VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)

Programme Outcomes, Programme Specific Outcomes and Course Outcomes

B. A. Programme

Student are expected to imbue with following quality which help them in their future life to achieve the expected goals

PO 1. Ability to practice human values

PO 2 . Responsible and sensible citizen

PO 3. Devotion to social service

PO 4. Critical thinking and application of knowledge

PO 5 . Engagement in community work and global understanding

B. Com Programme

PO 1: Understand and application of basics of commerce, accounting and economics.

PO 2 : Effective business communicators

PO 3 : comprehend and write reports

PO 4 : Design/development of business solutions through problem analysis

PO 5 : Functioning of various components of business environment

PO 6 : Instill abilities and skills related to business ideas

B. Sc. Programme

PO1 To acquire the knowledge with facts.

PO2 To understand the basic concepts, fundamental principles and scientific theories related tomatter and energy.

PO 3 To acquire the skills in handling scientific instruments.

PO 4 To develop scientific outlook with respect to science subjects.

PO 5 To analyze the given scientific data critically and systematically.

PO 6 To realize ethical moral and social values in personal and social life.

1		**Department of English**
	PSO 1	Know development, themes and elements of the short story.
	PSO 2	Develop interest in and appreciation of Literature.
	PSO 3	Interpret texts with due sensitivity to both textual and contextual cues.
	PSO 4	Improvement of language through grammar skills.
	PSO 5	Basic knowledge of the nature of language and of the importance of language study in society.
	PSO 6	Acknowledgement of the basic principles and goals of Translation
	PSO 7	Fundamental understanding of core areas of language analysis including phonology, morphology, syntax, semantics and pragmatics.
	PSO 8	Recognition and utilization of basic empirical research methods in Translation.
	PSO 9	Get familiar with representative literary texts within a significant number of historical, geographical, and cultural contexts
	PSO 10	Understand texts in their cultural and historical contexts
	PSO 11	Demonstrate coherent writing in multiple genres (literary analysis and creative writing) as well as an awareness of critical and interpretative methods. Performcompetent close readings of texts.
	B.A. Part I	**DSE (Core Paper I)Introduction to English Language and Literature**
	CO1	After completion of this course, the students will be able to: Know development, themes and elements of minor forms of literature, especially one act play.
	CO2	Identify morphemes and word formation processes.
	CO 3	Translate simple sentences.
	CO 4	Use English proverbs & phrases in real-life situations.
		appreciate literary texts based on the knowledge of genre and elements.
		Paper III & Paper V Language and Linguistics
	CO1	Grasp the complexity of language as a communication system shaped by cognitive, biological, cultural, and social factors.
	CO2	Understand the concepts, theories, and methodologies used by linguists in qualitative and quantitative analyses of linguistic structure, and patterns of language use.
	CO 3	Realize the role of language in reflecting and constructing social identities.
	CO 4	Apply the knowledge gained of the selected areas of linguistics in other academic contexts.
		Paper IV & Paper VI **Forms of English Literature**
	CO1	Apply critical and theoretical approaches to the reading and analysis of literary texts of multiple genres.
	CO2	Identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary texts
	CO 3	Analyze literature using appropriate terminology and common rhetorical figures.

	CO 4	Develop intellectual flexibility, creativity and linguistic literacy so that they may engage in life-long learning.
	CO 5	Employ knowledge of literary traditions to produce creative writing.
	B.A. I Sem I	**AECC English for Communication (1011 A)**
	CO1	After completion of this course, the students will be able to: Revise the grammatical rules and use the language grammatically correct.
	CO2	Improve English vocabulary and use it in real-life situations.
	CO 3	Produce narrative texts creatively.
	CO 4	Use the language confidently according to different needs in different contexts
	B.A. I Sem II	**AECC English for Communication (1011 B)**
	CO1	After completion of this course, the students will be able to: use the language grammatically correct.
	CO2	acquire the skills of communication in real-life situations.
	CO 3	produce descriptive texts creatively
	CO 4	develop the language skills effectively.
2	**Department**	**History**
	PSO 1	The purpose of the History is to enable the student to Understand the important developments in the Historical Research in a thematic approach .
	PSO 2	To examine and criticize various revolutions & world wars along with their impact on history.
	PSO 3	To adequate students with life , work and contribution of social reformers & freedom fighters in india and world.
	PSO 4	To understand the application of history with reference to Archives, Museums &
		Tourism Industry.
	B. A. I SEM-I	**Course Name :B.A.I- DSC-1020 A History of Ancient India – I**
	CO 1	To Get acquainted with different aspects of reconstruction of ancient Indian history.
	CO2	To Understand the Cultures in Ancient Maharashtra & Indus valley Civilization
	CO3	To Get acquainted with Stone Age Cultures.
	CO4	Glimpses on Vedic & Post Vedic Era
	B. A. I SEM-I	**Course Name :B.A.I- DSC-1020 A History of Ancient India – II**
	CO 1	To Understand Art- Architecture & Literature in ancient India
	CO2	Get acquainted with Mauryan Dynasty.
	CO3	To Study Religious reformation in 6 th century BC.
	CO4	To study the age of Gupta Empire.
	CO 5	Glimpses on Vedic & Post Vedic Era.

	B.A. II Sem III	History of Modern Europe –I DSC-1020 C-1
	CO 1	Examine the French revolution & its various aspects.
	CO2	Get acquaint with salient features of Age of Napoleon & Metternich
	CO3	Understand the unification of Germany & Italy
	B.A. II Sem IV	History of Modern Europe –II DSC-1020 D-1
	CO 1	Criticize first world war and its consequences
	CO2	Study the age of Bismarck and his internal- External Policy.
	CO3	Get acquaint students with Rise of Dictatorship in Modern Europe
		Study the highlights of second world war and its consequences
	B.A. II Sem III	Making of Modern India (1757-1947) DSC-1020 C-2
	CO 1	Examine the Establishment and Expansion of British East India Company
	CO2	Criticize 1857 Revolt and its consequences
	CO3	Understand the rise of Indian Nationalism & Establishment of Indian National Congress
	CO4	Get acquaint with salient features of Age of Tilak
	CO5	Criticize Mahatma Gandhi's contribution in Indian Freedom Struggle
	B.A. II Sem IV	Towards Independence DSC-1020 D-2
	CO 1	Study the highlights of Revolutionary Movements and its consequences
	CO2	Understand critically the partition and Independence of India
	CO3	Examine the Constitutional Development Acts in British India
	CO4	Get acquainted with salient features of Indian Constitution
	B.A. II Sem III	History of Social Reformers in Maharashtra –I DSC-1025 C
	CO 1	Examine the Socio-Economic & Political condition of Maharashtra in 19 th century
	CO2	Criticize British Rule over India through its administration, Law & Justice
	CO3	Study & Examine the contribution of early social reformers in Maharashtra
	CO4	Adequate with life & work of Mahatma Jyotiba Phule
	B.A. II Sem IV	History of Social Reformers in Maharashtra –II DSC-1025 D
	CO 1	Criticize the contribution of Social Movements in Maharashtra
	CO2	Study & Examine the life & work Women Reformers in Maharashtra
	CO3	Understand the highlights of Educational Contributions of Educational Reformers in Maharashtra
3	**Department**	**Geography**
	PSO 1	Explain the scope of the Geography.
	PSO 2	Explain the concepts, theories and models of Geography
	PSO 3	Understand the new trends in Geographical studies.
	PSO 4	Understand the Geographical issues of local to global level with reference to resources.

	PSO 5	Develop scientific thinking for analyzing environmental issues.
	PSO 6	Develop the knowledge and thinking power for solution for Geo-environmental Problems.
	BA I Sem I	**Physical Geography**
	CO 1	To develop a keen interest in Geography subject.
	CO 2	Explain to be familiar with concepts of Physical Geography.
	CO 3	Analyze the Geo-environmental issues around world.
	BA I Sem II	**Human Geography**
	CO 1	To introduce basic conceptual framework of Human Geography.
	CO 2	To cultivate basic knowledge of Human Geography through understanding and analysis .
	CO 3	To help a holistic understanding the issues related to Human Geography.
	BA I Sem I	**Science Technology and Development (GEC) - 1**
	CO 1	To Familiar the students with various dimension of Science and Technology.
	CO 2	To understand latest concept in Science and Technology.
	CO 3	To develop scientific thinking among students.
	BA I Sem II	**Science Technology and Development (GEC) - 2**
	CO 1	To narrate the challenges and confronting the science and technology.
	CO 2	To laterally understands the problem solving scientific method .
	CO 3	To develop research thinking among students.
	B.A. II Sem III	**Soil Geography, DSC-1022C1**
	CO 1	Students should be able to understand significance of soil geography which is the fundamental branch of Physical Geography .
	CO 2	Students should be able to compare and relate soil is key resource for the development of any country.
	CO 3	Students should be able to make use of various models of soil formations.
	CO 1	Students should be able classify soil degradation and soil distribution in Maharashtra
	CO 4	Students should be able to use soil sample tools. vi) Students should learn to analyse saline and alkaline soil and comprehend vermi compost process
	CO 5	vii) Students should be familiar with the concept, need and methods soil of management
	B.A. II Sem III	**Resource Geography, DSC-1022C2**
	CO 1	Students should know Resource geography is the fundamental branch of Physical Geography .
	CO 2	Students understand mineral resource is key resources for the development of any country.
	CO 3	Students should know forest and energy resources.

	CO 4	Students should know approaches in resource management and concept of sustainability.
	CO 5	Students should know principles of energy conservation and Indian Renewable energy Programme
	B.A. II Sem IV	**Oceanography, DSC-1022D1**
	CO 1	i) Students should be able to define nature and scope of oceanography.
	CO 2	ii) Student should be able to describe temperature, salinity and currents of ocean.
	CO 3	iii) Students should be able to classify ocean deposits.
	CO4	iv) Students should be acquainted with practical's related to oceanography i.e. hypsographic curve, wind rose, Isohalines and isotherms.
	B.A. II Sem IV	**Agricultural Geography , DSC-1022D2**
	CO 1	1. Students be able to understand the concept and development of Agriculture.
	CO 2	2. Students be able to inspect the role of agricultural determinants towards the changing cropping pattern.
	CO 3	3. Students be able to revise the Green Revolution.
	CO4	4. Students be able to know agricultural concepts and modern technologies used in Agriculture.
4	**Department**	**Political Science**
	PSO 1	Narrate the scope of the discipline of Political Science.
	PSO 2	Explain the major concepts, theories of Political Science and the thought of Political thinkers.
	PSO 3	Understand the bases and structure of modern governments.
	PSO 4	Analyze the political issues of local, regional, national and global level.
	PSO 5	Comment on important political issues in a studied manner.
	PSO 6	Develop the knowledge base for competitive examinations
	BA I Sem I	**POLITICAL SCIENCE-DSC – 19 A (Basic Concepts in Political Theory)**
	CO 1	Visualize the broad areas of Political Science.
	CO 2	Explain the basic concepts used in political theory.
	CO 3	Analyze the socio-political issues around them with the help of these concepts.
	BA I Sem II	**POLITICAL SCIENCE-DSC – 19 B (Indian Constitution)**
	CO 1	Narrate the background and history of making of the Indian Constitution.
	CO 2	Explain the broad philosophy of Indian Constitution.
	CO 3	Elaborate the structure of Indian state.
	B.A. II Sem III	**Political Process in India (DSC 1019 C1)**
	CO 1	1) To give an overview of electoral system and party politics in India.
	CO 2	2) To discuss major issues in Indian politics.
	CO 3	3) To enable students to understand the basics of democratic politics.
	B.A. II Sem IV	**Indian Political Thought –Part I (DSC 1019 C2)**

