



K. K. Wagh Education Society's

K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori,

Tal:- Niphad, Dist:- Nashik- 422201 (Maharashtra)

(Affiliated to Savitribai Phule Pune University)

Accredited by NAAC: 'B+' Grade (CGPA 2.52)

SPPU ID: PU/NS/AC/79/2003

College Code: 755

A. I. S. H. E. Code: C-42064



91-2550- 233438, 233439



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<http://ascc.kkwagh.edu.in>

Programme Outcomes, Programme Specific Outcomes & Course Outcomes (PO, PSO, CO)

Mechanism of Communication:

- Clear learning outcomes of the programs and courses are stated by the college. Following is the mechanisms which are followed by the institution to communicate the learning outcomes to the teachers and students.
- Hard Copy of syllabi and Learning Outcomes are available in the departments for ready reference to the teachers and students.
- Learning Outcomes of the Programs and Courses are displayed on departmental notice board. Soft Copy of Curriculum and Learning Outcomes of Programs and Courses are also uploaded on the website of the college for reference.



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Department of English

Program Outcomes

After successfully completion of course students will be able to:

PO1	Disciplinary knowledge: Demonstrate comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.
PO2	Critical thinking: Take informed action after identifying the assumption that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational and personal) from different perspectives.
PO3	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO4	Self-directed and Life-long learning: Acquire knowledge and skills, including 'learning how to learn', that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.
PO5	Effective Citizenship: Execute their duties and responsibilities as citizens successfully by being a part of larger community.
PO6	Environment and Sustainability: Become aware about the issues related to environment and the steps needed to be implemented for its sustainability through the study of texts with ecological elements and dimensions.

Program Specific Outcomes

After successfully completing B. A. English Programme students will be able to:

PSO1	Understand the evolution of criticism and its application in language and literature.
PSO2	Comprehend excellent pieces of prose and poetry in English literature.
PSO3	Apply knowledge of English language to improve skills in Listening, Speaking, Reading and Writing.

Course Outcomes

After completion of course the students will be able to.

Class	Course	Outcomes
FYBA	Compulsory English	1. Expose to the best examples of prose and poetry in English so that they realized the beauty and communicative power of

		English
		2. Acquire human values and developed their character as responsible citizens..
		3. Develop the ability to appreciate ideas and think critically..
		4. Enhance employability by developing their linguistic competence and
		5. communicative skills
	Optional English (General Paper-I)	1. Expose to the basics of literature and language and developed an integrated view about language and literature in them.
		2. Familiarize with minor forms of literature in English and help them to appreciate the creative use of language in literature
		3. Introduce to the basics of phonology of English so that they can pronounce better and speak English correctly.
		4. Prepare to go for detailed study and understanding of literature and language
		5. Enhance their job potential by improving their language skills.
SYBA	Compulsory English	1. Develop competence among the students for self-learning.
		2. Familiarize with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English.
		3. Develop their interest in reading literary pieces.
		4. Expose to native cultural experiences and situations in order to develop humane values and social awareness.
		5. Develop overall linguistic competence and communicative skills.
	General English: Study of English Language and Literature	1. Expose them to the basics of short story as a literary form.
		2. Familiarize them with different types of short stories in English.
		3. Understand the literary merit, beauty and creative use of language.
		4. Introduce some advanced units of language so that they become aware of the technical aspects and their practical usage.
		5. Prepare to go for detailed study and understanding of literature and language.
		6. Develop integrated view about language and literature in them.
	Appreciating Drama S-I	1. Acquaint and familiarize them with the terminology in Drama Criticism (i.e. the terms used in Critical Analysis and Appreciation of Drama).
		2. Encourage to make a detailed study of a few sample masterpieces of English poetry.
		3. Develop interest to appreciate and analyze drama in dependently.
		4. Enhance awareness in the aesthetics of Drama and to empower them to evaluate drama independently.
	Special Paper-II (S-2) Appreciating Poetry	1. Acquaint and familiarized with the terminology in poetry Criticism (i.e. the terms used in Critical Analysis and Appreciation of poetry).
		2. Encourage to make a detailed study of a few sample masterpieces of English poetry.
		3. Enhance awareness in the aesthetics of poetry and to empower them to evaluate poetry independently.
TYBA	Compulsory English	1. Introduce them to the best uses of language in literature.
		2. Familiarize with the communicative power of English.
		3. Become competent users of English in real life situations
		4. Expose to varied cultural experiences through literature.
		5. Contribute to their overall personality development by improving their communicative and soft skills
		1. To get the awareness of career opportunities available to them.
		2. To identify the career opportunities suitable to them.
		3. To understand the use of English in different careers.

	General English (G-3): Enhancing Employability Skills	4. To develop competence in using English for the career of their choice.	
		5. To enhance skills required for their placement.	
		6. To use English effectively in the career of their choice.	
			7. To exercise verbal as well as nonverbal communication effectively for their career.
	Special Paper III (S-3): Appreciating Novel		1. Familiarize to the basics of novel as a literary form.
			2. Expose the historical development and nature of novel.
			3. Aware of different types and aspects of novel.
			4. Develop literary sensibility and sense of cultural diversity in students.
			5. Expose to the best examples of novel.
	Special Paper IV(S-4): Introduction to Literary Criticism		1. Introduce the basics of literary criticism.
			2. Make aware of the nature and historical development of criticism.
			3. Familiarize with the significant critical approaches and terms.
			4. Encourage to interpret literary works in the light of the critical Approaches.
		5. Develop aptitude for critical analysis.	



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Department of Economics

Program Outcomes

After successfully completion of course students will be able to:

PO1	Disciplinary knowledge: Demonstrate comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.
PO2	Critical thinking: Take informed action after identifying the assumption that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational and personal) from different perspectives.
PO3	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO4	Self-directed and Life-long learning: Acquire knowledge and skills, including 'learning how to learn', that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.
PO5	Effective Citizenship: Execute their duties and responsibilities as citizens successfully by being a part of larger community.
PO6	Environment and Sustainability: Become aware about the issues related to environment and the steps needed to be implemented for its sustainability through the study of texts with ecological elements and dimensions.

