BasedTechnique	





	4.4 IntroductiontoAssociationRule Mining	
	MarketBasketAnalysis,Items, ItemsetsandLargeItemsets	
	4.5 AprioriAlgorithm	
	4.6 KindsofAssociationRules	
	Mining Multilevel association	
	rulesConstraintBasedAssociationrulesmini	
	ng	
UnitV	IntroductiontoDataScience	10 Hrs
	5.1.Basicsof Data	
	5.2Whatis DataScience?	
	5.3. Datascienceprocess	
	5.4. StagesinaDataScience project	
	5.5ApplicationsofData Scienceinvariousfields	
	5.6.Basicsof DataAnalytics	
	5.7 TypesofAnalytics–Descriptive,Predictive,Prescriptive	
	5.8 Statistical Inference - Populations and samples -	
	Statisticalmodeling-probability distributions	
UnitVI	EDAandDataVisualization	10 Hrs
	6.1 WhatisExploratoryDataAnalysis?	
	6.2 Stepsin EDA	
	6.3 Basictools (plots, graphs and summary statistics) of EDA	
	6.4 Typesofexploratorydataanalysis	
	6.5 Basicprinciplesofdatavisualization	
	6.6 BenefitsofDataVisualization	
	6.7 Datavisualizationtechniques	
	6.8 Toolsfordatavisualization	

ReferenceBooks:

DataMining:IntroductoryandAdvancedTopics

byMargaretDunham,S.Sridhar,PearsonPublication

DataMiningconceptsandTechniquesbyJiaweiHanandMichelineKamber,ELSEVIER,Third Edition,

- 3) RandDataMining, ByYanchangZhao,ElsevierInc., ISBN-10:0123969638
- 4) DataSciencefromScratch:FirstPrincipleswithPythonByO"ReillyMedia,20153.
- 5) Makingsense ofData: ApracticalGuideto ExploratoryDataAnalysisandData MiningbyGlenn J. MyattJohn WileyPublishers, 2007





E-Books:

- 1. http://myweb.sabanciuniv.edu/rdehkharghani/files/2016/02/The-Morgan-Kaufmann-Series-in-Data-Management-Systems-Jiawei-Han-Micheline-Kamber-Jian-Pei-Data-Mining.-Concepts-and-Techniques-3rd-Edition-Morgan-Kaufmann-2011.pdf
- 2. https://data-flair.training/blogs/data-mining-tutorial/
- 3. http://infolab.stanford.edu/~ullman/mmds/book.pdf
- 4. https://archive.org/details/IntroductionToDataMining
- 5. https://www.academia.edu/6489220/Data_Mining_ebook
- 6. https://en.wikibooks.org/wiki/Data_Mining_Algorithms_In_R





COMPUTER SCIENCE: BCS





BCS





S.Y.B.Sc (C.S.)- Software Engineering

Sr.	Crosscut	Progra	Subject	Clas	Name	Contentin	Course Outcome
No	ting	mme		S	of the	thecourse	
	issue				course		
1	Professiona	B.Sc(C.	Softwar	S.Y.	Softwar	Umbrella	Students compare
	l Ethics	S).	e	B.S	e	Activities,	and chose a process
			Enginee	c(C.	Enginee	Agile Process,	model for a
			ring	S.)	ring	Software	software project
						requirement	development.
						specification	Students
						(SRS),	Identify
						Behavioral	requirements
						Modeling,	analyze and prepare
						Information	models, prepare the
						Hiding	SRS, Design
						Design for	document, Project
						Test	plan of a given
							software system to
							develop
							professional ethics





Students compare and chose a process model for a software project development. Students Identify requirements analyze and prepare models, prepare the SRS, Design document, Project plan of a given software system to develop professional ethics

S.Y.B.Sc.(ComputerScience)

Choice Based Credit System SyllabusTobeimplementedfromAcademicYea r 2020-2021

	-	y S.Y.B.Sc. (Computer per -II Course Code:				
TeachingScheme	No.of Credits	ExaminationScheme IE: 15 marks UE: 35				
3lectures/week(50minsduration)	2	marks				
Prerequisites						

ER Modeling

Course Objectives

Togetknowledgeandunderstandingof softwareengineering discipline.

1. Tolearnanalysis and design principles for software project development.

Course Outcomes

Oncompletion of the course, student will be able to-

- 1. Compareand choseaprocessmodel for asoftwareproject development.
- 2. Identifyrequirementsanalyzeandpreparemodels.
- 3. PreparetheSRS, Designdocument, Projectplan of a given software system.