	CO 1	1) To introduce students to the broad strands of thought that constituted the modern Indian political thinking.
	CO 2	2) To introduce students to the early Indian political thought.
	B.A. II Sem III	**Political Process in Maharashtra (DSC 1019 D1)**
	CO 1	1) To introduce students to issues in politics of Maharahstra.
	CO 2	2) To introduce students to the trajectory of politics in Maharshtra.
	CO 3	1) To impart analytical skills for understanding the social and political issues around them.
	B.A. II Sem IV	**Western Political Thought – I (DSC 1019 D2)**
	CO 1	1) To introduce students to the themes in early and medieval political thought.
	CO 2	2) To introduce students to the evolution of some basic ideas in Western Political Thought.
	CO 3	3) To enhance students' cognitive skills through the study of thought.
5	**Department**	**Sociology**
	PSO 1	Basic concept and principles can be studied
	PSO2	Social Problems can be studied and solutions can be find out
	PSO3	Students will get Inspiration for new research
	PSO4	Students will be motivated towards Entrepreneurship and Occupation
	PSO5	Students will be Motivated towards Social development
	PSO6	Students will be awaken about Gender equality
	BA I Sem I	**Paper Introduction to sociology**
	CO 1	The Important basic Concept can be Understand Students will understand Social Structure
	CO3	The Social values can be Imbibe
	CO4	The Background of Evolution of Sociology can be Understand
	BA I Sem II	**Paper-II Principles of sociology**
	CO 1	Students will understand Fundamental concept of Sociology
	CO2	Helpful for Students Development
	CO3	Helpful for Social Change
	CO4	The positive changes can be happen in students Personality
	BA II Sem III	**Structure of Indian Society -Paper No.III(DSC-1021C1)**
	CO 1	To knowledge of Indian society and the importance of social unity.
	CO2	To inspired by the sense of cultural separation in various groups and competent with political, education, financially.
	BA II Sem IV	**SOCIAL CHANGE IN INDIAN SOCIETY (DSC-1021D1)**
	CO 1	To know about the new economic policy for the speed of social innovation and the establishment of

		the industry.
	CO2	To inspired by the duties and motivating to do social work.
	BA II Sem III	**SOCIAL PROBLEMS IN INDIA.(DSC-1021C2)**
	CO 1	To creating social awareness and participating in social work will inspire population control.
	CO2	To eradicate poverty, we will be aware of various schemes and information regarding redressed of drought.
	BA II Sem IV	**SOCIAL PROBLEMS IN CONTEMPORARY INDIA.(DSC-1021D2)**
	CO 1	To help prevent female feticide and farmers suicides.
	CO2	To the social duty will be realized.
6	**Department**	**Economics**
	PSO 1	Students will be able to analyze the economic and institutional arrangements of firms, industries, organizations, specific regions and countries.
	PSO 2	Students will understand the role of government and regulatory framework in the process of economic development.
	PSO 3	Apply research knowledge in economics
	PSO 4	Students will be able to analysis the current issues of the economies.
	PSO 5	Students will be able to apply micro and macro economic theories and principles to explain the behaviour of individuals, business firms and industries with their interrelationship.
	B.A.I/SEM I	**Indian Economy Paper –I, DSC-1018A**
	CO 1	Understand nature and characteristics of Indian economy.
	CO 2	Know various issues and challenges before Indian economy
	CO3	Understand role of Agricultural and Industrial sector in economic development
	B.A.I/SEM II	**Indian Economy Paper –II, DSC-1018B**
	CO 1	Understand role of service sector in process of economic development
	CO 2	Know implementation and impact of economic reforms
	CO3	Understand social security and labour market
	B.A. II Sem III	Macro Economics-I Course Code:DSC-1018C1
	CO 1	CO1. Understand macro-economic variables
	CO 2	CO2. Realize macro-economic theories of output and employment.
	CO3	CO3. Understand impact of change in general price level.
	CO4	CO4. Analyze consumption and investment function.
	B.A. II Sem IV	Macro Economics-II Course Code : CC-1018 D1
	CO 1	CO1.Understand phases of business cycle
	CO 2	.CO2. Expresses public finance and economic development.
	CO3	CO3. Explains export, import and foreign trade deficit and balance of payment concepts
	CO4	CO5. Students will be able to analysis the current issues of the economies
	B.A. II Sem III	Banks and Financial Institutions-I

		DSC-1018 C2
	CO 1	CO1. Understand commercial banks with their functions.
	CO 2	CO2. Know bankers and bank customer's rights and obligations.
	CO3	CO3. Know central bank and its various policies.
	CO4	CO4. Analyze need and impact of monetary policy
	B.A. II Sem IV	Banks and Financial Institutions –II, DSC-1018D2
	CO 1	CO1. Understand Indian financial market.
	CO 2	CO2. Know the different development banks and their reforms.
	CO3	CO3. Understand e-banking sources and their functions.
7	**Department**	**HOME SCIENCE**
	PSO 1	Understand the role of food and nutrition for the welfare of self and community and applyscientificand analyticalprinciples and techniques of food and nutritionin diet formulation.
	PSO 2	Gain knowledge in textile production techniques and Acquire skill in textile Dyeing and printing.
	PSO 3	Relate the principles of Human Development with self, family and Society and manage life crisis at every stage of life span.
	PSO 4	Exhibit efficient resource use potentials at home and work and appreciatenuances of value based quality life skill oriented learning.
	B. A. I SEM-I	**Course Name-I. Fundamentals of Food and Nutrition**
	CO1	Students will be able to relate between food , Nutrition and health
	CO2	Students will be able to classify food groups and explain Nutritional contribution & Physical changes during cooking
	CO 3	Students will be able to Identify nutrients& write their functions ,dietary sources and deficiency .
	CO 4	Students will be able to choose methods of cooking for Preventing Nutrient Losses in cooking
	CO 5	Students will be able to modify their foods in Nutritious food
	B .A.I /Sem II	**Course Name –II. Family Resource Management**
	CO1	Students will be able to explain the concept and process of family resource management
	CO2	Students will be able to classify of family resources and identify for development of self as a resource with SWOC analysis .
	CO3	Students will be able to Preparation of money and time Management for self & family
	CO4	Students will be able to apply managerial process in event Planning Management and evaluation
	B.A. II Sem III	**Home Science Course – 3 Basics of Interior Design**
	CO1	Student will be able to apply elements and principles of design in interior decoration .
	CO2	Student will be able to classify the colour wheel and demonstrate the colour scheme in interior decoration .
	CO3	Student will be aware to choose of furniture and apply furniture arrangement in different rooms .
	CO4	Student will be plan for flower arrangement and able to demonstration and preparation of flower decoration .
	CO5	Student will be able to prepare colour wheel colour scheme .

	B.A. II Sem III	**Home Science Course – 4 Introduction to Food Safety and Preservation**
	CO1	Student will be able to explain the concept of food preservation and food safety .
	CO2	Student will be aware for food safety and food laws, standards , regulations .
	CO3	Student will be define the terms of food safety and food preservation .
	CO4	Student will be able to illustrate the methods of food preservation .
	CO5	Student will be able to start food preservation based small scale industry .
	B.A. II Sem IV	**Home Science Course – 5** **Fundamentals of Textile Science and Apparel Construction-I**
	CO1	Student will be able to classify the textile fibres and yarns.
	CO2	Student will be able to illustrate weaves and finishing process.
	CO3	Student will be able to explain the terms, tools and equipments of apparel construction .
	CO4	Student will be able to take the perfect body measurement .
	CO5	Student will be able to preparation of drafting, cutting, stitching and finishing of apparel construction .
	B.A. II Sem IV	**Home Science Course – 6** **Introduction to Human Development**
	CO1	To understand the field of Human Development and significance of Human development
	CO2	To create an understanding of the various stages if child development beginning with prenatal, neonate, infant and child development
8	Hindi	

	बी. ए. भागएक :हिंदीअनिवार्य (GEC1012A & B)
B.A.I SEM I	GEC सृजनात्मकलेखनऔरहिंदीकहानी (हिंदीअनिवार्य A /Comp. Hindi 1012A)
CO 1	स्तंभलेखन, साक्षात्कारलेखनकीकुशलताछात्रोंमेंविकसितकरना।
CO 2	छात्रोंकेछायाचित्र, कार्टून, रेखाचित्रआदिकीलेखनविधिसेपरिचितकरनाँ
CO 3	जनसंचारमाध्यमलेखनकेविविधक्षेत्रोंसेछात्रोंकोपरिचितकरना।
B.A.I SEM I	**GEC संपादनऔरहिंदीकहानी (हिंदीअनिवार्य B /Comp. Hindi, 1012B)**

CO 1	संपादककेउद्देश्यएवंसिद्धांतोंसेछात्रोंकोपरिचितकराना।
CO 2	संपादकएवंउपसंपादककेमहत्त्वएवंदायित्वसेछात्रोंकोपरिचितकरना।
CO 3	समाचारपत्रकेविविधस्तंभोंसेछात्रोंकोपरिचितकराना।
CO 4	समाचारपत्रोंकीसाज-सज्जासेछात्रोंकोअवगतकराना।
B.A.I SEM I	**DSC कथेतरगद्यसाहित्यऔररचनात्मकलेखन (हिंदीऐच्छिक/Optional Hindi 1016A)**
CO 1	छात्रोंहिंदीसाहित्यकेप्रतिछात्रोंकीरुचिबढ़ानातथासाहित्यकीविविधविधाओंसेअवगतकरानाँ
CO 2	निबंध, रेखाचित्र, संस्मरण, व्यंग्यआदिविधाओंकेमाध्यमसेछात्रोंकाभावनात्मकविकासकरना।
CO 3	हिंदीगद्यकारोंसेछात्रोंकोपरिचितकरना।
CO 4	छात्रोंकीविचारक्षमताऔरसृजनात्मकताकोबढ़ावादेना।
B.A.I SEM I	**DSC छायावादोत्तरहिंदीकविताऔररचनात्मकलेखन (हिंदीऐच्छिक/Optional Hindi 1016 B)**
CO 1	छायावादोत्तरहिंदीकवियोंसेछात्रोंकोपरिचितकरना।
CO 2	हिंदीभाषाकेश्रवण, पठनएवंलेखनकीक्षमताओंकोछात्रोंमेंविकसितकरना।
CO 3	नैतिकमूल्य, राष्ट्रीयमूल्यएवंउत्तरदायित्वकेप्रतिछात्रोंमेंआस्थानिर्माणकरना।
CO 4	राष्ट्रप्रेम, राष्ट्रीयऐक्यकीस्थापनाएवंसामाजिकप्रतिबद्धताहेतुछात्रोंमेंराष्ट्रभाषाहिंदीकाप्रचार-प्रसारकरना।

9	Marathi		**GEC अवकाश-गद्य(मराठीअनिवार्य A /Comp. Marathi 1013A)**
		CO 1	मराठीभाषावसाहीत्याविषयीचीविद्यार्थ्यांच्यामनातरुचीवाढविने.
		CO 2	विद्यार्थ्यांचेमराठीभाषासाहीत्याचीओळखकरुनदेणे.
		CO 3	कथा,ललीतलेखववैचारीकलेखनयातूनविद्यार्थ्यांचीमानसीकजडणघडणकरणेवबुद्धीकैश ल्याचाविकासकरणे.
		CO 4	सर्जनशीललेखनासाठीसंवादकौशल्यगटचर्चा, मुलाखतवकार्यक्रमसंयोजनाचीमाहितीदेणेवसरावकरुनघेणे. भाषेचीअभिवृद्धीकरणे.
			GEC अवकाश-पद्य(मराठीअनिवार्य A /Comp. Marathi 1013B)
		CO 1	प्राचीनवअर्वाचनकाव्यविषयीविध्यार्थ्यांच्यामनातरुचीवाढविने.
		CO 2	मराठीसाहित्यपरंपरा, लेखक, कवीयांचापरिचयकरुणदेणे.
		CO 3	विद्यार्थ्यांच्यामनामध्येराष्ट्रीयएकात्मताउच्यमानवीमुल्यवकलेचीजोपासनाकरणे.
		CO 4	विद्यार्थ्यांचाव्यक्तीमत्वविकासघडवूनआनणेविविधपरीक्षाआणि स्पर्धापरीक्षांचीतयारीकरुनघेणे
			बी. ए. भागएक: मराठीऐच्छिक (DSC1015 A & B)
			DSC संवाद-गद्य (मराठीऐच्छिक/Optional Marathi 1015A)
		CO 1	विद्यार्थ्यांचेमराठीभाषासाहीत्याचीओळखकरुनदेणे.
		CO 2	मराठीभाषावसाहीत्याविषयीचीविद्यार्थ्यांच्यामनातरुचीवाढविने
		CO 3	कथा,ललीतलेखववैचारीकलेखनयातूनविद्यार्थ्यांचीमानसीकजडणघडणकरणेव बुद्धीकैशल्याचाविकासकरणे.
		CO 4	वृत्तपत्रलेखनाचीमाहितीदेणे. संपादकियवार्तालेख, स्तंभलेखनयाचासरावकरुनघेणे. तसेचभाषेचीअभिवृद्धीकरणे.
			DSC संवाद-पद्य (मराठीऐच्छिक/Optional Marathi 1015B)
		CO 1	प्राचीनवअर्वाचनकाव्यविषयीविध्यार्थ्यांच्यामनातरुचीवाढविने.
		CO 2	मराठीसाहित्यपरंपरा, लेखक, कवीयांचापरिचयकरुणदेणे.
		CO 3	विद्यार्थ्यांच्यामनामध्येराष्ट्रीयएकात्मताउच्यमानवीमुल्यवकलेचीजोपासनाकरणे
		CO 4	विद्यार्थ्यांच्यामनामध्येकाव्यविषयीचेआकलन, अभीरुचीवाढविनेवत्यांच्याव्यक्तीमत्वाचाविकासघडविणे.
B. Com Programme			
	B.Com.I,SEM I		**Business Economics – I DSC-1044A**
	CO 1	Understand concept of economics, business economics and difference between micro andmacro economic analysis	
	CO 2	Know demand function and measures of responsiveness of demand with its determinants.	
	CO3	Know production function and various cost and revenue concepts and their applications	
	B.Com.I,SEM II		**Business Economics – I DSC-1044B**
	CO 1	Understand the causes and consequences of different market structures	
	CO 2	Apply micro economic analysis to the firm under different market conditions	
	CO3	Understand different pricing practices in business	
	B.Com-I	**Financial Accounting**	
	CO 1	1. To understand financial accounting concept and branches of accounting.	
	CO 2	2. To study the Amalgamation of Partnership Firm	