Program Specific Outcomes

After successfully completing B. A. Economics Programme students will be able to:

PSO1	Explain the basic concepts, laws and theories related to the economic behavior of the human being
PSO2	Inculcate the economic way of thinking.
PSO3	Apply economic analysis in practice.

Course Outcomes

After completion of course the students will be able to.

FYBA	Indian Economic Environment -G-1	1. Familiarize the students with the recent developments in the Indian Economy
		2. Provide the students with the background of the Indian Economy with focus on contemporary issues like economic environment.
		3. Help the students to prepare for varied competitive examinations.
		4. Understand and comprehend the current business scenario,

		<p>agricultural scenario and other sectorial growth in the Indian context. To make the student aware of the developments such as MSMEs, Digital Economy, E-Banking, BPO & KPO, etc.</p> <p>5. Develop an understanding of the economic environment and the factors affecting economic environment.</p> <p>6. Develop awareness on the various new developments in the different sectors of an economy – agriculture, industry, services, banking, etc.</p> <p>7. Compare and contrast Indian Economy with other world economies.</p> <p>8. Discuss and debate on the various issues and challenges facing the Indian Economic Environment.</p>
SYBA	Indian Financial System G-2	1. To understand fundamentals of modern financial system.
		2. To understand the recent trends and developments in banking system.
		3. To understand the role of the Reserve Bank of India in Indian financial system.
		4. To provide the knowledge of various financial and non-financial institutions.
		5. To provide the students the intricacies of Indian financial system for better financial decision making.
	Micro Economics S-1	1. To develop an understanding about subject matter of Economics.
		2. To impart knowledge of microeconomics.
		3. To clarify micro economic concepts.
		4. To analyze and interpret charts, graphs and figures
		5. To develop an understanding of basic theories of micro Economics and their application.
		6. To demonstrate that the theories discussed in class will usually be applied to real-life situations.
		7. To help the students to prepare for varied competitive Examinations.
	Macro Economics S-II	1. To introduce students to the historical background of the emergence of macroeconomics.
		2. To familiarize students with the differences between microeconomics and macroeconomics.
		3. To familiarize students with various concepts of national income.
		4. To familiarize students with Keynesian macroeconomic theoretical framework of consumption and investment functions.
		5. To introduce students to the role of money in an economy.
		6. To introduce students to the conceptual and theoretical frameworks of inflation, deflation and stagflation, Business Cycle.
		7. To introduce students to the role of monetary and fiscal policies in fulfilling the macroeconomic objectives of stability, full employment and growth.
		8. To introduce students to the various instruments of monetary and fiscal policies.
	TYBA	
		2. To describe and analyze the concept and indicators of Human Development.
		3. To explain the characteristics of Developing and Developed Countries.

	Economic Development & Planning G-III	4. To describe the constraints to the process of Economic Development.
		1. To describe and explain the process of Economic Planning.
		2. To describe and examine the changing structure of planning process in India.
		3. To describe and explain the relation between Economic Development and Environment.
	International Economics S-III	1. To relate and recall the concepts of International Economics and International Trade.
		2. To describe and apply the theories of international trade.
		3. To explain and comprehend the issues relating to Terms of trade and Balance of Payment.
		1. Ability to relate and explain the concept of Exchange Rate and Foreign Exchange Market.
		2. Ability to describe the trends in Growth, Composition and Direction of India's Foreign Trade.
		3. Ability to comprehend the issues relating to Foreign Capital and Regional and International Co-Operation.
	Public Finance S-IV	1. To relate and recognize the Nature and Scope of Public Finance.
		2. To describe and analyze the concept of Public Revenue and its components.
		3. To explain types of Public Expenditure and reasons for rising Public Expenditure.
		4. To explain the types of Public Debt and its effects.
1. To explain and assess the components and instruments of Fiscal Policy.		
2. To relate to the concepts of Budget and its components.		
3. To describe and analyze the concept of Deficit Financing and its effects.		
4. To describe and explain the Centre and State Financial Relationship.		



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Department of Marathi

Program Outcomes

After successfully completion of course students will be able to:

PO1	Disciplinary knowledge: Demonstrate comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.
PO2	Critical thinking: Take informed action after identifying the assumption that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational and personal) from different perspectives.
PO3	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO4	Self-directed and Life-long learning: Acquire knowledge and skills, including 'learning how to learn', that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.
PO5	Effective Citizenship: Execute their duties and responsibilities as citizens successfully by being a part of larger community.
PO6	Environment and Sustainability: Become aware about the issues related to environment and the steps needed to be implemented for its sustainability through the study of texts with ecological elements and dimensions.

Program Specific Outcomes

After successfully completing B. A. Marathi Programme students will be able to:

PSO1	Marathi literature can be analyzed.
PSO2	Marathi literature can be Criticized

Course Outcomes

After complication of course the students will be able to.

FYBA	Marathi Sahitya : Katha ani Bhashik kaushalyavikas (G1) (SEM-I & II)	1. Familiarize with Marathi literature, language and culture.
		2. Expose to the basics of literature and language
		3. Connect literature to real life experience.
		4. Introduce the form, elements and types of the literary of story.
		5. Understand the importance of language in personality development.
		6. Develop interest to appreciate and analyze drama.
		7. Enhance employability by developing their linguistic