Course Contents





Chapter1	Title:IntroductionToSoftwareEngineeringand Process	8 lectures						
11 5 6	Models							
1.1 DefinitionofSoftware								
	fSoftware Engineering							
	agnatureof software							
1.4 Softwa								
	The Process Framework							
	2 UmbrellaActivities							
	Process Model Process Model							
-	ptiveProcessModels							
	TheWaterfallModel							
1.6.2								
1.6.3 1.6.4	•							
	5 TheUnified Process							
		5lectures						
Chapter2	Title:AgileDevelopment	Siectures						
2.1 Whatis Ag	· · · · ·							
2.2 Agile Pro								
_	ity Principles							
	Politics Of Agile Development							
	Programming(XP)							
2.3.1 XP V								
2.3.2 XP F 2.3.3 Indu								
	Software Development(ASD)							
2.5 Scrum	System Development Medal (DCDM)							
-	SystemDevelopmentModel(DSDM)							
	FiedProcess(AUP)	71-4						
Chapter3	Title:RequirementsAnalysis	7 lectures						
	nentElicitation,							
	3.2 Softwarerequirementspecification (SRS)							
	3.2.1 DevelopingUseCases(UML)							
	3.3 BuildingtheAnalysisModel							
	mentsofthe AnalysisModel							
	alysis Patterns							
	ileRequirements Engineering							
	ingRequirements							
3.5 Validatir	ngRequirements							





ReferenceBooks:

	,					
Chapter4 Title:RequirementsModeling	10 lectures					
4.1 IntroductiontoUML						
4.2 Structural Modeling						
4.2.1 Usecasemodel						
4.2.2 Class model						
4.3 Behavioral Modeling						
4.3.1 Sequencemodel						
4.3.2 Activity model						
4.3.3 CommunicationorCollaborationmodel						
4.4 ArchitecturalModeling						
4.4.1 Component model						
4.4.2 Artifactmodel						
4.4.3 Deploymentmodel						
Chapter5 Title:Design Concepts	6lectures					
5.1 Design Process						
5.1.1 SoftwareQualityGuidelinesandAttributes						
5.1.2 EvolutionofSoftware Design						
5.2 Design Concepts						
5.2.1 Abstraction						
5.2.2 Architecture						
5.2.3 Patterns						
5.2.4 Separation of Concerns						
5.2.5 Modularity						
5.2.6 InformationHiding						
5.2.7 Functional Independence						
5.2.8 Refinement						
5.2.9 Aspects						
5.2.10 Refactoring						
5.2.11 ObjectOriented DesignConcepts						
5.2.12 Design Classes						
5.2.13 DependencyInversion						
5.2.14 DesignforTest						
5.3 TheDesignModel						
5.3.1 DataDesign Elements						
5.3.2 ArchitecturalDesign Elements						
5.3.3 InterfaceDesign Elements						
5.3.4 Component-Level Diagram						
5.4.5Deployment-Level Diagram						





- 1. SoftwareEngineering:APractitioner'sApproach-RogerS.Pressman,McGraw hill(Eighth Edition)ISBN-13: 978-0-07-802212-8, ISBN-10: 0-07-802212-6
- 2. AConciseIntroductiontoSoftwareEngineering-PankajJalote,SpringerISBN: 978-1-84800-301-9
- ${\it 3.} \quad The Unified Modeling\ Language Reference Manual-James Rambaugh, Ivar\ Jacobson, Grady Booch ISBN 0-201-30998-X$





T.Y.B.Sc(C.S.)- Block chain Technology

Sr. No		Progr amm e	Subje ct	Class	Nam e of the	Conte ntin theco	Course Outcome
	issue				cour se	urse	
1	Professi onal Ethics	B.Sc(C.S).	Block chain Techn ology	Sc(C.S.	Bloc k Chai n Tech nolog y	Crypto graphy (private and public keys, Hashin g & Digital Signatu re, Smart Contra cts, DApps, Initial Coin Offerin gs	on. 3.Learn to create smart contracts