	CO3	3. To know the procedure of Conversion of Partnership Firm in to Limited Company.
	CO 4	4. To understand Accounting of Professionals.
	CO 5	5. To know single entry and double entry system.
	CO 6	6. To study the consignment and branch accounting
	CO 7	7. To know the accounting standards
	Principles of business management	
	CO 1	To understand Concept of Management and Significance of Management.
	CO 2	To know different Contributors towards Management Theories.
	CO3	To know uses of Managerial Functions in the Organisation.
	CO 4	To understand Role of Manager.
	CO 5	To understand Management of Change and Recent Trends in Management.
	Principles of Marketing	
	CO 1	To understand Core Concepts of Marketing, Importance of Marketing.
	CO 2	To know Consumer Behaviour.
	CO3	To know the Relationship Marketing and Marketing Information System.
	CO 4	To understand Segmentation, Targeting & Positioning.
	CO 5	To understand the Rural Marketing.
	CO 6	Ps of Marketing.
	Insurance	
	CO 1	To understand concept of insurance, types of insurance and significance of insurance.
	CO 2	To know the principles of insurance.
	CO3	To know the procedure of taking life and general insurance policies.
	CO 4	To understand who is insurance agent and procedure of becoming insurance agent, ethical code of conduct, qualification of insurance agent and remuneration of insurance agent.
	CO 5	To know the Procedure of taking various insurance policies. 6. To know why privatization of insurance and IRDA act
	B.Com.I,SEM I	**English AECC English for Business Communication (1040 A)**
	CO 1	After completion of this course, the students will be able to: formulate grammatically correct sentences
	CO 2	speak about subject specific topics
	CO3	draft different types of business letters like inquiry, complaint, application
	CO 4	describe and narrate effectively
	CO 5	use vocabulary and correct grammar according to the purpose of communication
	B.Com.I,SEM II	**English AECC English for Business Communication (1040 B)**

	CO1	After completion of this course, the students will be able to: use articles and voices appropriately
	CO2	understand the format and content of business letters
	CO3	learn linguistic structures and vocabulary of English in advertisements, reports and e-mails.
	CO4	comprehend English prose and poetry.
	B. Com II Sem III	**Fundamentals of Entrepreneurship Paper - I**
	CO1	To impart theoretical knowledge of Entrepreneurship.
	CO2	To develop Entrepreneurship qualities and skills
	CO3	To acquaint students with the state policy on entrepreneurship development.
	B. Com II Sem III	**Corporate Accounting Paper - I**
	CO1	To develop awareness of students and train them in Corporate Accounting in conformity with the provisions of Indian Companies Act 1956 and Indian Accounting Standards.
	CO2	It aims at training the students in the practical aspects and computerized accounting.
	B. Com II Sem IV	**Fundamentals of Entrepreneurship Paper - II**
	CO1	To acquaint students with the concept of rural and women entrepreneurship.
	CO2	To impart conceptual knowledge of project management.
	CO3	To encourage the students through successful stories of Entrepreneurs.
	B. Com II Sem III	**Business Economics (Macro) –I Course Code : CC-1049C**
	CO1	Understand basic concepts and theories in macro-economic
	CO2	Describe the interrelationships among prices, income, money output and employment as they affect consumption, saving and investment
	CO3	Analyze causes and consequences of unemployment, inflation and economic growth
	B. Com II Sem IV	**Business Economics (Macro)-II, Course Code : CC-1049D**
	CO1	Understand changes in economic variables and business cycle
	CO2	Understand macro-economic policies and its importance.
	CO3	Make optimal business decisions by integrating the concepts of macroeconomics like business cycle, public finance and international trade environment.
	B. Com II Sem III	**Capital Market Paper – I Subject Code – CC-1050C**
	CO1	Understand Indian Financial System
	CO2	Know the difference between primary and secondary market
	CO3	Understand stock exchange
	B. Com II Sem IV	**Capital Market Paper – II Subject Code – CC-1050D**
	CO1	Know the functions of venture capital and merchant banking
	CO2	Understand different forms of analysis of capital market.
	CO3	Understand D-mat account with its components.
	M.Com-I	**Management Concept and organisation behaviour**

	CO	After Completion of this course student students will understand basic concept of management as well as modern trends in management and importance of management
		Managerial Economics
	CO	After the completion the course students will be able to understand the role of managerial economics in today's world, role of business manager analysis of economics concept and its applicability in management decision
		Advanced Accountancy-I
	CO	After Completion of this course student will familiarize with Accounting standards, Accounting of Holding company and Final accounts of co-operatives
		Advanced Accountancy-II (Auditing)
	CO	After Completion of this course student will understand the process of auditing and crucial aspect of auditing
		Advanced Accountancy-III
	CO	After Completion of this course student will understand the accounting procedure of amalgamation, absorption and reconstruction, insurance company as well as familiarize with recent concepts of accounting
		Advanced Accountancy-IV
	CO	After Completion of this course student will understand calculation of taxable income under different heads of the income
	M.Com-II SEM III	Business Finance-I CP-1217C
	CO1	To develop an understanding of the conceptual framework of Business Finance.
	CO2	To understand the concepts of Business finance with their environment and functions and to apply them in their life and in business organizations.
	M.Com-II SEM IV	CC1225D Business Finance
	CO1	To enhance the knowledge about capital market, SEBI, mutual funds, portfolio, micro finance and credit rating etc.
	CO2	To gain the information about International finance and instruments of International Finance.
	M.Com-II SEM III	Management Accounting Paper - I
	CO1	To understand the concept of Management Accounting.
	CO2	To know the use of tools and techniques of Management accounting in business.
	M.Com-II SEM IV	Management Accounting Paper II
	CO1	understand the concept of Management control system
	CO2	To understand cost Accounting terminology and methods related to Management Accounting
	M.Com-II SEM III	CBP-1219C Advanced Accountancy Paper V (Cost Accounting)
	CO1	To understand the costing concepts.
	CO2	To acquire the knowledge of Cost Accounting procedure and techniques.
	M.Com-II SEM IV	CBP-1227D Advanced Accountancy Paper VII (Financial Management)
	CO1	To acquire the knowledge of Financial Management.
	CO2	To know Selected Decision Making Techniques.
	M.Com-II SEM III	CBP-220C Cost Accounting paper V (Financial Management)
	CO1	To understand the financial management concepts.

	CO2	To asquint the students with financial management techniques.
	M.Com-II SEM IV	CBP-228D Advanced Accountancy Paper VII (Financial Management)
	CO1	The objective of this course is to help the students in understanding the conceptual frame work of financial Management with the aid of cost base.
	M.Com-II SEM III	CBP-222C (RESEARCH METHODOLOGY & PROJECT WORK PAPER – VI)
	CO1	To understand the conceptual framework of scientific Methods in Research.
	CO2	To develop the skills and apply the process of Research in Project report writing.
11	**Department**	**Physics**
	PSO 1	To get the ability to draw the objective conclusions.
	PSO 2	To provide the knowledge about material properties
	PSO 3	To demonstrate a rigorous understanding of the core theories and principal.
	PSO4	To understand the nature at atomic level
	PSO 5	To use the theories of physics for developing the technology to ease the problem related to society.
	PSO 6	To analyze the application of Mathematics to the problems in Physics.
	B.Sc I, SEM-I	**Mechanics**
	CO 1	To understand the laws of physics describing the motion of bodies under the influence of system of forces. To study different types of motions.
	CO2	To understand the laws of conservation of momentum and energy.
	CO 3	To study the fundamental elastic properties of material.
		To learn the concept of relativity to understand the nature microscopically.
	B.Sc I SEM-II	**Electricity magnetism and electromagnetic theory**
	CO 1	To understand the principles of physics this includes electromagnetism.
	CO2	To study the relation between electric field and magnetic field.
	CO 3	To know the concept of charge, current and voltage
	CO 4	To understand the nature of electromagnetic waves.
		M.Sc. Physics
	PSO 1	The student will acquire a job efficiently in diverse fields such as Science and Engineering, Industry, Education, Banking, Public Services, Business.
	PSO 2	The student will effectively communicate their knowledge of physics through a variety of oral, written, and computational modalities.
	PSO 3	Assess the errors involved in an experimental work and make recommendations based on the results in an effective manner also gain the knowledge of Physics through theory, practical's and research project.
	PSO4	Understand good laboratory practices and safety.
	PSO 5	The student will be able demonstrate a purposeful knowledge of scientific literature and ethical issues related to physics.

	PSO 6	Describe and critically evaluate the current state-of-the-art in solid state Physics area.
	Bsc. II Sem. - III	**Paper III: Physical and Organic Chemistry -DSC-2C**
	CO1	After studying this course student will able to understand the physical properties of Solutions.
	CO2	After studying this course student will able to understand the phases of the subject
	CO3	After studying this course student will able to understand the electrolytic cells and basics of electrochemistry
	CO4	After studying this course student will able to understand the structural aspects and synthesis of bio molecules such as amino acids, carbohydrates etc
	Bsc. II Sem. - IV	**Paper IV: Inorganic and Physical Chemistry -DSC-2D**
	CO1	On successful completion of the course, the students will be able to know about transition metals. , lanthanide actinide.
	CO2	On successful completion of the course, the students will be able to coordination chemistry theory
	CO3	On successful completion of the course, the students will be able to properties of solid, liquid and gases
	CO4	On successful completion of the course, the students will be able to chemical kinetics.
12	**Department**	**Chemistry**
	PSO 1	To encourage students to fix their feet and bright their carrier in the fields of science and technology for sustainable future and solve the emerging opportunities and challenges.
	PSO 2	To encourage our budding scientist in the field of chemical research for human well beings.
	PSO 3	To encourage and motivate the students to understand the chemistry in our daily life
	PSO 4	To inspire students to follow the principles of green chemistry which provides guideline for the exploration of nature without disturbing equilibrium of the nature?
	PSO 5	We help the students to understand theoretical chemistry by its practical applications in which traditional and modern apparatus are used.
	PSO 6	To create awareness and understanding of various critical perspectives and environmental challenges.
	PSO 7	To understand the diversity of the subject in the different fields.
	PSO 8	To encourage the student towards creativity and generates scientific attitude.
	PSO 9	To encourage students to adopt comparative understanding with mathematical, biological and social sciences.
	B.Sc I SEM-I	**Chemistry-DSC-1002A: Inorganic and Organic Chemistry**

	CO 1	To understand the fundaments of atom.
	CO 2	To learn the details of 'S' and 'P' block elements in the periodic table
	CO 3	To acquire the knowledge regarding ionic bonding and its formation.
	CO 4	To study the principles of covalent bonding.
	CO 5	To learn the aspects of AOs, MOs, LCAO.
	CO 6	To understand the basic concepts of organic chemistry.
	CO 7	To learn structural aspects of the organic compounds and its impact on properties.
	CO 8	To learn the various chemical reactions of the aliphatic hydrocarbons like alkanes, alkenes, alkynes.
	B.Sc I SEM-II	**Chemistry-DSC-1002B: Physical and Organic Chemistry**
	CO 1	To learn enthalpy of reaction and its types.
	CO 2	To understand the different laws of thermodynamics and its importance in the chemistry.
	CO 3	To understand the concept of free energy and its importance in the feasibility of chemical reactions.
	CO 4	To study the fundamental aspects of solubility and ionization
	CO 5	To learn the various chemical reactions of the aromatic hydrocarbons.
	CO 6	To gain the knowledge of preparation and chemical reactions of various important organic compounds like halides, aldehydes, ether, phenols, alcohols, etc.
	M.Sc.I SEM I	**Paper CP-1131 A: Inorganic Chemistry – I**
	CO 1	To learn Symmetry elements and symmetry operations of various inorganic compounds.
	CO 2	Understanding of spatial arrangement and nature of bonding in case of main group compounds.
	CO 3	Acquiring knowledge of bio inorganic chemistry and transition elements.
	CO 4	Study of Electronic, Electric and Optical behaviour of Inorganic materials.
	M.Sc.I SEM I	**Paper CP-1132A: Organic Chemistry-I**
	CO 1	Understanding the structure and reactivity of various reactive intermediates as well as stereochemistry of nucleophilic substitution reactions.
	CO 2	Learning of stereochemistry in nucleophilic substitution reactions in aliphatic compounds.
	CO 3	Identification of Electrophilic substitution reaction with respect to aromatic. Introduction of benzenoid and non benzenoid aromatic compounds
	CO 4	Grasping of new reactions with respect to its stereochemistry and applications
	CO 5	Studying the specificity of elimination reactions.
	CO 6	Assimilation of stereochemical aspects of chiral compounds containing heteroatoms and introduction to allenes and spiranes.
		Paper CP-1133 A: Physical Chemistry–I
	CO 1	Inculcation of Molecular spectroscopy phenomenon.
	CO 2	Studying the aspects of polymers and rubber.
	CO 3	Developing the concept of Colloids and surface phenomena.
	CO 4	Learning of new concepts in thermodynamics and related properties.