		competence and
		8. Communicative skills.
		9. Develop an integrated view about language and literature.
SYBA	Sem-III Bhashik kaushalyavikas ani Adhunik marathi Sahityaprakar - Kadambari (G-2)	1. Familiarize with minor forms of literature in Marathi and help them to appreciate the creative use of language in literature.
		2. Prepare to go for detailed study and understanding of literature and language.
		3. Aware of different types and aspects of novel.
		4. Expose to the best examples of novel.
	Sem-IV Bhashik kaushalyavikas ani Adhunik marathi Sahityaprakar - Lalitgadya (G-2)	1. Familiarize with standard writing practices.
		2. Develop ability to appreciate and evaluate selected Biographies and Autobiographies in modern Marathi literature.
		3. Enhance their job potential by improving their language skills.
	Sem-III Adhunik Marathi Sahitya – Prakashvata (S-1)	1. Understand the nature and concept of autobiography.
		2. Understand aspects of Biography and Autobiography.
		3. Develop ability for in-depth study of literature.
	Sem-IV Madhyayugin marathi Sahitya – Nivadak Gadya- Padya (S-1)	1. Familiarize with various movements in Modern Marathi literature.
		2. Create perspectives to analyze, evaluate and appreciate literary texts
3. Develop ability for in-depth study of literature.		
SYBA	Sem-III Sahityavichar (S-2)	1. Understand the nature of the process of literary creation and the concept of literary genus.
		2. Analyze the process of literary appreciation.
		3. Provide knowledge of some fundamental concepts in literary appreciation.
	Sem-IV Sahityasamiksha (S-2)	1. Develop aptitude for critical analysis.
		2. Introduce the basics of literary criticism.
		3. Encourage to interpret literary works in the light of the critical Approaches.
TYBA	Sem-V Bhashik kaushalyavikas ani Adhunik marathi Sahityaprakar - Pravasvarnan (G-3)	1. Introduce various movements in Modern Marathi literature
		2. Generate interest in modern Marathi literature among students.
		3. Expose to varied cultural experiences through literature.
	Sem-VI Bhashik kaushalyavikas ani Adhunik marathi Sahityaprakar – Kavita (G-3)	1. Enhance awareness in the aesthetics of poetry and to empower them to evaluate poetry independently.
		2. Understand creative uses of language in Marathi Poetry.
		3. Encourage to make a detailed study of a few sample masterpieces of Marathi poetry.
	Sem-V Madhyayugin Marathi	1. Study the history of Marathi literature.
		2. Familiarize with the nature, source and types of Marathi literature from Start to 1600

Vangmayacha Stul itihas : Prarambha te 1600 (S-3)	3. Familiarize with the major Marathi writers and their works from Start to 1600
Sem-VI Madhyayugin Marathi Vangmayacha Stul itihas : 1600 te 1818 (S-3)	1. Learn the concept of literary history.
	2. Provide close understanding of selected literary texts.
	3. Provide knowledge of some fundamental concepts in literary appreciation.
Sem-V Varnanatmak Bhashavidnyan Bhag - 1 (S-4)	1. Understand the original development of Marathi language in the light of linguistic theories.
	2. Understand the evolution of Marathi language.
	3. Study the basic features of Marathi language.
	4. Familiarize with historical and descriptive linguistics.
Sem-VI Varnanatmak Bhashavidnyan Bhag - 2 (S-4)	1. Understand the original development of Marathi language in the light of linguistic theories.
	2. Understand the evolution of Marathi language.
	3. Study the basic features of Marathi language.
	4. Familiarize with historical and descriptive linguistics.



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Department of Geography

Program Outcomes

After successfully completion of course students will be able to:

PO1	Disciplinary knowledge: Demonstrate comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.
PO2	Critical thinking: Take informed action after identifying the assumption that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational and personal) from different perspectives.
PO3	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO4	Self-directed and Life-long learning: Acquire knowledge and skills, including 'learning how to learn', that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.
PO5	Effective Citizenship: Execute their duties and responsibilities as citizens successfully by being a part of larger community.
PO6	Environment and Sustainability: Become aware about the issues related to environment and the steps needed to be implemented for its sustainability through the study of texts with ecological elements and dimensions.

Program Specific Outcomes

After successfully completing B. A. Geography Programme students will be able to:

PSO1	Demonstrate and understanding of principles and theories of Geography. This include Geomorphology, Economic Geography, Human Geography, Agriculture Geography.
PSO2	Apply Statistical Techniques of Spatial Analysis.
PSO3	Demonstrate ability to apply knowledge learned in classroom to set and perform simple laboratory experiments in geography.

Course Outcomes

After complication of course the students will be able to.

FYBA	Physical Geography	1. Develop the geographical maturity in their current and future courses.
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	Sem. I	2. Develop theoretical, applied and computational skills.
	Human Geography Sem-II	1. Develop the geographical maturity in their current and future courses. 2. Develop theoretical, applied and computational skills.
SYBA	Environment Geography G2	1. Become aware about dynamic environment among the student.
		2. Acquaint with fundamental concepts of environment geography for development in different areas.
		3. Integrate various factors of Environment and dynamic aspect of Environmental geography.
		4. Become aware about the problems of environment , their utilization and conservation in the view of sustainable development
	Geography of Maharashtra S-I	1. Acquaint with Geography of our State.
		2. Become aware of the magnitude of problems and prospects in Maharashtra.
		3. Understand the inter relationship between the subject and the society.
		4. Understand the recent trends in regional studies.
		5. become aware about the agriculture problems and prospects of Maharashtra.
		6. Understand the concept of rural development.
		7. Understand the prospectus in Tourism activity in Maharashtra and the role of MTDC and Role of MIDC in industrial development in rural area of Maharashtra
	Practical Geography S-II	1. Develop practical skill and use of map scale and projection.
2. Become aware about the new techniques, accuracy and skills of map making.		
3. Introduce to the basic and contemporary concepts in Cartography.		
4. Acquaint with the utility and applications of various Cartographic Techniques.		
TYBA	Regional Geography of India (G-3)	1. Acquaint with geography of our Nation.
		2. Become aware of the magnitude of problems and Prospects at National level.
		3. Understand the inter relationship between the subject and the society.
		4. Understand the recent trends in regional studies.
	Agricultura Geography (S-3)	1. Familiarize with agricultural activities and its relation with Geography.
		2. Familiarize with new modern technical methods and their applications in Agricultural activities.
		3. Apply previously knowledge in problems and prospects in agriculture
	Techniques of Spatial Analysis (S- 4)	1. Familiarize with SOI Toposheets and to acquire the Knowledge of Toposheet Reading/Interpretation.
		2. Familiarize with the weather instruments and their applications in Geographical phenomena.
		3. Acquaint with IMD weather maps and to gain the knowledge of weather map Reading / interpretation.
		4. Trained in elementary statistics as an essential part of geography.
		5. Become aware about GIS among the students



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Department of Political Science (Gen.)