SavitribaiPhule Pune UniversityT.Y.B.Sc.(ComputerScience)- Sem–V							
	CourseType:SECC-II Course Code : CS-						
		ourseTitle: <mark>BlockchainTechno</mark>					
Teach	Teaching No.ofCredits2 ExaminationScheme:						
Scheme03 IE:15marksUE:3							
Lect/	week		5ma	arks			
		Prerequisite:					
Understandingof	ObjectOrientedF	ProgrammingConceptsKn					
	owledgeofPy	rthon					
		CourseObjectives					
1		erstandwhat andwhyofBlockchaint					
		Exploremajor componentsofblock					
4 77 1		naboutBitcoin,Cryptocurrencyand					
4. Tolea	ırnblockchainprog	rammingusingPython,FlaskWebF	ramework,andHTTI	,			
		clientPostman. CourseOutcomes					
l	Oncomn		ablata				
		letionofthecourse,studentwillbe hefundamentalsofBlockchainTech					
l		. LearnBlockchainprogramming	nology.				
		ledgeofSmart Contractsandhowth	evfunction.				
	Busiemie ;	CourseContents					
Chapter1		IntroductiontoBlockchair	<u> </u>	7 Lect			
	ndationalComput	tingConcepts(Client-Serversyst	emsvsPeertoPeerS	vstems)			
	r	• EvolutionofBlockchain		Jacoba, and			
		BlockchainVsDatabase					
• Es	sentialsofBlocko	chain(Blockchaingenerations, ty	vnesofblockchain				
- 10		itsandchallengesofblockchainus					
		TypesofNetworks	,450)				
	• I ave	eredArchitectureofBlockchainE	cosystem				
	Lay		•				
 Componentsofblockchain Cryptography(privateand publickeys, Hashing& 							
	• Crypt		,nasiiiiga				
• DigitalSignature)							
	C .	• ConsensusMechanisms	1.17/1				
	• Cryptoci	rrency,DigitalCurrencyBitcoin	and Ethereum				
l		 SmartContracts 					
		Blockchainusecases					
Chapter2		HowBlockchainWorks?)	5 Lect			





- UnderstandingSHA256Hash
 - ImmutableLedger
 - DistributedP2PNetwork
- HowMiningWorks?(TheNONCE andCryptographicPuzzle)
 - ByzantineFaultTolerance
- Consensus Protocols: Proof of Work, Proof of State, Défense Against Attackers, Competing Chains
 - BlockchainDemo

Chapter3 SmartContracts 6 Lect

- EthereumNetwork
- WhatisaSmartContract?
- EthereumVirtualMachine,Ether,Gas
 - DApps
- DecentralizedAutonomousOrganizations(DAO)
 - HardandSoftForks
 - InitialCoinOfferings
 - DemoofSmartContracts

Demonstration ProgrammingAssignments: 18Lect

Out of 36 lectures, 18 are assigned for demonstration. Teacher should give demonstration of various programs mentioned below in the classroom or in the laboratory as per their convenience.

Assignment1 -

DemonstrationofBlockchainhttps://andersbro

wnworth.com/blockchain

Assignment2-InstallationofGanache,FlaskandPostman

Assignment 3 –Write a Simple Python program to create a Block class that contains index, timestamp, and previous hash. Connect the block stocreate a Block chain.

Assignment4–DemoofRemix-EthereumIDEhttps://remix.ethereum.org and TestNetworks

Assignment5–1.WriteaSimpleSmartContractforBankwithwithdrawanddepositfunctionality. **Assignment6**–2.WriteaSmartContractfor storingandretrievinginformationofDegreeCertificates.

ReferenceBooks:





Textbook:

- 1. Beginning Blockchain: A Beginner's Guide to Building Blockchain Solutions ByBikramadityaSinghal,GautamDhameja,PriyansuSekharPanda,ApressMedia ReferenceBooks:
 - 2. MasteringBlockchainbyImranBashir,ThirdEdition,PacktPublication
 - 3. Waterhole, The Science of the Block chain
 - 4. SatoshiNakamoto,Bitcoin:APeer-to-PeerElectronicCashSystem
- **5.** MasteringEthereum:BuildingSmartContractsandDAPPS,byAndreasAntonopoulos,Dr.Gavid Wood,OreillyPublication

ReferenceWebLinks

1.https://www.investopedia.com/terms/b/blockchain.asp





PDEA's

AnnasahebMagarMahavidyalaya HadapsarPune-411028.