		Paper CP-1134 A: Analytical Chemistry –I
	CO 1	Conceptual learning of quality control and quality assurance related to analytical chemistry.
	CO 2	Acquiring the new hyphenated techniques in chromatography.
	CO 3	Grasping of new analytical techniques related to electrochemistry such as voltametry, amperometry and polarography etc.
	CO 4	Introduction to research methodology and nanomaterials.
		Paper CP-1137B: Inorganic Chemistry – II
	CO 1	Learning Symmetry elements and symmetry operations of various inorganic compounds.
	CO 2	Adapting knowledge related to organometallic chemistry, transition elements, transition metal complexes
	CO 3	Detailed study related to lanthanides and actinides Getting familiar with spectroscopic term symbols, nuclear and radiochemistry
		Paper CP-1138B: Organic Chemistry-II
	CO 1	Assimilation of reaction mechanism with various name reactions, C-alkylation and acylation
	CO 2	Learning oxidation , hydroboration and enamines
	CO 3	Studying reduction reactions with help of various reducing agents, also studying functional group protection
	CO 4	Getting familiar with the concept of retrosynthetic analysis and organometallic chemistry w.r.t. organic synthesis
		Paper CP-1139B: Physical Chemistry–II
	CO 1	Acquiring knowledge related to atomic structure of many electron system
	CO 2	Getting familiar with basics of resonance energy transfer and fluorescence quenching
	CO 3	Applying electrochemistry basics to determination of activity and activity coefficients of an electrolytes
	CO 4	Understanding the kinetics approach for simultaneous reactions
		Paper CP-1140B: Analytical Chemistry –II
	CO 1	Grasping the fundamentals of molecular spectroscopy
	CO 2	Applying basics of spectroscopy in structure determination of organic compounds
	CO 3	Use of heat energy in structure determination
	CO 4	Getting familiar with modern techniques such as AAS, ICPS
13	**Department**	**Mathematics**
	PSO 1	To study differentiability of real valued functions and to make aware students about their applicability.
	PSO 2	To study various classes of differential equations.
	B.Sc II **SEM-I**	**Differential Calculus**
	CO 1	Learn to find arbitrary integer order derivative of various classes of functions.
	CO 2	Learn how to trace curves.

	CO 3	Learn applicability of Mean value Theorems
	CO 4	Learn to evaluate limit of functions in indeterminate forms
	CO 5	Learn to check continuity and differentiability of functions
	B.Sc II SEM-II	**Differential Equations**
	CO 1	Learn to solve both ordinary and partial (linear, nonlinear) differential equations.
	CO 2	Learn to know mathematical formulation (involving differential equations) and solution of Mathematical Models
	M.Sc. I	**CP-1170A Algebra**
	CO 1	Check solvability of groups via Sylows theorems.
	CO 2	Check irreducibility of polynomial over any field.
	CO 3	Be familiar with theory of modules.
		CP-1171A : Advanced Calculus
	CO 1	Make use of Greens Theorem, Stokes Theorems for an arc rectification of curve.
	CO 2	Analyze convergence of sequences and series of functions.
	CO 3	Find the directional derivative of function of several variables.
		CP-1172A Complex Analysis
	CO 1	Know how to check given complex valued function is analytic or not.
	CO 2	Find power series expansion of an analytic function with radius of convergence.
	CO 3	Find zeros and singularities of complex valued functions
	CO 4	Evaluate integral of complex valued functions along given curve.
		CP-1173A Ordinary Differential Equations
	CO 1	Find the linearly independent and hence general solutions of given differential equations
	CO 2	Find series solution of Bessel's and Legendre's differential equations.
	CO 3	Apply Picard's successive approximation method to find approximate solution of initial value problem.
		CP-1174A : Classical Mechanics
	CO 1	Analyze motion of system of particles through Lagrangian and Hamiltonian principles.
	CO 2	Apply principle of variation of calculus for extrimization of problem.
	CO 3	Study motion of rigid body.
		CP-1175B : Linear Algebra
	CO1	Students will have a demonstrable knowledge of Vector space, Linear Transformations, Canonical Forms and Bilinear Transformations.
		CP-1176B : Measure and Integration
	CO 1	Find measure of given set and classification of measurable and nonmeasuarble sets and functions
	CO 2	Evaluate Lebesgue Integration of measurable and nonmeasurable functions.
		CP-1177B : General Topology
	CO 1	Find different topologies on a given set and study their properties.
	CO 2	Check continuity of functions through different topological approaches.
		CP-1178B : Partial Differential Equations
	CO 1	Classify given second order partial differential equations.
	CO 2	Use different method to solve boundary value problem specially wave equations, Heat equations.
		CP-1179B : Numerical Analysis
	CO 1	Solve linear and nonlinear equations by various numerical methods.

	CO 2	Find numerical integration along with error computation.
	CO 3	Solve initial value problem by different numerical methods
	Bsc. II Sem. - III	**MATHEMATICS-DSC -1005 C - Differential and Integral Calculus**
	CO1	After studying this course student will able to Make use of concept of derivative to study different curves geometrically
	CO2	After studying this course student will able to Make use of vector differentiation to study various physical phenomenon
	CO3	After studying this course student will able to solve improper integrals
	CO4	After studying this course student will able to find the area, volume of the given region
	CO5	After studying this course student will able to find Fourier series expansion of the given functions.
	Bsc. II Sem. - IV	**MATHEMATICS-DSC -1003D - Discrete Mathematics and Integral Transform**
	CO1	After studying this course student will able to aware with different mathematical structures.
	CO2	After studying this course student will able to have sufficient knowledge of graph theory to apply in various fields
	CO3	After studying this course student will able to familiar with different kinds of integral transformations.
	CO4	After studying this course student will able to make use of the transformations to solve differential equations
14	**Department**	**Computer Science**
	PSO 1	Design, implementation, testing, and evaluate a computer system, component and algorithms to meet desired needs and to solve a problems using Computers.
	PSO 2	Demonstrate knowledge of Computer fundamentals, discrete mathematics and data structures, Network systems and Internet Technologies.
	PSO 3	Demonstrate knowledge of probability and statistics, including applications appropriate to computer science, information and technology.
	B.Sc I, SEM-I	**DSC-6A** **Problem Solving Using Computers**
	CO 1	Students should be able to understand the concepts of programming before actually starting to write new programs.
	CO 2	Students should be able to develop logic for Problem Solving
	CO 3	Students should be made familiar about the basic constructs of programming such as data, operations, conditions, 4loops, functions etc.
	CO 4	Students should be able to understand what happens in the background when the programs are executed
	CO 5	Students should be able to apply the problem solving skills using syntactically simple language i. e. Python (version: 3.X or higher)
	B.Sc II	**DSC-6B**
	SEM-II	**Database Management Systems**

	CO 1	1) Apply knowledge of computer architecture and organization appropriate to the discipline
	CO2	Analyze given processing element, and identify and define the computing requirements.
	CO 3	Design, implement, and evaluate a microcontroller-based system, process, component, or program to meet desired needs
	CO 4	4) Use current techniques, skills, and tools necessary for Low-Level computing.
15	**Department**	**B.Sc. STATISTICS**
	PSO1	With a short term course in Statistical Quality Control they can serve as Qualitycontrol expert
	PSO2	With short term course in Actuarial Science they can work in InsuranceCompanies.
	PSO3	They can work as a Data analyst in various fields.
	B.Sc I, SEM-I	**DSC - 1004 A** **(Descriptive Statistics - I & Elementary Probability Theory)**
	CO1	Compute descriptive statistics, moments, skewness, kurtosis, m.g.f. and c.g.fforcontinuous univariate distributions.
	CO2	Compute various statistical measures for continuous bivariate distributions.
	CO3	Understanding transformation of continuous univariate and bivariate random variable.
	CO4	Understanding various continuous probability distributions and their applications in
	CO5	Compute simple, weighted Index numbers and cost of living Index number.
	CO6	Understanding vital statistics and computation of vital events.
	CO7	Distinguish between process and product control, plotting control charts for variableand attributes.
	CO8	Applications of Chebychev's inequality in finding bounds for probabilities.
	B.Sc I, SEM-II	**DSC - 1004 B** **(Descriptive Statistics II & Discrete Probability istributions)**
	CO1	At the end of this course students will be able to: Understanding various continuous probability distributions and their applications indifferent fields.
	CO2	Know the relation between various probability distributions.
	CO3	Learn basics and data analysis using R- software.
	CO4	Learn numerical methods.
	CO5	Understand the basic concepts of reliability and ageing properties.

	CO6	Understanding the basic concepts of testing of hypothesis.
	CO7	Distinguish between large and small sample tests.
	CO8	Applications of small and large sample tests for real life examples.
16	**Department**	**Department Electronics**
	PSO1	The main aim of program (B.Sc. Electronics) is to develop the students withadequate theory knowledge of the electronic components, circuit design,instruments and practical work.
	PSO2	Understand and develop ideas, knowledge and practical skill based on readingand through the internet.
	PSO3	Transfer of appropriate knowledge and methods from one topic to anotherwithin the subject.
	PSO4	To encourage students to develop skills for accepting challenges of up-coming technological advancements.
	PSO5	Students learn to carry out practical work in the laboratory.
	PSO6	They get experience in applying skills and greater expertise.
	PSO7	To prepare students with necessary fundamental concepts and specificpractical skills.
	PSO8	Develop the foundation of student to face rapidly developing electronic field.
	PSO9	To give training on circuit design, analysis, building and testing.
	PSO10	Apply appropriate techniques, modern instrument and equipment to studyelectronic circuit analysis for low frequency, mid frequency and highfrequency, with the help of signal generator and Digital Storage Oscilloscope.
	PSO11	Career opportunities and planning.
	B.Sc. I, Semester-I	**Course Name: Network Analysis and Analog Electronics**
	CO1	To understand the electronics component, basic network theorems andacquire the knowledge of applying theorems to resistive circuits.
	CO2	Acquire the fundamental knowledge and expose to the field of semiconductortheory and devices and their Applications.
	CO3	To understand the basics of different DC power supplies.
	CO4	Know about the multistage amplifier using BJT in various configurations todetermine frequency response and concept of voltage gain.
	CO5	Know about different power amplifier circuits, their design and use inelectronics and communication circuits
	CO6	To understand the effects of negative feedback on amplifier circuits.

	B.Sc. Part-I Semester-II	**Course Name: Linear and Digital Integrated circuits**
	CO1	Understand the fundamentals and areas of applications for the integratedcircuits.
	CO2	Analyze important types of integrated circuits.
	CO3	Analyze, design and implement combinational logic circuits.
	CO4	Analyze, design and implement sequential logic circuits
	CO5	Understand the fundamentals and areas of applications of the integratedcircuits.
	CO6	Analyze, design and implement combinational and sequential logic circuitslogic circuits.
	B.Sc. II Sem. - III	**Electronics-Paper- III-DSC -1005 C-Electronics Communication and Microprocessor 8085**
	CO1	On successful completion of the course, the students will be able to Apply the knowledge of semiconductors to illustrate the functioning of basic electronic devices
	CO2	On successful completion of the course, the students will be able Differentiate different modulators of AM , DSBSC, SSB, VSB and FM
	CO3	On successful completion of the course, the students will be able Explain the basics of satellite communication
	CO4	On successful completion of the course, the students will be able Use the Satellite system for the benefit of society and to know the different application of satellite communication
	CO5	On successful completion of the course, the students will be able Solve basic binary math operations using the microprocessor
	CO6	On successful completion of the course, the students will be able Apply knowledge of the microprocessor's internal registers and operations by use of a PC based microprocessor simulator
	CO7	On successful completion of the course, the students will be able Write assembly language programs, assemble into machine a cross assembler utility and download and run their program on the training boards.
	CO8	On successful completion of the course, the students will be able Design electrical circuitry to the microprocessor in order to interface the processor to external devices
	B.Sc. II Sem. - IV	**Electronics-Paper- IV-DSC -1005 D-Advance Communication and Microcontroller 8051**
	CO1	Understand different Analog Pulse Modulation technique like PAM,PWM and PPM.
	CO2	Understand different digital modulation technologies like ASK,FSK and BPSK
	CO3	Know modern multiple access schemes, the concept of frequency reuse, channel assignment strategies
	CO4	Understand GSM, CDMA concepts, architecture, frame structure, system capacity
	CO5	Understand evolution of mobile communication generations 2G, 2.5G, 3G and 4G with their characteristics and limitations
	CO6	Draw and describe architecture of 8051 microcontroller