Program Specific Outcomes

After successfully completing B. A. Political Science Programme students will be able to:

PSO1	Discuss about Indian Constitution and Political process.
PSO2	Discuss Political theory and concepts.

Course Outcomes

After completion of course the students will be able to.

FYBA	Introduction to Indian constitution SEM-I	1. Know the historical background and nature of Indian constitution
		2. Aware about Fundamental rights duties & Directive Principles
		3. Understand Indian Federal System.
	Introduction to Indian constitution SEM-II	1. Know the Indian government and Political system.
2. Understand Indian Judiciary System.		
3. Become aware about Indian Electoral System		
SYBA	Introduction to Political Science SEM-III	1. Understand Political Science as a discipline.
		2. Understand approaches of Political Science.
		3. Become aware the concepts like State, Market, Civil Society and Democracy.
	Introduction to Political Science SEM-IV	1. Become aware about Political Values like liberty, equality and justice, Rights.
2. Understand Ideologies of Political Science		
3. Become aware about International Organizations		
TYBA	Local Self Government in Maharashtra SEM-V & VI	1. Know the historical background of Indian Local Self Government.
		2. Know the importance of democratic decentralization.
		3. Become aware about development of Local Self Government.in Maharashtra.
		4. Understand the nature and role of Local Self Governments in Maharashtra
		5. Become a politician in Local Self Governments.



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Department of Psychology

Program Specific Outcomes

After successfully completing B. A. Psychology programme students will be able to:

PSO1	Enhance the stress management skills.
PSO2	Measure attitude, aptitude, interest, adjustment, skills etc. within the people.
PSO3	Enhance coping skills with different problems in life.

Course Outcomes

After completion of course the students will be able to.

FYBA	SEM-1 Foundations of Psychology (G1)	1. Understand the basic psychological processes and their applications in day to day life
		2. Develop the ability to evaluate cognitive processes, learning and memory of an individual.
		3. Understand the importance of motivation and emotion of the individual.
		4. Understand the personality and intelligence of the individuals by developing their psychological processes and abstract potentials.
SYBA	SEM-2 Introduction to Social Psychology (G1)	1. Understand the personality and intelligence of the individuals by developing their psychological processes and abstract potentials.
		2. Understand the nature of self, concept of attitude and prejudice of the individual.
		3. Access the interactional processes, love and aggression in our day to day life.
		4. Understand group dynamics and individual in the social world.
SYBA	Health Psychology (G2) SEM-III	1. Understand health psychology and arrive at the introduction to the role of psychology in health.
		2. Understand the nature of stress and coping
		3. Understand various factors related to health and diseases.
		4. Understand quality of life and promoting the good health.
TYBA	Positive Psychology G2 SEM-IV	1. Understand how the positive psychology as the science of happiness, human strengths, positive aspects of human behavior and 'psychology of well-being.'
		2. How we lead our lives, find happiness and satisfaction, and face's challenges.
		3. How positive psychology has become an evolving mosaic research and theory from many different areas of psychology.
		4. Compare different theories of motivation.
TYBA	Industrial and Organizational Psychology SEM-V	1. Describe the concept of industrial and organizational psychology, selection and training, evaluation and motivation at workplace.
		2. Explain job profile, job analysis, recruitment techniques and employee training.
		3. Identify and classify the appraisal rating system.
		4. Compare different theories of motivation.

		5. Evaluate the training programme and job performance.
	Applied Psychology(G3) SEM-VI	1. Describe the concept of applied psychology, educational psychology, family structure and developmental patterns.
		2. Know the clinical psychology related mechanisms, social issues, and criminal behavior.
		3. Classify the intellectual ability, abnormality, criminal behavior.
		4. Identify the problems and solutions in the field of education.



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Department of History

Program Specific Outcomes

After successfully completing B. A. History programme students will be able to:

PSO1	Understand the meaning, key concept of Early India.
PSO2	Visit historical place and understand history India through caves, Temple, Art and Architecture.
PSO3	Know the importance of Sources of History

Course Outcomes

After completion of course the students will be able to.

FYBA	Early India G-I SEM-I & II	1. Students should have information of sources of Ancient Indian History
		2. Students will be able to examine institutional basis of Ancient India.
		3. The history of Early India is a crucial part of Indian history. It is a base for Understanding the entire Indian history
		4. Student understands the history of early India from the prehistoric times to the age of the Mauryas and the major developments in early Indian history.
		5. Students will explain to illustrate the development of empire.
		6. Students will be able to explain our heritage through cultural aspects of Ancient India.
		7. Students are must be knowing the achievements of some eminent kings in Ancient India.
		8. Course will be introducing the students to the developments in different parts of India through a brief study of regional kingdoms up to the tenth century C.E
		9. Students will be able to explain the consequences of the foreign invasions, particularly on the polity, economy, society and art and architecture.
SYBA	History of Maratha G-II SEM-III & IV	1. Student will develop the ability to analyses sources for Maratha History
		2. Student will learn significance of regional history and political foundation of the region.
		3. It will enhance their perception of 17th century Maharashtra and India in context of Maratha history.
		4. Appreciate the skills of leadership and the administrative system of the Marathas.
		5. Students will be able to analyze the Marathas policy of expansionism and its consequences.