T.Y.B.Sc(C.S.)-Foundation Of Data Science

	Pro ora	Sub iect	Class	Na me	Contenti	Course Outcome
ttin	mm	jeet		of	thecours	
g	e			the	e	
issu				cou		
e				rse		
Profess ional Ethics	B.S c(C. S).	Fou ndat ion of Data Scie nce	T.Y. B.Sc(C.S.)	Fou nda tion of Dat a Sci enc e	Applications of Data Science Data Sources Data Formats Measuring the Dispersion: Range, Standard deviation, Variance, Interquar tile Range Cleaning Data	PerformExploratoryDataAnalysis Detectanddiagnosecommo ndataissues,suchasmissing values,specialvalues, outliers, inconsistencies, and localization. Presentresultsusingdatavisualizati ontechniques. Preparedataforusewithavarietyofst atisticalmethodsand modelsand recognizehow the quality ofthe data and the means ofdata collection
	sscu ttin g issu e Profess ional	sscu gra mm g e issu e Profess B.S ional c(C.	rescu ttin mm e issu e Profess ional c(C. Ethics S). Fou of Data Scie	rescu ttin mm e issu e Profess B.S c(C. Indat B.Sc(C. Ethics S). of Data Scie	ttin mm e of the course Profess B.S c(C. ndat B.Sc(nda Ethics S). ion C.S.) tion of Data Scie nce nce Science	Titin mm g e issu e Profess ional c(C. ndat Ethics S). Fou of Data Scie nce nce nce nthe cours e e cou rse ndat Scie nce nce nce nce nce nce nce nce nce nc



			Transfor	
			mation	
			Specializ	
			ed data	
			visualiza	
			tion tools	
			Advance	
			d data	
			visualiza	
			tion	
			tools-	
			Wordclo	
			uds	
			3.3.	





SavitribaiPhule Pune University					
T.Y.B.Sc.(ComputerScience) –Sem-V					
CourseType:DSEC-II CourseCode: CS - 3					
PaperTitle:FoundationsofDataScience					

TeachingScheme	No.ofCredits	ExaminationScheme			
03lectures/ week	2	IE : 15 marks			
		UE: 35 marks			
Prerequisites					

- Problemsolvingusingcomputers
- Basicmathematicsandstatistics
 - KnowledgeofDatabases

CourseObjectives

- Providestudentswithknowledgeandskillsfordata-intensive problemsolving and scientific discovery
- Bepreparedwithavariedrangeofexpertise indifferent aspectsofdatasciencesuchas data collection, visualization, processing and modeling of large data sets.
 - Acquiregoodunderstandingofboththetheoryand applicationofappliedstatisticsand computer science based existing data science models to analyze huge data sets originating from diversified application areas.
- Bebettertrainedprofessionalsto caterthegrowingdemand fordatascientists in industry.

CourseOutcomes

Oncompletion of the course, student will be able to –

- PerformExploratoryDataAnalysis
- Obtain, clean/process, and transform data.
- Detectanddiagnosecommondataissues, suchasmissing values, special values, outliers, inconsistencies, and localization.
 - Demonstrate proficiency with statistical analysis of data.
 - Presentresultsusing datavisualization techniques.
- Preparedataforusewithavarietyofstatisticalmethodsand modelsand recognizehow the quality of the data and the means of data collection may affect conclusions.

CourseContents IntroductiontoDataScience Chapter1 **6lectures**





Introductiontodatascience, The3V's:Volume,Velocity,Variety Why learn Data Science?

ApplicationsofDataScience

The Data Science Lifecycle
Data Scientist's Toolbox
Types of Data

 $Structured, Semi-structured, Unstructured Data, Problems with unstructured\ data$

Data sources

OpenData,SocialMediaData, MultimodalData,standard datasets Data
Formats

Integers, Floats, TextData, Text Files, DenseNumerical Arrays, Compressedor Archived Data, CSV Files, JSON Files, XML Files, HTML Files, Tar Files, GZip Files, Zip Files, Image Files: Rasterized, Vectorized, and/or Compressed

Chapter2	StatisticalDataAnalysis	10 lectures				
2.1. Roleofstatistics indatascience						
	2.2. Descriptive statistics					
	MeasuringtheFrequency					
	MeasuringtheCentralTendency:Mean,Median,andMod	e				
	MeasuringtheDispersion:Range,Standarddeviation,Variance,Interq	<mark>uartile Range</mark>				
	2.3. Inferential statistics					
	Hypothesistesting, Multiple hypothesistesting, Parameter Estimation	onmethods,				
	2.4. Measuring Data Similarity and Dissimilarity					
	Data Matrix versus Dissimilarity Matrix, Proximity Measures for	or Nominal				
	Attributes, Proximity Measures for Binary Attributes, Dissimilarity	ofNumeric				
	Data:Euclidean,Manhattan,andMinkowskidistances,ProximityMeasuresfor					
	Ordinal Attributes					
	2.5. ConceptofOutlier, types of outliers, outlier detection methods					
Chapter3	DataPreprocessing	10 lectures				





DataObjectsand Attribute Types: WhatIsanAttribute?, Nominal, Binary, Ordinal Attributes, Numeric Attributes, Discrete versus Continuous Attributes

Data Quality: Why Preprocess the Data?