	CO7	Interface various peripheral devices to the microcontrollers
	CO8	Write assembly language program for microcontrollers
	CO9	Understand Embedded -C language programming for 8051 Microcontroller
	CO10	Design microcontroller based system for various applications
17	**Department**	**Microbiology**
	PSO 1	Upon completion of B.Sc. Microbiology programme , student will be able to – Perform the basic techniques related to screening , isolation and cultivation of microorganism from various sources.
	PSO 2	Understand microorganisms and their relationship with the environment.
	PSO 3	Conduct the basic research with these microorganism and perform the diagnostic procedures required in food , milk and pharmaceutical industries.
	PSO4	Follow the aseptic techniques and conduct the process of sterilization as well as perform the techniques to control the microorganism.
	PSO 5	Produce and analyze the microbial product at laboratory level.
	B.Sc I, SEM-I	**Course Name :DSC 1010 A Introduction to Microbiology and Microbial Diversity**
	CO 1	After completing the course , student will be able to- Apply various physical and chemical methods for sterilization of different materials.
	CO2	Identify microorganisms using staining techniques.
	CO 3	classify the organism on the basis of their nutritional requirements
	B.Sc I SEM-II	**Course Name :DSC 1010B Bacteriology and Applied Microbiology**
	CO 1	After completing the course , student will be able to- Identify different kinds of microorganisms on the basis of their morphological, cultural & biochemical characters.
	CO2	Explain techniques of preservation of microbial culture.
	CO 3	Analyzethe milk microbiologically.
	B.Sc II SEM-III	**DSC- 1010C : Microbial Physiology and Metabolism**
	CO1	Describe mechanism of energy generation in bacteria.
	CO2	Predict effect of various environmental factors on the growth of microorganism.
	CO3	Explain various methods of food preservation.
	B.Sc II SEM-IV	**DSC- 1010D : Microbial Genetics and Medical Microbiology**
	CO1	Distinguish between various forms of DNA.
	CO2	Explain the gene regulation.
	CO3	Define various terminologies used in medical microbiology.
18	**Department**	**BIOTECHNOLOGY (OPTIONAL)**
	PSO 1	Graduates will be able to apply knowledge of biotechnology to conserve flora & fauna.
	PSO 2	Graduates will be able to outline various projects for human welfare & social awareness
	PSO 3	Graduates will be able to perform various techniques in Life sciences.
	PSO 4	Graduates will be able to differentiate plant & animals to species level.
	B.Sc I, SEM-I	**DSC-1009A Basics of Biotechnology**

	CO 1	At the end of this course students will be able to: Depict scope of biotechnology with respect to various branches.
	CO 2	Perceive knowledge about biomolecules
	CO 3	Choose precise tool & techniques to purify specificbiomolecules.
	CO 4	Predict & Illustrate the image formation by microscope
	B.Sc I SEM-II	**DSC-1009B** **Basics of Cell biology &Microbiology**
	CO 1	At the end of this course students will be able to: Classify types of microorganism
	CO2	Differentiate cell organelles in Pro & Eukaryotes ,can also outline their functions.
	CO 3	Design media formulation with respect to individual Organism
	CO 4	Outline various staining procedures
	B.Sc II SEM-III	**DSC 1345C- Genetics**
	CO1	To understand basic principles of Mendelian inheritance.
	CO2	To study cell division & chromosome segregation To explore the Linkage inheritance.
	CO3	To acquire the chromosome structure, chromatin organization and variation.
	CO4	To learn the concepts of Linkage concept of sex determination and sex
	CO5	Linked inheritance. To gain knowledge about the organellar inheritance.¬
	B.Sc II SEM-III	DSC 1346C- Biophysics and Enzymology
	CO1	Biophysics and Enzymology deals with study of detailed of spectroscopy, crystallography, NMR with respect to functions and factors affecting Enzymes catalysis.
	CO2	The course will give opportunity to understand following concepts a) Proximity orientation, Strain and Distortion, Covalent catalysis, Acid- base catalysis b) Steady state kinetics c) Allosteric Enzyme d) models explaining mechanism of action- sequential model, Symmetry Model
	B.Sc II SEM-III	DSC 1347C - Metabolic Pathways
	CO1	Have knowledge of cellular metabolism, including central catabolic and anabolic pathways.
	CO2	Understand the principals and importance of metabolic control
	CO3	Be able to describe the main mechanisms through which metabolic processes are controlled, and appreciate that control occurs at multiple levels.
	CO4	Understand how different control mechanisms may be integrated to coordinate cell metabolism and function.
	CO5	Understand how metabolism is coordinated in mammals, and have knowledge of how disturbances in metabolism contribute to disease.
		DSC 1348C – Ecology
	CO1	Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.
	CO2	Understand the Biogeochemical cycle and its functioning interactions across local to global scales.

	CO3	Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes.
	CO4	Reflect critically about their roles and identities as citizens, consumers and environmental actors¬ in a complex, interconnected world.
	B.Sc II SEM-III	DSC 1349C - Molecular Biology- I
	CO1	Molecular Biology-I gives knowledge about structure and function of the macromolecules, essential to life. Molecular Biology gives detailed knowledge of biological and/or medicinal processes through the investigation of the underlying molecular mechanisms.
	CO2	Students will gain an understanding of chemical and molecular processes that occur in¬ and between cells. Students understanding will become such that they will able to describe and explain processes such replication and repair of DNA.
	CO3	Students will gain insight into the most significant molecular and cell-based methods¬ used today to expand our understanding of biology.
	B.Sc II SEM-III	DSC 1350C - Plant Tissue Culture
	CO1	To acquaint students with Techniques of Plant. To impart the skills of PTC.
	CO2	The students will be technically and critically trained with good practical exposure to perform¬ both the plant and animal culture, which is the at most required in this field of science; skilled candidates are absorbed in well established and commercial tissue culture units.
	CO3	This area can be taken up as micro propagation business with smaller investment by¬ entrepreneurs.
	B.Sc II SEM-IV	DSC 1345D-Immunology
	CO1	The immune system governs defense against pathogens and is of importance for development of autoimmune diseases, allergy and cancer.
	CO2	The course discusses basic immunology including cellular and molecular processes that¬ represents the human immune system.
	CO3	This subject offers detailed study of following concepts;¬ a) Immunological processes at a cellular and molecular level b) Defense mechanism (Physico-chemical barriers) c) Innate & Acquired Immunity d) Antigen & Antibody (Reactions) e) Hypersensitivity
	B.Sc II SEM-IV	DSE 1346D- Advances in Cell Biology
	CO1	Describe cytological, biochemical, physiological and genetic aspects of the cell, including cellular processes common to all cells, to all eukaryotic cells as well as processes in certain specialized cells.
	CO2	Explain cellular processes and mechanisms that lead to physiological functions as well as• examples of pathological state. .
	CO3	Students will understand the cellular components underlying mitotic cell division•
	B.Sc II SEM-IV	DSC 1347D -Plant Biochemistry
	CO1	To understand plant structures in the context of physiological function plants.
	CO2	To understand plant water relations, i.e. how plants acquire, utilize, and regulate the flow of¬ water between plant and environment.
	CO3	To understand the mineral nutrients plants require, and how they are obtained, metabolized,¬ and transported.
	CO4	To understand the physiological details of photosynthesis and respiration, and how they are¬ organized and regulated in plants.

	CO5	To understand plant growth and development, and its regulation by hormones and the¬ environment.
	B.Sc II SEM-IV	DSC 1348D Environmental Biotechnology
	CO1	Students who successfully complete this unit will be able to: Recognise the various global and regional environmental concerns due to natural causes and/or¬ human activities, and the impact of these on various forms of life including native biodiversity.
	CO2	Investigate some examples of different types of environmental pollution and their impacts¬ Describe the applications of various fields including chemistry, biochemistry, molecular biology and/or microbiology, in understanding and addressing the above issues, as well as
	CO3	exploring environmental resources for new technologies.
	CO4	Demonstrate an awareness of emerging concerns such as climate change, waste management or¬ reductions in fossil fuels, and new technologies for addressing these.
	B.Sc II SEM-IV	**DSC 1349D - Molecular Biology-II**
	CO1	Molecular Biology-II gives knowledge about structure and function of the macromolecules, DNA blue print of life. Molecular Biology gives detailed knowledge of processes such as transcription and translation.
	CO2	Students will gain an understanding of chemical and molecular processes that occur in¬ and between cells. Students understanding will become such that they will able to describe and explain processes such operon model, gene regulation etc .
	CO3	Students will gain insight into the most significant molecular and cell-based methods¬ used today to expand our understanding of biology.
	B.Sc II SEM-IV	DSC 1350D Animal Tissue Culture
	CO1	Students will be able to describe animal cell culture from a historical point of view.
	CO2	Appreciate the importance of and the progress in animal cell culture technology.¬ Be familiar with the theoretical and practical aspects of culturing and sub-culturing established¬ cell lines.
	CO3	Principles of regulating biological products as it apply to the pharmaceutical industry.¬
	CO4	Describe different methods and equipment employed in the scale-up of animal cell culture.¬
19	**Department**	**DEPARTMENT OF ZOOLOGY**
	PSO 1	Understand the nature and basic concepts of Animal diversity, taxonomy, Comparative anatomy Developmental biology, physiology, Biochemistry, Genetics and Evolutionary Biology
	PSO 2	Perform procedures as per laboratory standards in the areas of Animal diversity, taxonomy, Comparative anatomy, Developmental biology, physiology, Biochemistry, Genetics and Evolutionary Biology, Entomology, Sericulture, Biochemistry, Animal biotechnology, Immunology and research methodology
	PSO 3	Understand the applications of applied zoology in Apiculture, Aquaculture, Agriculture and Medical zoology

	PSO 4	Acquired knowledge about research methodologies and skills of problem solving methods
	PSO 5	Students will Contributes the knowledge for Nation building and society welfare.
		ZOOLOGY-DSC -1008A
	CO 1	Students are able to understand the evolution, history of phylum from protozoa to vertebrata.
	CO2	Students are able to understand about the Non Chordate animals.
	CO 3	Students are able to understand about the Chordate animals
	CO 4	To study the distinguishing characters of non chordates.
		ZOOLOGY-DSC -1008B
	CO 1	Understand the comparative structures of integument, skeletal system, digestive system, respiratory system, heart, aotic arches, kidney, respiratory organs, brain of different animals and sense organs.
	CO2	Understand the Gametogenesis, Fertilization, pattern of cleavege, fate map, germ layers and early development, movements, neurogenesis and organogenesis in animals.
	CO 3	Understand the implantation, placenta and metamorphosis in frog
	CO 4	Understand Gene activation, determination, induction, Differentiation, intercellular communication, cell movements and cell death
	CO 5	Understand the Chick embryology
20		**Department of Botany**
	PSO 1	Critically evaluation of ideas and arguments by collection relevant information about the plants, so as recognize the position of plant in the broad classification and phylogenetic level.
	PSO 2	Identify problems and independently propose solutions using creative approaches, acquired through interdisciplinary experiences, and a depth of knowledge/expertise in the field of Plant Identification
	PSO 3	Accurately interpretation of collected information and use taxonomical information to evaluate and formulate a position of plant in taxonomy
	PSO 4	Students will be able to apply the scientific method to questions in botany by formulating testable hypotheses, collecting data that address these hypotheses, and analyzing those data to assess the degree to which their scientific work supports their hypotheses.