		6. They will understand the role played by the Marathas in the 18th century India.
		7. They will be acquainted with the art of diplomacy in the Deccan region.
TYBA	Indian National Movement SEM-V	1. Imbibe the spirit of nationalism and patriotism.
		2. Understand the various trends and movements of freedom struggle.
		3. Feel proud and respect the sacrifices of our freedom fighters.
		4. Assimilate how Indians nurtured the desire for a life free of the tyrannical British Raj.
	India after Independence SEM-VI	1. Understand the socio-political and economic conditions of India on the eve of independence
		2. Study the contributions made by the stalwarts and architects of India.
		3. Analyze and appreciate the foreign policies of India.
		4. Examine how Indians adapt to the world of science and technology.



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SPPU ID : PU/NS/AC/79/2003

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Date : / / 202

Bachelor of Commerce

Programme Outcomes, Programme Specific Outcomes & Course Outcomes (PO, PSO, CO)

Programme Outcomes

Programme	Programme Outcomes
Bachelor of Commerce	<ol style="list-style-type: none"> 1) To gain In depth knowledge, understanding and skills in Commerce and apply these skills for real life problem solving. 2) To In calcite reading, writing, speaking skills and develop business correspondence and administrative abilities. 3) To create awareness amongst society about Law and Legislations related to commerce and business and develop leadership skills. 4) To use new technologies effectively to communicate ideas in the area of commerce & E-commerce & about Economic Environment of Country as well as World. 5) To plan and develop the start-ups and entrepreneurial ventures in dependently through skills developed and work collaboratively and productively in groups. 6) To pursue higher education and advance research in the field of commerce, business and finance with the clear understanding of basic concepts required for the same and critically evaluate new research findings, ideas, methodologies.

Programme	Programme Specific Outcomes
Bachelor of Commerce	<ol style="list-style-type: none"> 1) Students will be able to apply basic skills learnt in commerce necessary for analysis of various problems in accounting, marketing, business economics, management and finance. 2) Students will demonstrate progressive effective domain development of moral, social and ethical values in business and society.

Course Outcome		
Commerce- B.com.		
F. Y. B. Com. (CBCS 2019 Pattern) SEM I		
Subject Code	Subject Name	Outcome
111	Compulsory English- I	<ol style="list-style-type: none"> 1. To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application. 2. To expose students to a variety of topics that dominate the contemporary socio economic and cultural life. 3. To develop oral and written communication skills of the students so that their employability enhances. 4. To develop over all linguistic competence and communicative skills.
112	Financial Accounting- I	<ol style="list-style-type: none"> 1. Knowledge about various accounting Concepts, Conventions and Principles. 2. Understanding emerging trends in accounting and its effect on accounting Practices. 3. Knowledge about process of dissolution of partnership firm. 4. Knowledge about single entry systems. 5. Purpose and advantages of double entry system . 6. Process of conversion of single entry into double entry system. 7. Knowledge about conceptual framework of the GST, various components of GST. 8. Types of taxes under GST & Registration process under GST for business establishments.
113	Business Economics-I	<ol style="list-style-type: none"> 1. Analyze and think critically, develop writing skills. 2. Understanding complex theories and concepts Geometrical skills, mathematical aptitude, writing skills. 3. Applying mathematical and statistical analysis methods extracting information, drawing conclusions. 4. Interpret economic theories, writing skills, understand charts and graphs.
114 (B)	Computer Concepts and Application- I	<ol style="list-style-type: none"> 1. Understand the basics of software and hardware. 2. Acquire knowledge of office automation tools like Application software i.e.MS-Office. 3. Understand the knowledge of Computer Network its application. 4. Understand the Computer Applications in various fields of Commerce and Use of E-Commerce.
115-B	Banking and finance	<ol style="list-style-type: none"> 1. Knowledge of evolution of banking. 2. Understanding structure of Indian Banking. 3. Understanding primary and secondary functions of a bank. 4. Understanding the concepts related to lending and ratios. 5. Understanding the process of opening and operating procedure of bank accounts. 6. Understanding various types of bank accounts holders. 7. Understanding various methods of remittance.
116-C	Marketing-I	<ol style="list-style-type: none"> 1. The basic knowledge of Market and Marketing will be developed amongst students. 2. Students will develop the Marketing Segmentation knowledge along with the basic concept of Marketing Mix. 3. Students will get proper insight of Product and Price Mix. 4. Students will develop the skills of promoting a product along with gaining knowledge about the distribution channels.

117	Marathi	<ol style="list-style-type: none">1. Commerce students get knowledge of Marathi business area.2. Recognizes the work and thought so competent persons in various fields.3. Ethical, professional and ideological values are nurtured in the students.4. Commerce students get knowledge of Marathi business area.5. Identifies the work and thought so competent persons in various fields.6. Ethical, professional and ideological values are nurtured in the students.
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**F.Y.B.COM CBCS
(SEM II)**

Subject Code	Subject Name	Outcome
121	Compulsory English	<ol style="list-style-type: none"> 1. To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application. 2. To expose students to a variety of topics that dominates. The contemporary socioeconomic and cultural life. 3. To develop oral and written communication skills of the students so that their employability enhances. 4. To develop over all linguistic competence and communicative skills.
122	Financial Accounting-II	<ol style="list-style-type: none"> 1. Students are expected to acquaint themselves with computerized accounting, its application and utility. 2. Understanding the accounting process of accounting of charitable trusts recording basic accounting. 3. Transactions and prepare annual financial statements; and Analyzing , interpreting and communicating the information contained in basic financial statements and explain the limitations of such statements. 4. Learning the concept of intangible assets and the methods of their valuation. 5. Understanding the process and methods of leasing.
123	Business Economics (Micro)-II	<ol style="list-style-type: none"> 1. To understand the concept and types of cost 2. To make the students know about short run and long run cost concepts 3. To impart knowledge about types of revenue. 4. To help the students understand the concept of pure and perfect competition. 5. To impart knowledge about equilibrium of firm and industry in short and long run. 6. To develop ability to understand the market structures under imperfect competition. 7. Ability to compare perfect and imperfect competition. 8. To understand the theory of marginal productivity and the concept and theories in factor pricing.
124-B	Computer Concepts & Applications - II	<ol style="list-style-type: none"> 1. To make the students familiar with Computer environment. 2. To make the students familiar with basics of Network, Internet and related concepts. 3. To make awareness among students about applications of Internet in Commerce. 4. To enable make awareness among students about e-commerce and M - Commerce.
125-B	Fundamentals of banking –II	<ol style="list-style-type: none"> 1. To learn about Lending Principles and Balance Sheet of a Bank 2. To learn about Negotiable instruments 3. To learn about Endorsement. 4. To acquire knowledge about current trends in Banking Technology.
126-C	Marketing and Salesmanship -II	<ol style="list-style-type: none"> 1. Students will get the knowledge of Salesmanship and various approaches. 2. Techniques of salesmanship skills will be developed. 3. Awareness and importance of Rural Marketing amongst students. 4. Skills of Modern Marketing will be developed.