3.3. Datamunging/wranglingoperations

CleaningData-MissingValues,NoisyData(DuplicateEntries,Multiple

Entries for a Single Entity, Missing Entries, NULLs, Huge Outliers, Out-of-Date Data, Artificial Entries, Irregular Spacings, Formatting Issues - Irregular between Different Tables/Columns, Extra Whitespace, Irregular Capitalization, Inconsistent Delimiters, Irregular NULL Format, Invalid Characters, Incompatible Datetimes)

DataTransformation—Rescaling,Normalizing,Binarizing,Standardizing,LabelandOne Hot Encoding

Data reduction

Datadiscretization

Chapter4 Data Visualization 10 lectures

Introduction to Exploratory Data Analysis

Data visualization and visual encoding

Data visualization libraries

Basicdatavisualizationtools

Histograms, Barcharts/graphs, Scatterplots, Linecharts, Areaplots, Piecharts, Donut charts

Specializeddatavisualizationtools

Boxplots,Bubbleplots,Heatmap,Dendrogram,Venndiagram, Treemap,3D scatter plots

Advanceddatavisualizationtools-Wordclouds

Visualization of geospatial data

DataVisualizationtypes

ReferenceBooks:

- 1) DataScienceFundamentalsandPracticalApproaches,GypsyNandi,Rupam Sharma, BPB Publications, 2020.
 - 2) TheDataScienceHandbook,FieldCady,JohnWiley&Sons,Inc,2017
 - 3) DataMiningConceptsandTechniques,ThirdEdition,JiaweiHan,Micheline





M.Sc (C.S.)-C#.Net Programming

Sr. No	Cros scutt	Progr amme	Subject	Class	Name of the	Contenti n	Course Outcome
	ing issue				cours e	thecours e	
1	Profess ional Ethics	M.Sc(C.S).	C#.Net Progra mming	F.Y.B.S c(C.S.)	C# .Net Progr ammi ng	Inherita nce Window s Forms Connect ion object, Comme nd Object Dataset, DataRea der&Da taAdapt er Accessi ng Data withAD O.NET	ntedProgrammingconce ptslikeInheritance andPolymorphismin C# programminglanguage. Design&Implementtheapplicatio





CS-515-MJP:LabCourseonCS-514-MJ(C#.NETProgramming)

No.ofCredits:2	TeachingScheme	ExaminationScheme
	Theory:2Hrs/Week	ContinuousEvaluation:15MarksEn
		dSemester:35Marks

Prerequisite

- Knowledgeofobjectorientedprogrammingconceptssuchasdataabstraction,encapsulation,inheritance, and polymorphism.
- FamiliaritywithprogramminglanguagesuchasC++and/orJava.

Objectives

- TounderstandtheDOTNETframework
- Developdeepunderstandingof C#languagefeatures
- BuildstrongconceptsofOOP'sandimplementthesameinC#.
- Tounderstandthe conceptofmulti-threading &files
- Tounderstandand implement the controls&properties of Windows forms
- Todevelopdatabasecentricapplicationsusing ADO. NET.

CourseOutcomes

OnCompletion of this course, studentwill beableto-

CO1:UnderstandthefeaturesofDotNetFramework

 $along with the features of C\#CO2: Interpret and Develop Interfaces\ for real-time applications.$

CO3:Design & implementObjectOrientedProgrammingconceptslikeInheritance andPolymorphismin C# programminglanguage.

CO4:Design&Implementtheapplicationusingmultithreading&Filehandling

CO5:DesignandImplementWindowsApplicationusingWindowsForms&toolsapplicationusingD atabasein C#

CO6:DesignandImplementCustomApplicationUsingWindowsForm&ADO.NETinC#

Unit	Nameof Unit	Teaching	COTargeted
No.		Hours	
1	Introductionto.NetFramework	2	CO1





PDEA's AnnasahebMagarMahavidyalaya

HadapsarPune-411028.