	PSO 5	Students will be able to access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works.
	PSO 6	Students will be able to apply fundamental mathematical tools (statistics, calculus) and physical principles (physics, chemistry) to the analysis of relevant biological solutions.
	PSO 7	Students will be able to compare and contrast the characteristics of plants, algae, and fungi that differentiate them from each other and from other forms of life.
	PSO 8	Students will be able to explain the ecological interconnectedness of life on earth by tracing energy and nutrient flow through the environment. They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.
	PSO 9	Students will be able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for their area of specialization within biology.
	B.Sc. -I, Sem-I:	**Biodiversity in Cryptogams and Gymnosperms**
	CO 1	Understand the diversity among Microbes, Algae and Fungi.
	CO2	Know the systematic, morphology and structure, of Microbes, Algae and Fungi. Understand the life cycle pattern of Microbes, Algae and Fungi.
	CO 3	Understand the useful and harmful activities of Microbes, Algae and Fungi.
	CO 4	Know the Economic Importance of Algae, Fungi .
	CO 5	Understand the Biodiversity of Microbes, Algae and Fungi
	B.Sc I, SEM-I	**Paper II : Plant Ecology and Taxonomy**
	CO 1	Understand the ecological factors , ecosystem and Phyto-geography
	CO2	Understand plant communities and ecological adaptations in plants.
	CO 3	Understand the Phyto-geographic zones of India
	CO 4	Understand plantcommunities and ecological adaptations in plants..
21	**Department**	**BIOTECHNOLOGY (ENTIRE)**
	PSO 1	Graduates will gain and apply knowledge of Life sciences, to solve problems related tofield of Biotechnology.
	PSO 2	Graduates will be able to identify, analyze and understand valid conclusions with basicknowledge of traditional subjects in the view of Biotechnology

PSO 3	Graduates will be able to decide and apply appropriate tools and techniques inbiotechnology
PSO4	Graduates will be able to design and develop solution for environment & society issue.
PSO 5	Graduates will be able to justify social, health, safety and legal issues and understand hisresponsibilities in biotechnological practices.
PSO 6	Graduates will be able to understand the need and impact of Biotechnological solutionson environment and societal context keeping in view need for sustainable solution.
PSO 7	Graduates will be able design, perform experiments, analyze and interpret data afterinvestigating different scientific problem.
PSO 8	Graduates will be able to demonstrate knowledge of project and finance managementwhen dealing with Biotechnology
PSO9	Those with biotechnology degrees command a great deal of scientific research funding,as the ability to create new and more productive food sources is always in demand.
B.Sc I, SEM-I	**DSC 1331 AChemistry-I**
CO 1	At the end of this course students will be able to: Construct the thermodynamic models for reactionrate
CO 2	Analyze the relation between different measures ofconcentration
CO 3	calculate Gibb's free energy for biological process.
	DSC 1332 ABiochemistry-I
CO 1	At the end of this course students will be able to: Understand basic concepts of origin of lifein the diet.
CO 2	Outline the importance of carbohydrates and lipids
CO 3	understand the basic concepts of biological buffersystem.
CO 4	Predict and illustrate sap value, iodine value, andacid value.
	DSC 1333 APlant Science
CO 1.	At the end of this course students will be able to: Understand general classification of plant kingdom
CO 2	explain the terms used in plant morphology andtaxonomy
CO 3	outline the general characters of Algae, Bryophytesetc.
CO 4	explain the rules of taxonomy.
	DSC 1334 AMathematics
CO 1	At the end of this course students will be able to: differentiate various types of matrices.
CO 2	Outline the importance of Bernoulli differentialequation
CO 3	Explain the system of linear equation
CO 4	Discuss the mathematical theorem

		DSC 1335 AComputer
	CO 1	At the end of this course students will be able toChoose the operating system for computers
	CO2	To learn different aspects of office operations.
	CO3	Outline the database management system.
		DSC 1336 ABiotechniques and Instrumentation
	CO 1	At the end of this course students will be able to:. Illustrate different methods of protein purification
	CO 2.	Demonstrate and use different lab instruments
	CO 3	understand basic concepts of spectroscopy
	CO 4.	Perceive the knowledge about different types ofmicroscopy.
		DSC 1338 APhysics-I
	CO 1	At the end of this course students will be able to: Reflect the importance of various temperature scale
	CO 2	understand basic concepts of elasticity
	CO 3	Demonstrate the nature of electromagnetic waves.
	CO 4	outline the concepts of viscosity, surface tension.
	B.Sc I, SEM-I	**DSC 1331 BChemistry-II**
	CO 1.	At the end of this course students will be able to: Describe the mechanism of organic evolution
	CO 2	elaborate the concept of aromaticity
	CO 3	compare the gravimetric and titrimetric analysis
	CO4	explain chemical nature of natural products.
		DSC 1332BBiochemistry-II
	CO 1	At the end of this course students will be able to: Classify different types of proteins.
	CO 2	Elaborate the role of chromatography in purificationof bimolecule.
	CO 3	Describe the functions of different coenzymes.
	CO4	Explain IUB classification of enzymes.
		DSC 1333 BAnimal Science
	CO 1	At the end of this course students will be able to: Understanding the diversity of life.
	CO 2	Reflect the importance of host parasite relationship
	CO 3	Explain the structure and functions of different types of tissue.
	CO4	Encourage the students to opt for carrier in applied zoology.
		DSC 1334 B Statistics
	CO 1	At the end of this course students will be able to: Differentiate between correlation & regression
	CO 2	Explain the importance of random sampling
	CO 3	Perceive the knowledge of probability &testinghypothesis.
	CO4	Outline the importance of graphical representation ofdata.
		DSC 1335 BComputer

	CO 1	At the end of this course students will be able to: Explain the importance of programmingoperator.
	CO 2	Illustrate the relation between symbolic and logical
	CO 3	Explain importance of formatting
	CO4	Outline the types of conservation in expression.
		DSC 1336 BBasics in cell biology
	CO 1	At the end of this course students will be able to: percieve knowledge about the cell theory
	CO 2	Explain concept of different types of membrane transport.
	CO4	Outline the types of conservation in expression.
		DSC 1337B CO 1 Microbiology-II
	CO 1	Acquire the Knowledge about the isolation ofmicroorganism in pure culture from mixed population.
	CO 2	To carry out microbiological analysis of water
	CO 3	To conclude Different modes of transmission ofdiseases.
		DSC 1338 BPhysics-II
	CO 1	To correlates optics with microscopy.
	CO 2	Apperciate the importance of laser.
	CO 3	Discuss different types of semi-conductor devices.
	CO 4	Draw microbial growth curve.
22	**Department**	**B.B.A.**
	PSO 1	Students will have knowledge of management concepts, HRM practices,Material Management, E –Commerce, and production management.
	PSO 2	Students will learn concept of management of tourism, entertainment, education, telecommunication and day care services.
	PSO 3	BBA graduates able to identify a business opportunities and sources
	PSO4	BBA graduates will learn consumer behavior, preferences and consumersatisfaction
	PSO 5	BBA graduates will learn concept of management accounting Break Evenconcept& budgets like cash budget, flexible budget capital budget etc
	PSO 6	Students will able to differentiate between methods of measurement of NationalIncome, direct and indirect taxes.
	PSO 7	BBA graduates will learn entrepreneurial competency and entrepreneurial skill.
	PSO 8	Students will have capability of marketing a product or a service includingdigital marketing.
	PSO 9	Students can demonstrate the fundamentals of creating and managinginnovation, new business development, and high-growth potential entities
	PSO 10	Students will have ability to do analysis of statistical data.
	B.B.A I, SEM-I	**Course Name- CC -1362A** **Principles of Business Management-I**
	CO 1	Understand the fundamentals of management.
	CO2	Be able to explain planning process.
	CO 3	Understand Contribution Towards Management Thought

CO 4	Know staffing and organizing.
B.B.A I, SEM-I	**Course Name- CC-1364A Business Economics (Micro) Paper- I**
CO 1	Understand concept of economics, business economics and difference betweenmicro and macro economic analysis
CO2	Know demand function and measures of responsiveness of demand with itsdeterminants.
CO 3	Know production function and various cost and revenue concepts and theirapplications
B.B.A I, SEM-I	**Course Name- CC -1365A Marketing Management-I**
CO 1	Explain basic concepts Marketing Mix
CO2	Understand the concept Production and Pricing decision
CO 3	To get knowledge about Promotion and place
CO 4	Able to Understand the concepts of CRM and E-CRM
B.B.A I, SEM-I	**Course Name-CC -1363A Financial Accounting-I**
CO 1	Understand the concepts in accountancy..
CO2	Prepare trial balance ,journal, ledger and subsidiary books of accounts
CO 3	Be able to differentiate between GAAP & IFRS
CO 4	Prepare statements of accounts of sole proprietor
B.B.A I, SEM-I	**Course Name-GEC-1367A Human Resource Management-I**
CO1	Interpret the concepts of Human resource management and HR manager
CO2	To get knowledge about Human resource planning
CO3	Describe the concepts of Recruitment and selection
CO4	Illustrate International HRM and challenges of International HRM
B.B.A I, SEM-I	**AECC: BUSINESS COMMUNICATION I** (1361A)
CO 1	To enable students to understand different types of communication barriers and to overcome them
CO 2	To acquaint students with different types of communications
CO 3	To enable students to draft notice, memo and circulars effectively
CO 4	To enable students with all soft skills and writing skills essential job interview
B.B.A I, SEM-II	**Course Name-CC-1364A Principles of Business Management-II**
CO 1	Have an understanding of the skills, abilities, and tools needed to become a leader understand leadership styles
CO 2	Describe Motivational theories.
CO 3	Understand need for change and resistance to change.
	Course Name- CC -1363B Financial Accounting-II
CO 1	Describe Management Information System (MIS)
CO 2	Demonstrate calculations of depreciation

CO 3	Prepare Final accounts of Partnership firm
CO 4	Understand Accounting Packages.
B.B.A I, SEM-II	**Course Name- GEC-1367B Human Resource Management-II**
CO 1	Understand the concepts Performance appraisal
CO 2	To get knowledge about Promotion, Transfer, and Demotion
CO 3	Describe the concept of composition management
CO 4	Illustrate Employee relations
B.B.A I, SEM-II	**Course Name- CC-1364B Business Economics (Micro) Paper- II**
CO 1	Understand the causes and consequences of different market structures
CO 2	Apply micro economic analysis to the firm under different market conditions
CO 3	Understand different pricing practices in business
B.B.A I, SEM-II	**Course Name-CC -1365B Marketing Management-II**
CO 1	Explain basic concepts Marketing Mix
CO 2	Understand the concept Production and Pricing decision
CO 3	To get knowledge about Promotion and place
CO 4	Able to Understand the concepts of CRM and E-CRM
B.B.A I, SEM-II	**Course Name - Computer Application In Business-II GEC –1366B**
CO 1	Understand the various concepts, processes and importance of computer networkand terminology related to itconcept with examples
CO 2	Understand how to write various reports using Excel
CO 3	Understand Computer assisted audit tool for fraud detection and audit purpose its
CO 4	Understand BPR process and various terminologies related to it
B.B.A I, SEM-II	**Course Name - Business Communication II AECC-1361B**
CO 1	To enable students to engage in oral communication
CO 2	To help students to acquire skills to perform well in seminars, conferences and groupdiscussions
CO 3	To help students to acquire report writing skills
CO 4	To help students to acquire decision and negotiation skills
B.B.A. II Sem III	**Management Accounting CC 1369C**
CO1	To develop an understanding of the conceptual framework of Management Accounting
CO2	To understand the process of budgeting and use of marginal costing and standard costing
B.B.A. II Sem IV	Management Accounting 1369D
CO1	To understand analysis and interpretation of financial statements and
CO2	To Know the basics of human resource accounting
CO3	To understand the concept of funds flow and cash flow
B.B.A. II Sem III	GEC 1372C ENTREPRENEURSHIP DEVELOPMENT– I
CO1	To understand the concept of for Entrepreneurship
CO2	To understand the process of EDP
CO3	To Know the functioning of different institutes promoting entrepreneurship
B.B.A. II Sem IV	GEC 1372D ENTREPRENEURSHIP DEVELOPMENT– II
CO1	To understand entrepreneurial opportunities.

	CO2	To know the successful stories of women entrepreneur and top successful entrepreneurs.
	CO3	To prepare their own proposals of their businesses with the help of project report.
	B.B.A. II Sem III	GEC- 1370C Production management
	CO1	To get the knowledge about functions and process of Production Management.
	CO2	Students come to know about Recent trends in production management
	CO3	This course will help to understand production concepts along with quality management.
	B.B.A. II Sem IV	GEC– 1370D Material Management
	CO1	This course will help to understand material management along with Inventory management and supply chain management.
	B.B.A. II Sem III	CC–1368C Service sector management
	CO1	To understand service sector
	CO2	To know the marketing practices of service sectors
	CO3	To understand management of service sector
	B.B.A. II Sem IV	CC–1368D Service Sector Management
	CO1	This course will help to understand services provided by marketer like insurance transport, hospital, tourism, education, telecommunication services.
	B.B.A. II Sem III	Business Economics (Macro), Paper – I
	CO1	To know macroeconomics and its interrelationship with business
	CO2	Understand national Income and their different methods of measurements.
	CO3	To know concept of money and their forces
	CO4	describe the interrelationships among prices, income, money output and employment as they affect consumption, saving and investment
	CO4	Analyze causes and consequences of unemployment, inflation and economic growth
	B.B.A. II Sem III	STATISTICAL TECHNIQUES FOR BUSINESS- I
		E-commerce
	CO1	The fundamental principles of e-Business and e- Commerce and its role to improve Management
	CO2	The underlying used technologies with emphasis on Internet Technologies
	CO3	The application of tools and services to the development of small scale e-Commerce applications.
		AECC: BUSINESS COMMUNICATION I (1361B)
	CO 1	To enable students to engage in oral communication
	CO 2	To help students to acquire skills to perform well in seminars, conferences and group discussions
	CO 3	To help students to acquire report writing skills
	CO 4	To help students to acquire decision and negotiation skills
23	**Department**	**B.C.A.**
	PSO 1	Understand the concepts of key areas in computer science.