127	Marathi	<ol style="list-style-type: none">1. The position of Marathi language in the field of business becomes clear and the Actual use of Marathi in it can be studied.2. To study Marathi in various fields, one understands then a true of media and its discourse.3. Understands the nature and necessity of language transactions in various fields.4. Different types of writing in the media can be studied and actual writing can be done.
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**S.Y.B.COM– 2019 Pattern
(Sem. III)**

Subject Code	Subject Name	Outcome
231	Business Communication	<ol style="list-style-type: none"> 1. Conceptual Clarity and understanding the Meaning, Characteristics and Importance of communication. 2. To understand the Principles and Process of communication 3. To understand Barriers to communication. 4. To understand the importance of business letters. and Essentials Qualities of business letters. 5. To acquire the fundamental knowledge about soft skills and the Elements of Soft Skills 6. To understand Resume writing and Job application letter.
232	Corporate Accounting	<ol style="list-style-type: none"> 1. To develop conceptual understanding about various Accounting Standards and its applicability in corporate accounting. 2. To develop Conceptual understating about Pre- and Post-Incorporation period. 3. To develop analytical skills (by understanding the allocation and apportionment of incomes and expenses for the Preand Post-Incorporation) 4. To understand Practical Application of financial statements along with various adjustments. 5. To understand revised format of company final accounts. 6. To understand the concept and need of valuation of shares and the methods of valuation of shares.
233	Business Economics (Macro)	<ol style="list-style-type: none"> 1. To make the students aware of concepts in macroeconomics 2. Analyze & think critically, develop writing skills. 3. To make the students aware of basic concepts in national income. 4. Analyze & think critically, quantitative aptitude and develop writing skills. 5. To help the students to understand the concept of Employment and theory Output. 6. Understanding, writing skills, critical thinking. 7. To understand the concepts of Multiplier and Accelerator. To impart knowledge of Consumption Function, Saving and Investment Function 8. Understanding, ability to analyze, quantitative aptitude and writing skills.
234	Business Management	<ol style="list-style-type: none"> 1. Understanding how management works and developing thought process as a manger. 2. Understanding functions of Management and Understand the role of Management Thinkers in development of modern management process. 3. How to plan various management activities, programmes and events and Developing of decision making skills to evaluate various alternatives and situations . 4. Understanding the importance and process of organization and understanding authority and process of delegation of authority. 5. Team building skills and wining confidence of group members 6. How to initiate healthy discussions to achieve consensus?
235	Elements of Company Law	<ol style="list-style-type: none"> 1. Understand the concept of company and Equip the students with knowledge of nature and types of companies. 2. Acquaint the students with procedure of formation of company. 3. To make students understand the role and importance of various documents like Memorandum.

		4. To give Comprehensive insight about the capital of Company and various aspects of shares.
236-A	Business Administration Special Paper I	<ol style="list-style-type: none"> 1. To understand the concept of Business and the various perspectives to business. 2. To know the various functions of Business Administration. 3. To understand the meaning and importance of organized and unorganized sector To introduce the concept of Entrepreneurship as a form of business. 4. To study the various aspects of business environment and its impact on business. 5. To study the various stages in business promotion and how to develop a business 6. To study the important factors to be emphasized for Business development
236-E	Cost and Works Accounting Special Paper I	<ol style="list-style-type: none"> 1. To understand the concept of cost, costing and cost accounting. 2. To trace the cost to cost centres and cost units. and to identify role of cost accountant in an organization. 3. To understand different elements of cost and to be able to prepare a cost sheet. 4. To understand the purchase procedure and its documentation. 5. To understand the different methods of inventory control. . 6. To calculate EOQ , stock levels and inventory ratio

**S.Y.B.COM– 2019 Pattern
(Sem. IV)**

Subject Code	Subject Name	Outcome
241	Business Communication	<ol style="list-style-type: none"> 1. To understand the Report Writing and Internal Correspondence. and to understand office Correspondence. 2. To study Import Export Trade Correspondence. 3. To understand the Recent Trends in Business Communication. 4. To acquire the fundamental knowledge about types of Business Letters. 5. To create ability among the students for Drafting of Business Letters. 6. To understand the Writing Formal Mails and Blog writing.
242	Corporate Accounting	<ol style="list-style-type: none"> 1. Conceptual Understanding of Holding Company Accounts Practical Application skills and Analytical skills. 2. Conceptual understanding on the concept of Absorption of companies Practical application and skills in the process of accounting for Absorption. 3. Conceptual understanding on Liquidation of Companies Practical application skills. 4. Conceptual skills Acquisition of knowledge about forensic accounting and its implication.
243	Business Economics (Macro)	<ol style="list-style-type: none"> 1. To understand the concept of money. To make the students know about Demand, Supply and Value of Money. 2. To understand the concept Inflation. and to understand the stagflation and Phillips curve. 3. To understand the concept and phases of trade cycle. and to understand the policy measures. 4. To understand Public Finance. To understand the Procedure of Budget.
244	Business Management	<ol style="list-style-type: none"> 1. Skills regarding retaining motivational level 2. Understanding needs and expectations of group members and meeting them effectively. 3. Understanding followers and their views on various organizational matters & Conflict Management. 4. Skills to establish coordination between departments. 5. Significance of Disaster Management , Importance and implementation of CSR & Importance of Corporate Citizenship.
245	Elements of Company Law	<ol style="list-style-type: none"> 1. To Equip the students with procedure and practices. 2. To have Comprehensive understanding about the Key Managerial Persons and CSR. 3. To acquaint students about company meeting. 4. To be able to appreciate the emerging E Governance and E- filing under the Companies Act, 2013. Learn the winding up of company.
246-A	Business Administration Special Paper I	<ol style="list-style-type: none"> 1. To develop a better understanding of the legal compliances in business. 2. To understand the term productivity and its importance in business administration. 3. To develop an understanding of the various forms of liasoning required in business administration. 4. Getting acquainted with the growth strategies of business.
246-E	Cost and Works Accounting Special Paper I	<ol style="list-style-type: none"> 1. To understand different pricing methods used for issuing the material. 2. To gain knowledge about the documents used in store departments. 3. To Understand the difference between salary and wages. to know the methods of time keeping and time booking. to enable the student to calculate wages and incentives. & to understand meaning and components of payroll.