1.1 Ove	erviewof.NETframework &.NetArchitectureThe		
(Common Language Runtime (CLR)Microsoft		
I	ntermediate Language (MSIL) Code, JustIn		
7	TimeCompilers (JITers),		
7	TheFrameworkClassLibrary(FCL),		
7	TheCommonLanguagesSpecification(CLS),Th		
e	Common TypeSystem (CTS),		
(GarbageCollection(GC),		
2	IntroductiontoC#.Net	4	CO1
2.1Bas	icsofC#.Language(ConsoleApplication)Na		1
me	espace, Variables and Expressions,		
Ту	rpeConversion		
Во	oxingand Un-boxing		
Flow C	Control Functions		
Debug	ging and error handling		
2.2 Arı	ray		
One-di	mensional & two-dimensional array		
2.3 Exc	ception handling		
System	Defined and User Defined		
3	OOPSwithC#	5	CO3
3.1 Ob	jectOrientedConcept		
3.2 Ot	pjectandClasses		
3.3 Cla	assproperties: Accessmodifiers, Implementation of class		
	onstructor,		
3.5 Inl	<mark>neritance</mark>		
	lymorphism&Interface		
	ostractClass		
3.8 De	elegates		
3.9 Mu	lticasting&AnonymousMethods		
4	DataStructure	2	CO3
4.1 Arı	•		
	llection		
	ctionary		
4.4 Ha	shTable		
5	MultithreadingI/OStream	3	CO4





CO5

5 1	StreamRead	er StreamV	Vriter

- 5.2 FileMode
- 5.3 Opening&ClosingFile
- 5.4 RandomAccess File

3.4 Kai	IdolliAccess file		
6	AssemblyComponents	2	CO1
6.1 .NE	TAssemblyfeatures		
6.2 Stru	actureofAssemblies		
6.3 Cal	lingassemblies,privateandsharedassemblies		

7.1 WindowsForms

MenusandTool Bars,SDIand MDIapplications, BuildingMDIapplications.

7.2 BasicControls

Button, TextBox, Label, RadioButton, CheckBoxDateTimePicker, Timer ,PictureBox,ComboBox,ListBox, RichTextBox, MonthCalender

7.3 Container & Dialog Control

WindowsProgramming

Group Box, Panel, Common Dialog boxes, Progress Bar





8	DatabaseConnectivity usingADO.NET	6	CO6	

- 8.1 ADO.NETArchitecture
- 8.2 Connectionobject, CommendObject
- 8.3 Dataset, DataReader & DataAdapter
- 8.4 SQLCommands(Insert, Delete, Update, Select)
- 8.5 Accessing Datawith ADO. NET
- 8.6 DatagridviewDataBinding: Insert,Update,Deleterecords

ReferenceBooks

- 1. ProgramminginC#,E.Balagurusamy,
- 2. ProfessionalC#, WroxPublication
- 3. C#TheCompleteReference",Shildt,TMH
- 4. DatabaseProgrammingwithC#,ByCarstenThomsen,Apress
 - 1. FreeOnlineCoursesonUdemy

Basicsof ObjectOrientedProgrammingwithC#,

2. GettingStartedwithC#

FreeOnlineVideo-https://dotnet.microsoft.com/en-us/learn/csharp





BBA





FYBBA

Sr. No	Crosscu tting issue	Progra mme	Subject	Clas s	Name of the course	Content in thecour se	Course Outcome
1	Profession al Ethics	BBA	Business communic ation skills	FYB BA	Methods and types of communi cation	of commun ication: Linguisti cs, non- linguisti cs and para linguisti cs, art of listening , written commun ication, forms of written commun	and concise and effective message. These skills





		Business correspon dance	business letters	To understand how to make effective business correspondence and ability to write precise business letters and understanding about business correspondence.
		Analysis of different media of communication	Fax commun ication, voice mail, emails, tele conferen cing, commun ication through social media	1) To underst and how modern technol ogy effects busines s and

Magar A



			of new
			media
			on
			busines
			s is
			affectin
			g on
			interper
			sonal
			relation
			s and
			groups
			and
			ability
			to use
			differen
			t
			formats
			of
			social
			commu
			nication
			and
			technol
			ogy
			based
			commu
			nication
			effectiv
			ely





• Students understand how to write effective message and different types of business communications and also ability to write meaningful and concise and effective message. These skills are very important for inculcating professional ethics in them