PSO 2	Develop practical skills to provide solutions to industry, society and business.
PSO 3	Identify, formulate, review and analyze complex problems using various computer techniques
B.C.A I, SEM-I	**Course Name: Fundamental of Computers**
CO 1	Master in the binary and hexadecimal number systems including computer arithmetic
CO2	Be familiar with the history and development of modern computers
CO 3	Understand the fundamentals of different instruction set architectures and their relationship to the CPU design
CO 4	Understand the principles and the implementation of computer arithmetic
B.C.A I, SEM-I	**Course Name: Programming in C part I**
CO1	Understand the basic terminology used in computer programming
CO 2	Write, compile and debug programs in C language
CO 3	Design programs involving decision structures, loops and functions
B.C.A I, SEM-I	**Course Name: Principle of Management**
CO 1	Students can understand Management concepts in organizations.
CO2	Students came to know planning and organizing process in management.
CO 3	Students get aware about motivation, stress management and change management.
B.C.A I, SEM-I	**Course Name: Financial Accounting**
CO 1	To enable the students to learn principles and concepts of Accounting.
CO2	Students can use accounting in real-life work .
CO 3	Ability to prepare accounting statements and reports in accordance with accounting
B.C.A I, SEM-I	**AECC: English for Business Communication-1395 A**
CO 1	To understand the concept, process and importance of communication
CO2	To gain knowledge of media of communication
CO 3	To develop skills of effective communication - both written and oral.
CO 4	To make students familiar with information technology.
B.C.A I, SEM-II	**Course Name: Software Packages**
CO 1	Recognize when to use each of the Microsoft Office programs to create professional business documents
CO2	Use Microsoft Office programs to create personal and/or business documents following current professional and/or industry standards
CO 3	Pursue future courses specializing in one or more of the programs
B.C.A I, SEM-II	**Course Name: Programming in C part II**
CO 1	Understand the user defined function and categories of functions
CO2	Write programs using pointers
CO 3	Be familiar with the concept of Dynamic memory allocation
CO 4	Design programs involving structure and union
	Student can write file handling programs.
B.C.A I, SEM-II	**Course Name: Bank Management**
CO 1	Students are able to understand various banking functions.
CO2	Students can understand KYC procedure and its importance in bank.

	CO 3	They came to know e-banking concepts and fund transfer options.
	B.C.A I, SEM-II	**Course Name: Financial Accounting with Tally**
	CO 1	Students can understand accounting packages.
	CO2	Knowledge of practical applications of accounting concepts with Tally.
	CO 3	Prepare final account of various companies with necessary schedules
	B.C.A I, SEM-II	**Course Name: Principle of Marketing**
	CO 1	Students are enable to get practical knowledge and tactics in the marketing
	CO2	Students can understand marketing mix and segmentation of products .
	CO 3	They are clear about buyers behavior and product advertisements
24	**Department**	**B.Sc. Entire Computer Science**
	PSO 1	Graduate will have an ability to use appropriate techniques, skills & tools necessary for computing practice.
	PSO 2	Graduate will have an ability to apply knowledge of computing, mathematics & electronics appropriate to the discipline.
	PSO 3	Graduate will have ability of problem analysis: Identify, formulate using principles of mathematics, electronics.
	PSO4	Graduate will have knowledge of software development fundamentals,including programming, data structures, algorithms and complexity
	PSO 5	The student can apply the knowledge they have gained to solve real
	B.Sc.-I SEM-I	**Course Name:Mathematics Subject Code : GEC-1300A**
	CO1	Construct simple mathematical proofs and possess the ability to verifythem. Comprehend formal logical arguments.
	CO2	Apply basic counting techniques of combinatorial problems. Specify andmanipulate basic mathematical objects such as sets, functions andrelations
		and will also be able to verify simple mathematical propertiesthat these objects possess.
	CO3	Classify numbers into number sets. Determine function is one-one andOnto.
	CO4	Prove results involving divisibility & greatest common divisors. ApplyFermat's theorem to find the remainder when any large number isdivided by any other integer
	B.Sc.-I SEM-I	**Electronics Code : GEC-1301A**
	CO1	Study the current voltage characteristics of semiconductor devices, understand the behavior of basic electronic components, Explain the concept of circuit laws and network theorems and apply them to laboratory measurements.
	CO2	Understand to semiconductor devices. Characteristics and biasing ofdiodes and transistors. Design and analysis of circuits using diodes, bipolar transistors, and field effect transistors. Application of transistorsas amplifiers and switches.
	CO3	Understand basic digital electronic systems. To learn different theoremsand laws for simplification of basic Digital electronics circuits. understand symbols, Truth tables, Boolean equations, & workingprinciple principle
	CO 4	Teach basic principles of programming. Develop skills for writing programs using 'C'.

B.Sc.-I SEM-I	**Subject : Computer Science Code : CC-CS-1303B**
CO1	Understand Basic elements of a communication system, Data Transmission modes, Data Transmission media, Types of networking Network Topologies, Definition and declaration, Operations on pointer, Pointer initialization, Pointer And Array, Pointer of pointer, Dynamic memory allocation.
CO2	Understand Information Technology IT Assets and its managements, ITAct, Definition, declaration, prototype of function, Local and globalvariable, User defined functions, Storage classes, Recursion, Pointer andfunction, Call by value and Call by reference.
CO3	Understand Database Management System, Data Models, Concept ofRDBMS, RDBMS Terminologies, DBA & Responsibilities of DBA,Relational Model, Definition and declaration, Array of structures,Passing structure to function, Pointer to structure, Nested structure, selfreferential structure, Sizeof and typedef, Definition of Union anddeclaration, Difference between structure and union.
CO4	Understand Oracle Data types, Classification of SQL commands, DataConstraints, Concept of File, Text and binary files, Opening and closingfiles, File opening mode.
B.Sc.-I SEM-I	**AECC: English for Business Communication- BCS I A**
CO1	To understand the concept, process and importance of communication.
CO2	To gain knowledge of media of communication.
CO3	To develop skills of effective communication - both written and oral.
CO4	To make students familiar with information technology.
B.Sc.-I SEM-II	**Subject : Mathematics Code : GEC-1300B**
CO1	Apply principles and concepts of graph theory in practical situations.Understand applications of graph theory in areas of Computer Science,Biology ,Chemistry ,Physics, Sociology etc.
CO2	To model real world problems using graph theory. To model real worldproblems using graph theory
CO3	Inspect the value of the limit of a function at a point using the definitionof the limit. Find the limit of a function at a point numerically andalgebraically using appropriate techniques including L'Hospital's rule.
CO4	Experiment with differentiation of exponential, logarithmic, trigonometric & inverse trigonometric functions n times. Illustrate theconsequences of the intermediate value theorem for continuous functions. Show whether a function is differentiable at a point.
B.Sc.-I SEM-II	**Subject : Electronics Code : GEC-1301B**
CO1	Design and analyze the basic operations of MOSFET. Know about themultistage amplifier using BJT in various configurations to determinefrequency response and concept of voltage gain. Know the concept offeedback amplifier and their characteristics. Design the differentoscillator circuits for various frequencies
CO2	Understand and analyze the IC 741 operational amplifier and its characteristics. Understanding various operating modes of Op-amp and its linear/non-linear applications.
CO3	Study different types of multivibrator and wave form generator using IC555. Understand concept of memories and types of memories

	CO4	Understand the basic architecture of 8- bit microprocessors and 16 bitmicroprocessor. Identify the addressing modes of an instruction. Develop programming skills in assembly language. Able to write programs on 8085 microprocessor based systems
	B.Sc.-I SEM-II	**Subject : Computer Science Code : CC-CS-1303B**
	CO1	Understand Basic elements of a communication system, Data Transmission modes, Data Transmission media, Types of networking Network Topologies, Definition and declaration, Operations on pointer, Pointer initialization, Pointer And Array, Pointer of pointer, Dynamic memory allocation.
	CO2	Understand Information Technology IT Assets and its managements, ITAct, Definition, declaration, prototype of function, Local and globalvariable, User defined functions, Storage classes, Recursion, Pointer andfunction, Call by value and Call by reference
	CO3	Understand Database Management System, Data Models, Concept ofRDBMS, RDBMS Terminologies, DBA & Responsibilities of DBA,Relational Model, Definition and declaration, Array of structures,Passing structure to function, Pointer to structure, Nested structure, selfreferential structure, Sizeof and typedef, Definition of Union anddeclaration, Difference between structure and union
	CO4	Understand Oracle Data types, Classification of SQL commands, DataConstraints, Concept of File, Text and binary files, Opening and closingfiles, File opening mode.
	B.Sc.-I SEM-II	**AECC: English for Business Communication- BCS I B**
	CO1	To acquaint the students with employment communication—Writing Resume, Acquiring Interview Skills etc..
	CO2	To introduce the students with the knowledge of office management.
	CO3	To develop skills of effective communication - both written and oral
	CO4	To make students familiar with modern technology
	CO5	To introduce the students for planning and controlling of office functions
25	**Department**	**Foundry Technology**
	PSO 1	B. Voc. Graduates in Foundry Technology will demonstrate knowledge ofMachine Drawing, Material Science, Gating System Design & Metallurgy tosolve actual casting products/processes related problems in Foundries
	PSO 2	Graduates will become Innovators & Entrepreneurs to address social,technical and business challenges.
	PSO 3	B. Voc. Graduates in Foundry Technology will select and apply relevantmodern technique and IT Tools to solve complex problems in design andmanufacturing
		of casting components.
	PSO4	B. Voc. Graduates in Foundry Technology will able to understand and solvesocial, health, legal issues related to foundry.
	PSO 5	B. Voc. Graduates in Foundry Technology will able to use appropriate environmental friendly processes for foundry to achieve sustainable growth.
	PSO 6	B. Voc. Graduates in Foundry Technology will be able apply ethical business practices in Industry.
	PSO 7	B. Voc. Graduates in Foundry Technology will able to work inIndustry/Foundry as a team player as well as a team leader
	PSO 8	B. Voc. Graduates in Foundry Technology will be able to communicate effectively and professionally at Local to Global level.

	PSO 9	B. Voc. Graduates in Foundry Technology will be able to apply Project Management Techniques and Financial Management Techniques in foundry.
	PSO 10	B. Voc. Graduates in Foundry Technology will demonstrate knowledge of Machine Drawing, Material Science, Gating System Design & Metallurgy to solve actual casting products/processes related problems in Foundries.
	PSO 11	Graduates will become Innovators & Entrepreneurs to address social,technical and business challenges.
	B.Voc Part I Sem I	**Course Name : ENGINEERING GRAPHICS-I**
	CO 1	Use various drawing techniques & drawing instruments.
	CO2	Draw various Conics such as Ellipse & Parabola
	CO3	Draw various special curves.
	CO4	Take appropriate projections of given point.
	CO5	Take appropriate projections of given Line.
	B.Voc Part I Sem I	**Course Name : ENGINEERING MATERIALS**
	CO1	Select appropriate materials and its compositions amongst Ferrous Metals.
	CO2	Select & Recommend suitable Non-ferrous Metal for Materials of Construction.
	CO 3	Apply knowledge of Plastics & Fibers for Material selection.
	CO4	Apply knowledge of Refractory Materials in Industry.
	B.Voc Part I Sem I	**Course Name : PATTERN CONSTRUCTION TECHNOLOGY**
	CO1	Identify various types of Patterns & their Allowances.
	CO2	Study of patterns for special processes
	CO3	Study process of pattern making.
	B.Voc Part I Sem I	**Course Name : MOULDING TECHNOLOGY**
	CO1	Understand Sand Molding Techniques.
	CO2	Understand sand molding machines.
	CO3	Understand various mold design techniques
	CO4	Identify Core making processes.
	B.Voc Part I Sem II	**Course Name : ENGINEERING GRAPHICS-II**
	CO 1	Use concepts of engineering drawing for Manufacturing/Fabrication/Design in foundry/Industries
	CO2	Visualize and draw various projection methods for lines and planes
	CO 3	Visualize and draw various projection methods of solids
	CO4	Understand sketching of development of surfaces
	CO5	Read and Interpret concepts of Isometric and Perspective Projections.
	CO6	Use various commands in Computer Aided Drafting.
	B.Voc Part I Sem I	**Course Name : MELTING TECHNOLOGY**
	CO1	Handle scraps and select proper charging method in furnace
		type and grade of metalcomposition
	CO2	Find appropriate melting operations and decide post melting treatments as per type and grade of metal
	CO3	Decide correct procedure of composition control as per required properties and composition.
	CO4	Select appropriate parameters for efficient operations of furnace
	CO5	Decide appropriate handling techniques for liquid metals in foundry