**T.Y.B.Com. 2019 Pattern
(Sem. V)**

Subject Code	Subject Name	Outcome
351	Business Regulatory Framework - I	<ol style="list-style-type: none"> 1. Understand the concept of Contract and its contents. Equip the students with knowledge of nature and performance and breach of Contracts. 2. Understand the nature of partnership, Rights and duties of Partner Handling the registration and dissolution of the partnership. Acquaint Knowledge about LLP. 3. Compressive understanding about the sale of Goods Act. Acquaint knowledge about ownership and delivery of goods. 4. To give Comprehensive insight about the emerging trend of Arbitration, conciliation, and its regulatory mechanism. 5. To acquaint knowledge and application of Partnership Deed. 6. To get training to face emerging issues relating Sale of Goods Act. 7. To give Comprehensive insight about the emerging trend of Arbitration and conciliation and its regulatory mechanism
352	Advanced Accounting - I	<ol style="list-style-type: none"> 1. To develop conceptual understanding about various Accounting Standards and its applicability and also introduce the students about IFRS – Fair Value Accounting. 2. To develop conceptual understanding about accounting for capital restructuring in the form of internal reconstruction. 3. To develop the skill & upgrade the knowledge regarding reorganization of venture capital and it's recording. 4. To understand the various legal provisions regarding banking companies. 5. To understand the procedure regarding preparation of final accounts of banking companies. 6. To understand the meaning of different costs incurred in investment business. 7. To develop the knowledge and skill regarding Investment Accounting.
353	Indian & Global Economic Development - I	<ol style="list-style-type: none"> 1. Students will be able to understand present Economic Scenario of Indian Economy as well as World Economy. 2. Students will be able to understand the various aspects of development in Agricultural, Industrial and service sector in India. 3. Student will be able to critically evaluate the role of India in international economy. 4. Students will be able to evaluate the working of international financial organization and institutions. 5. To make the students aware of concept of Development. To help the students compare Indian Economy with other developed and competitive economies. 6. To give the knowledge about varied aspects of agricultural sector in India. 7. To give the knowledge about importance and status of Industrial Development in Indian Economy.

<p>354</p>	<p>Audit & Taxation</p>	<ol style="list-style-type: none"> 1. Understanding the concept of Auditing, Various type of Audit 2. Help to Find out Errors frauds and help to improve internal control system in business organization. 3. Know the procedure of vouching, Verification, and Valuation use for audit. 4. To know the terms used in Audit Report, Certificate and Auditing Assurance Standard. 5. Understanding provisions for Work as Company Auditor as per Companies Act 2013. 6. Enhance Provisions under Income Tax Act 1961 used for Conduct Tax Audit. 7. Enhance the knowledge of Computerized Systems 8. Forensic Audit used for new techniques applicable for new business trends.
<p>355 (A)</p>	<p>Business Administration Special paper II</p>	<ol style="list-style-type: none"> 1. To acquaint the student with knowledge about Corporate Finance and the structure of the Indian Financial Market 2. To develop the Financial Planning Skills among the Students by introducing them to the process of efficient Financial Planning 3. To educate the students on the importance of Capitalization and the importance to maintaining an optimum capital structure 4. To create awareness among the students in the various sources of Finance available for raising corporate capital 5. Conceptual Understanding Analytical Skills Technical Knowledge 6. Conceptual Understanding Analytical Skills Accessing and analyzing information. 7. Analytical skills Decision making skills Technical skills
<p>355- E</p>	<p>Cost and Works Accounting. Special Paper II</p>	<ol style="list-style-type: none"> 1. Ability to understand the concept of Overhead and classification of overheads. 2. Students will be able to relate the cost Accounting Standard with respective overheads. 3. To understand the stages in the process of accounting overheads. 4. Students will be able to calculate total departmental overheads after implementing Primary and Secondary Distribution. 5. Conceptual understanding of under and over absorption. 6. Enable the learner with accounting treatment for under and over absorption. 7. Students will be able to identify overheads as per various activities.
<p>356 (A)</p>	<p>Business Administration Special paper III</p>	<ol style="list-style-type: none"> 1. To acquaint the student with knowledge about Corporate Finance and the structure of the Indian Financial Market 2. To develop the Financial Planning Skills among the Students by introducing them to the process of efficient Financial Planning 3. To educate the students on the importance of Capitalization and the importance to maintaining an optimum capital structure 4. To create awareness among the students in the various sources of Finance available for raising corporate capital. 5. Analytical skills Decision making skills Technical skills. 6. Conceptual Clarity and Practical understanding Technical Knowledge.