Savitribai Phule Pune University FY BBA Semester I (CBCS) Pattern 2019 **Business Communication Skills** Course Code: 102 SC Credit 4 Depth of the syllabus - Reasonable knowledge of the communication Program objectives 1 To understand what is the role of communication in personal and business world 2. To understand system and communication and their utility 3. To develop proficiency in how to write business letters and other communications required in business Purpose& Skills to be develop Unit Title Contents Unit No. To understand the basic purpose of communication. Concept of Role of Communication in social and economic system Communication and Need for effective communication, meaning and definition, Principles of effective communication, Barriers to Ability to understand and comprehend the meaning of different Introduction communication and over comings forms of communication Communication Methods of Communications]: Linguistics, Non-Linguistics To understand how to write effective messages and different Methods and types of and Para- Linguistics, Art of Listening types of communication, Communication Written communication, Forms of written Professional. Ability to write meaningful and concise and effective messages Qualities, difficulties in written communication, Constraints in Ethics developing effective written communic Types or Channels of Communication: Internal- Vertical, Horizontal, Consensus, Grapevine External- Inward, Outward Merits and Limitations of methods & types of communication Business Concept ,need and functions of Business .Correspondence , Business To understand effective Correspondence Types of Business letters ,Layout Drafting of business , Correspondence Professional Ethics SPPU BBA COURSE CONTENT - SEMESTER I CBCS/2019 PATTERN - Annexure I Updated On 10/5/2020 Page 27





		,Complaint , Credit verification, Correspondence with bank, Job application , and Reference check	business correspondence
4.	Lammunication	, core conference ,	1.To understand how modern technology effects businesses and media based communication is working in present context. 2. Effects of new media on business is affecting on interpersonal relations and groups & Ability to use different formats of social communication and technology based communication effectively





TYBBA

Sr. No	Crosscu tting issue	Progra mme	Subje ct	Class	Name of the course	Contentin thecourse	Course Outcome
1	Professiona I Ethics	BBA	Busin ess Ethics	TYB BA	1. Busin ess ethics	 Introduction to business ethics Corporation and stakehol der ethics Corporate social responsibility and marketing ethics 	 Understa n the role and scope of business ethics Understa nd the concept and role of business and stakehol der ethics Understa nd the role of CSRR in tradition al and modern business.







		Savitribai Phule Pune University TY BBA Semester V (CBCS) Pattern 2019 Subject: Business Ethics Course Code – GC 503 Credits – 3	
	Depth: Reasonable Wo	orking Knowledge	
1 2. 3.	To develop theoretical t To analyze the role of E	nsive understanding of the concepts of Business Ethics ools to understand current ethical issues and their impacts on business. thics in business, Government and Society, cenario concerning to Environment and consumer protection.	
Un	101	Contents	Purpose and Skills to be Developed
1	Introduction to Business Ethics Professional Ethics	1.1 Meaning, Nature and Scope of Business Ethics 1.2 Ethics in Contemporary Business 1.3 Organizational Ethical Climate – Ethical Decision Making and Importance of Framing Ethical Policies 1.4Why Ethical Problems occur in Business 1.5 Difference between workplace Ethics and Laws 1.6 Ethical Code of Conduct in Global Business 1.7 Government protection policies against illegal business practices, 1.8 Influence of Interest Groups on the Government	Understand the Role and Scope of Business Ethics. Role of Ethics and its importance at National and International Level in business as well as individual level.
2	and the world and the second	Impact of Business Decisions on Stakeholders Leadership Ethics at the organizational level – Training Ethics, imbibing organizational values and cultures, Awareness of rule and	Understand the concepts and role of Business and Stakeholder ethics. Page





	Professional- Ethics	regulations of an organization, Upskilling and Ethical knowledge of employees. 2.3 Organization of Modern corporation and Interaction with stakeholders	Modern Organization role and responsibility towards stakeholders.
	Roofessional -> Ethics Professional Ethics	2.4 Whistleblower Act and Employee Rights: Privacy and Safety 2.5 Collective Bargaining and Role of Management in implementing Ethics. 2.6 Ethics in Compliance Management – Fraud, Corruption, Sanction Violations, Conflict of Interests, Human Rights Violation. 2.7 Health and Safety Issues in Organizations – Workplace Safety, Measures to avoid accidents, Maintenance of Psychological wellbeing of employees.	Understanding the concept of business, government, and societal ethics.
3	Corporate Social Responsibility and Marketing Ethics	3.1 Role and Responsibility of Organizations towards government and society. 3.2 CSR Performance – Meaning and Responsibility. 3.3 CSR – Strategy in building community relationships. 3.4 Corporate Citizenship and – Concept and Stages	Understand the role of CSR in traditional and Modern Business. Identify the efficiency relevancy of CSR in today's world.
	Professional -	APRIL II I I I I I I B A B A B A B A B A B A	 CSR in today's world Understand Marketing ethics and its importance.





Links of the courses which integrates the Professional Ethics into the curriculum.