	B.Voc Part I Sem I	**Course Name : GATING SYSTEM AND RISERING**
	CO1	Select appropriate Gating System.
	CO2	Design Gating system for given mould.
	CO3	Design appropriate risers for a particular mould
		Course Name : CASTING PROCESSES:
	CO1	Select appropriate casting method for the components
	CO2	Analyze casting defects & implement remedial measures in the foundry
26	**Department**	**Animation and Film Making**
	PSO 1	B. Voc. Graduates in Animation & Film making will demonstrate that the cercal study of cinema inform their filmmaking and that the study and practice of film production enhance their work as film scholars analysts.
	PSO 2	B. Voc. Graduates in Animation & Film making will Computer Animation and Game Development graduates will have an understanding of critical and aesthetic issues in computer graphics and mixed-media
	PSO 3	B. Voc. Graduates in Animation & Film making will access industry related learning resources.
	PSO4	B. Voc. Graduates in Animation & film making will create effective visual animations using the elements of story
	PSO 5	B. Voc. Graduates in Animation & film making will identify and apply the 12 principles of animation. List of films featuring clay animation
	PSO 6	B. Voc. Graduates in Animation & Film making will relate some knowledge of the history of animation.
	PSO 7	B. Voc. Graduates in Animation & film making will demonstrate entry-level workplace computer competencies using industry standard 2D & 3D animation software
	PSO 8	B. Voc. Graduates in Animation & film making will demonstrate industry professional standards within their attitudes, conduct, ethics and work
	PSO 9	B. Voc. Graduates in Animation & film making will design layouts and backgrounds that incorporate principles of composition, perspective and color, with speed accuracy and dexterity, using a variety of media.
	B. Voc Part I Sem I	**Course Name: English for Business Communication**
	CO 1	Use appropriate words and sentences for effective communication.
	CO 2	Use various data representation techniques.
	CO 3	Use appropriate skills for resume writing.
	CO 4	Understand skills required for effective interview.
	B. Voc Part I	**Course Name: Fundamentals Of Art**
	Sem I	

CO 1	COs 1 Students will have demonstrable skills in their area of emphasis. These skills include formal and conceptual applications of foundation principles within their primary media.
CO2	Demonstrate basic practical visual art research skills, techniques and approaches to art making.
CO 3	Create meaningful links between concepts and materials within a contemporary framework, relating to the history and theories of art.
COs 4	Demonstrate a clear understanding of art as a language across 2D and 3D studies.
B. Voc Part I Sem I	**Course Name: Perspective**
COs 1	They relate to building knowledge and awareness, enhancing critical reflection, developing synthetic, analytical and presentation skills,
COs 2	Perspective-taking is the process by which an individual views a situation from another's point-of-view.
COs 3	Being able to analyze a situation from multiple perspectives, apply knowledge to new cases and present work fluently and convincingly
COs 4	Interpret and evaluate artistic expression considering the cultural context in which it was created
B. Voc Part I Sem I	**Course Name: History Of Animation**
COs 1	Students completing an assignment in Area C (Arts) courses will be able to analyze modes of artistic expression.
COs 2	Students will be able to identify through analysis the role of institutions (religious,political, economic, social, educational, etc.) in the development of all periodculture.
COs 3	Students will be able to assess and explain the repeating patterns of population rushes that characterize the history of area.
COs 4	Through research, students will present a paper showing and evaluating an element of change in history.
B. Voc Part I Sem II	**Course Name: English for Business Communication**
COs 1	Use appropriate words and sentences for effective communication.
COs 2	Use appropriate skills for resume writing.
COs 3	Use various data representation techniques.
COs 4	Understand skills required for effective interview.
B. Voc Part I Sem II	**Course Name: Colour Theory**
COs 1	Recognize color as a quality in the physical world, including natural phenomena. Be able to describe a variety of uses of color
COs 2	Apply color principles to 2 and 3 Dimensional design problems
COs 3	Color Theory is a Animation course that develops a student's understanding of the complex nature of color.
COs 4	The student will demonstrate skills in designing with color, while developing sensitivity through hue, value, intensity, proportion and placement in a composition.
B. Voc Part I Sem II	**Course Name: Classic Animation**
CO1	Enhance your drawing skills with storyboard and background design exercises.

	CO2	Create storyboards for an animated film, character model sheets, layouts, and final artwork for rendering.
	CO3	Progress to the art direction, digital ink and paint phase of production on your final project.
	CO4	Assemble a traditional animation portfolio in preparation for graduation.
	B. Voc Part I Sem II	**Course Name: Digital Animation**
	COs 1	Create drawings and paintings using custom brush libraries.
	COs 2	Export digital content for use in other software programs
	COs 3	Use Bezier paths to digitally ink vector graphic drawings
	COs 4	Demonstrate the synthesis of story, style, character, location, emotion, and symbology in compositional studies.
27	**Department**	**Graphic Design**
	PSO 1	Students will be able to Understand a Good Painting, Good Design and Good Photograph. Also able to make a Painting, Sketching.
	PSO 2	Students will be able to understand software tools and techniques for Manipulations, Image Editing, Creating designs and layouts.
	PSO 3	Students will be able to understand various font styles, understand serif/non serif fonts and how to using fonts or manuscript in the design.
	PSO4	Students will be able to understand the Depth in design, Painting and Photograph.
	PSO 5	Students will be able to develop concepts and provide design solutions in responseto a given brief or end user of the company product.
	PSO 6	Students will be able to present a range of promotional material, using branding guidelines in support of a given brand.
	PSO 7	Students will be able to read a famous logo and create a unique logo by following steps of Research, Mind Storming and Sketching.
	PSO 8	Students will be able to take a artistic photograph and professional image editing. In Indoor-Outdoor, Function, Industrial Area, Product, Wildlife and Model.
	PO 09	Students will be able to create a Website Design, Mobile App Design andApp\Website wireframe design.
	PO10	Students will be able to create conceptual solution for social and advertising campaigning.
	PO11	Students will understand awareness of the designer's roles and responsibilities and how to present themselves and their work within a commercial environment.
	B.Voc Part I Sem I	**Course Name :Color Theory Part I**
	CO 1	Understand the relationship between Value, Hue, Chroma. The Color Wheel - theories of Color Relationships/Harmonies.
	CO2	Understand to illustrate the application of color in three different color harmonies ona repeat side to side pattern of one's original design. Illustrate understanding of color proportion and extension.Develop and demonstrate ability to recognize color harmonies and proportions of color used by designers in existing spaces

	CO3	Understand Color Symbolism, Color Psychology, Historical & Contemporary use of Color. Local color and subjective use of color. Emotional effects Personal Colorpreferences.
	CO4	To develop more mature and varied colour skills using Graphic Software.
	B.Voc Part I Sem I	**Course Name : Elements of Art and Principles of Design**
	CO1	Discover the basic principles of two dimensional design through the manipulation of black, white and gray.
	CO2	Encourage to adopt a creative approach to problem solving and to become self-critical in the editing of the work.
	CO3	Develop a vocabulary of terms specific to the visual arts and particularly two dimensional art
	CO4	Use elements and principles in various designs created by using Graphic Design Software
	B.Voc Part I Sem I	**Course Name : History of Graphic Design**
	CO1	Provide exposure to images and information to inspire great work, further study, and exploration. Organize information for better communication..
	CO2	Identify influences and characteristics of design styles. Recognize significant contributors to design.
	CO3	Observe and discuss examples of effective design. Recognize prevalent historical design themes.
	CO4	Understand unification/separation of design and society. Unification/separation of design and technology
	B.Voc Part I Sem II	**Course Name :Color Theory Part II**
	CO1	Understand that when producing physical colors as in paint a Subtractive System is used and when producing colors digitally as on a computer an Additive System is used.
	CO2	Understand to illustrate the application of color in three different color harmonies on a repeat side to side pattern of one's original design. Illustrate understanding of color proportion and extension. Develop and demonstrate ability to recognize color harmonies and proportions of color used by designers in existing spaces.
	CO3	Understand that color is a meaningful constant for sighted people and it's a powerful psychological tool. By using color psychology, he can send a positive or negative message, encourage sales, calm a crowd, or make an athlete pump iron harder.
	CO4	Understand Color Psychology, applying Color Psychology to Everday Life.
	B.Voc Part I Sem II	**Course Name : TYPOGRAPHY**
	CO1	Understand generation of letter forms, including analysis of basic alphabet categories and rationale of individual letter-style characteristics.
	CO2	Understand fundamentals of typography with emphasis on the formal aspects of designing with typographic elements.
	CO3	Study contexts allowing the individual nature of the project content and audience to start influencing and determining their typographic choices.

	CO4	Use typography for meaningful design solution with minimal content by using Graphic Design Software.
	B.Voc Part I Sem II	**Course Name : PERSPECTIVE**
	CO1	Understand the art of representing three-dimensional objects on a two dimensional surface so as to give the right impression of their height, width, depth, and position in relation to each other.
	CO2	Know all details in perspective. Perspective drawings have a horizon line, which is often implied. This line, directly opposite the viewer's eye, represents objects infinitely far away. They have shrunk, in the distance, to the infinitesimal thickness of a line.
	CO3	Understand types of perspective. One point perspective uses one vanishing point placed on the horizon line. Two point perspective uses two points placed on the horizon line. Three point perspective uses three vanishing points.
	CO4	Use perspective in various designs created by using Graphic Design Software

B.Voc Part II Sem III	**Course Name : Advertising Art - Part I**
CO1	Understand introduction to advertising – defining advertising, Schematic history of advertising. Concepts of advertising
CO2	Understand and Study main trends in advertising. Strategy, Period, Focus and Themes. Rational vs. non-rational: Evolution of strategies. Strategy of repetition, use of text and patterns, typography and the creation of slogans.
CO3	Understand Advertising and society- Advertising business offers employment, Advertising promotes freedom of press, Information and freedom of choice, Advertising creates demand and consequently sales, Advertising reduces selling cost, Advertising creates employment, Advertising establishes reputation and prestige, Truth in advertising, Advertising tries to raise the standard of living.
CO4	Study Ethics, regulation and social responsibilities taste and advertising, Stereotyping in advertising, Advertising to children, Advertising controversial products.
B.Voc Part II Sem III	**Course Name : Calligraphy**
CO1	Understand basic of art in calligraphy by studying elements, principles, proportion and balance.
CO2	Understand and Study the art, symbolic expression, history and importance of calligraphy. Practice the calligraphy in ink and colour with pen, bamboo and brush in different types like English, Sanskrit, and Devanagiri etc.
CO3	Study Computer Graphics (Theory) - (i) Graphic Design for Calligraphers (ii) Letters as Subject: Written, Drawn & Painted (iii) The Joy of Calligraphy: Developing a Personal Script
CO4	Study Professional Calligraphy : (i) Lettering (ii) Logos (iii) Illustration (iv) Communication Design (Banners, Posters, Backdrops etc) (v) Illumination (vi) ICT in Graphic Design
B.Voc Part II Sem III	**Course Name : Printing Technology - Part I**
CO1	To understand Meaning of Printing and use of printing technology. History of printing, types of letters, printing press and industrial printing press

CO2	To understand & study Lithography Printing Process.
CO3	To understand & study types of Type Setting – Manual type setting, hot metal type setting and digital type setting..
CO4	To understand & study PAPER. History of paper, making process of paper, recycling of paper and types of paper.
CO5	To understand & study Screen Printing Process.
CO6	To understand & study Offset Printing Process and Plate Making Process.
B.Voc Part II Sem IV	**Course Name : Advertising Art - Part II**
CO1	Understand advertising and marketing – marketing plan, Advertising role in marketing: Types of market, Approaching market, The marketing concept and relationship marketing, Channel of distribution, Pricing.
CO2	Understand and Study Campaign planning objectives and basic principles, Campaign objectives, Factors influencing the planning of advertising campaign, The selling methods, Campaigning a new product, Layout design principles.
CO3	Understand and study Creative side of the advertising – what is creative advertising, Creative leap, Creative concept, Strategy and creativity, Creativity and strategy in the message design, Creative thinking.
CO4	Study Level aspects of advertising – copyright, Trade mark, Consequences of advertising, Status of advertising agents – outdoor advertising, advertisements in newspapers and magazine, cinematography – radio and television advertising.
B.Voc Part II Sem IV	**Course Name : Packaging Design**
CO1	To understand & study meaning of packaging and history.
CO2	To understand packaging for shipping. Different types and precautions taken for packaging for shipping.
CO3	To understand & study types of packaging and paper packaging methods.
CO4	To understand & study USP (Unique selling product).
CO5	To understand meaning and importance of FSSAI (Food Safety and Standards Authority of India)
CO6	To understand & study 3R i.e. “Reduce, Reuse and Recycle”
B.Voc Part II Sem IV	**Course Name : Printing Technology - PART- II**
CO1	To understand & study digital printing process and fine art inkjet printing process.
CO2	To understand spiral binding, center pinning, loop center pinning, perfect binding and perfect sewing binding.
CO3	To understand & study process of die making, creasing process and die cutting process.
CO4	To understand & study process of advance technology of 3D printing.
CO5	To understand & study gold / silver foiling and Vinyl or flex printing process.
CO6	To understand & study process of UV coating and types of UV coating.