SR/N	SUBJEC	CLAS	LINK
O	T	S	
1	ECONO MICS	SYBA	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/S.Y.B.A.%20Economics%20Syllabus%20from%202020_06. 072020.pdf
		TYBA	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/TYBA%20Economics%20Syllabus%202021- 22(1_01.07.2021.pdf
2	BVOC	FYBV	https://docs.google.com/document/d/1HpzPLmqYIkNUaoKNoT
	(T.S)	OC	vnolMpxcL75lYj/edit?usp=drive_link&ouid=115551644254398 988658&rtpof=true&sd=true
3	GEOGRA PHY	TYBA	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/T.Y.B.A.%20(Geography) 08102022.pdf
4	POLITIC AL SCIENCE	SYBA	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/S.Y.B.A.%20Political%20Science%20and%20Public%20Ad ministration%20Syllabus_27.012021.pdf
		TYBA	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/TYBA%20Political%20Science%20and%20Public%20Administration%20Syllabus_02.07.2021.pdf
		MA	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%2
		PART	<u>02019/MA%20Part-</u>
		I	<u>I%20%20Political%20Science%20Syllabus%20(Sem%20I%20a</u> nd%20II)_27.012021.pdf
		MA PART II	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/02%20M.A.%20Hindi%20Syllabus%20College%20Syllabus %202020_06.072020.pdf
5	DEMOCR	FY	Democracy, Election and Governance Syllabus (aitpune.com)
	ACY	BA,BC	
		OM,B.	
		S.c	



6	COMME RCE	FYBC OM SYBC OM TYBC OM	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%2 02019/Revised%20Syllabus%20of%20F%20Y%20B%20Com% 20(Semester%20I)%20(CBCS%20- %202019%20Patt.) 30122021.pdf http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/S%20Y%20B%20Com%20(Skill%20Based)%20Semester%2 0II%20and%20IV_18.06.2021_25012023.pdf http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/Revised%20Syllabus%20of%20T%20Y%20B%20Com.%20(Vocational)%20Tax%20ProcedureandPractices%20_26112021.p df
7	MARAT HI	FYBA SYBA	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%2 02019/F.%20Y.%20B.%20A.%20Marathi%202019%20Syllabus %20New%20(Regular-Optional)2019 17.092019.pdf http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/SYBA%20Final%20Syllabus%20Marathi%202020-
		TYBA	21_28.05.2021.pdf http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/TYBA%20%20Marathi%20Final%20Year%202021- 22_27082022.pdf'
		MA PART I	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/MA%20Marathi%20-II%20Year%20Final_27082022.pdf
		MA PART I	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/MA%20Marathi%20-II%20Year%20Final_27082022.pdf
8	MATHE MATICS	FYBS C SYBS	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%2 02019/F.Y.B.Sc.%20Mathematics_10.072019.pdf http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20
		C TYBS C	20/S.Y.B.Sc.%20(Mathematics)_25.062020.pdf http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/T.Y.B.Sc.%20(Mathematics)_07122021.pdf





9	BCA Sci Maths	FYBC A	https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:061 27c64-0ae9-35da-857a-2e80ce0fb5a3
10	Bvoc SD	FYBV	https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:184
10	Maths	OC	<u>a8f47-97a6-3d74-bc54-a9c4631b38a4</u>
11	BCA	SY BCS	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/SY%20BCA_16.062020.pdf
		TY BCS	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/TY%20BCA_02.07.2021.pdf
12	BCS	SY BCS	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/S.Y.B.Sc.%20(Computer%20Science)%20Electronics.pdf
		TY BCS	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/T.Y.B.Sc.%20(Computer%20Science)_07.07.2021.pdf
	-	MCS 1	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%2 02019/M.Sc.%20Computer%20Science%20%20(Part- I)%20%20%20(For%20Colleges)_19.092019.pdf
		MCS 2	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/M.Sc.%20(Computer%20Science)%20Revised%20Structure %20(for%20Dept)_12.092020.pdf
13	BBA	FYBB A	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%2 02019/F%20Y%20BBA%20(CBCS%202019%20Patt.)%20Sem %20I%20-%20II_22.062020.pdf
		TYBB A	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/2)%20TY%20BBA%20Semester%20%20V%20AND%20VI %2010-6-21_08.07.2021.pdf
14	COMPUT ER	SYBS C	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 20/S.Y.B.Sc.%20(Computer%20Science)%20Electronics.pdf
	SCIENCE	TYBS C	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus20 21/T.Y.B.Sc.%20(Computer%20Science)_07.07.2021.pdf
		MSC PART I	http://collegecirculars.unipune.ac.in/sites/documents/Syllabus%2 02019/M.Sc.%20Computer%20Science%20%20(Part- I)%20%20%20(For%20Colleges) 19.092019.pdf





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