356 -E	Cost and Works Accounting. Special Paper III	<ol style="list-style-type: none">1. Understanding of important concepts in Marginal Costing.2. It will develop the ability of the learner to make short-term decisions with the help of Marginal Costing.3. Develop the mindset of the student for making ethical decisions.4. It will help the learner to understand the basics of Budget and Budgetary Control5. The learner will get an idea of how to prepare different types of Budgets.6. It will acquaint the learner to understand essential concepts of Uniform Costing and Inter-Firm Comparison.7. The student will familiar with MIS and SCM8. The student will understand the basic concept of SCM.
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**T.Y.B.Com. 2019 Pattern
(Sem. VI)**

Subject Code	Subject Name	Outcome
361	Business Regulatory Framework-II	<ol style="list-style-type: none"> 1. To Equip the students with procedure and practices about negotiable instruments and liabilities of parties in case of dishonor of negotiable instrument. 2. Comprehensive understanding about the E Contracts, E-Commerce and their legal aspects. 3. To acquaint students about regulatory mechanism of Consumer Protection and Procedural aspect of Redressed of Consumers' grievances. 4. To be able to appreciate the emerging developments in the area of intellectual property Laws and their impact on the Indian businesses. 5. To understand the various statutes containing regulatory mechanism of business and its relevant provisions including different types of partnerships. 6. To have a understanding about the landmark cases/decisions having impact on business laws 7. To create awareness among the students about legal environment relating to the business activities and new ways dispute resolutions provided under Arbitration Act. 8. To acquaint the students on relevant developments in business laws to keep them updated.
362	Advanced Accounting-II	<ol style="list-style-type: none"> 1. To develop the skill regarding preparation & presentation of final accounts of Credit Co-Op. Societies & Consumer Co-Op. Societies. 2. To ascertain whether the branch should be expanded or closed, to ascertain the requirement of cash and stock for each branch. 3. To develop conceptual understanding about forensic accounting, corporate social responsibility, derivative contracts and artificial intelligence in accounting. 4. To understand the conceptual knowledge, objectives, methods & tools of analysis of financial statements. 5. To upgrade regarding legal provisions of co-operative accounting. 6. To diagnose the information contained in financial statements so as to judge the profitability, liquidity & solvency position of business organizations. 7. To develop the skill & upgrade the knowledge regarding methods of charging goods to branches. 8. To make aware the students about the conceptual aspects of various recent trends in the field of accounting especially forensic accounting, accounting of CSR activities, accounting of derivative contracts and Artificial Intelligence in Accounting.
363	Indian & Global Economic Development- II	<ol style="list-style-type: none"> 1. Students will be able to understand the concept of Human Resource Development. 2. Students will be able to understand the role of foreign capital in Economic Development. 3. Students will be able to critically evaluate the Indian Foreign Trade Policy. 4. Students will be able to analyzethe role of International Financial Institutions. 5. Students will be able to evaluate the success of Regional Economic Cooperation's. 6. To make the students aware of concepts related to Human Development and HDI. 7. To give the knowledge to students about Foreign Capital and issues related to Foreign capital in India. 8. To make aware to students about the situation of Foreign Trade and Balance of Payments.

<p style="text-align: center;">364</p>	<p style="text-align: center;">Auditing & Taxation-II</p>	<ol style="list-style-type: none"> 1. To understand the basic concepts of Income Tax Act, 1961 and create awareness of direct taxation among the students. 2. To understand the income tax rules and regulations and its provisions. 3. To have a comprehensive knowledge of calculation various types of income 4. To know the recent changes made by the finance bill (Act) every year and its impact on taxation of person. 5. To acquaint the students on Income tax department portal (ITD), e-filing and e-services mechanism relating to Assesse. 6. Understanding the calculation of total income and tax payable by individual person. 7. Know the e-filing due dates, recent changes in income tax provisions.
<p style="text-align: center;">366-A</p>	<p style="text-align: center;">Business Administration Special Paper II</p>	<ol style="list-style-type: none"> 1. To acquaint the student with knowledge of Production Management and Production Functions 2. To equip the students with knowledge for efficient Inventory Management and the recent development in the area Inventory Management. 3. To introduce the students to the concept of Quality Management and to motivate to adopt quality management even in the regular lifestyle. 4. To update the students with the knowledge of Logistics Management. 5. Conceptual Understanding Accessing and analyzing information skills Technical Knowledge Analytical Skills. 6. Conceptual Understanding Analytical Skills Technical skills Awareness on the latest in the trends
<p style="text-align: center;">365-E</p>	<p style="text-align: center;">Cost and Works Accounting Special Paper II</p>	<ol style="list-style-type: none"> 1. Lerner will understand the various methods of costing 2. Develop the ability to prepare a job cost sheet. 3. It will help the learner to understand the concept of contract costing 4. learners will understand the process of calculation of profit on incomplete contracts. 5. Students will get an idea of how to prepare process accounts. 6. Understand the basic concept of CAS 19: Joint cost. 7. The student will be enabled to understand the concept of service costing 8. Learners will be able to prepare a cost sheet for transportation services, hospital and hotel organization 9. Understand the basic concept of CAS13:service cost center.
<p style="text-align: center;">365-A</p>	<p style="text-align: center;">Business Administration Special Paper III</p>	<ol style="list-style-type: none"> 1. To acquaint the student with knowledge of Production Management and Production Functions 2. To equip the students with knowledge for efficient Inventory Management and the recent development in the area Inventory Management 3. To introduce the students to the concept of Quality Management and to motivate to adopt quality management even in the regular lifestyle 4. To update the students with the knowledge of Logistics Management. 5. Conceptual Understanding Analytical skills Accessing and analyzing information Imaginative thinking Awareness on the latest in the trends

366-E	Cost and Works Accounting Special Paper III	<ol style="list-style-type: none">1. The student will develop the ability to understand the basic concepts of Standard Costing2. The learner will be able to calculate variances.3. Students will be able to understand the Principles of product Pricing and Pricing Policy.4. Students will learn to calculate the Selling price under different pricing methods.5. Students will be able to understand the application of Cost Accounting Standards.6. Learners will be able to understand Cost Management practices in the Agricultural and IT sectors.7. 1. Learners will be able to understand the compliance about the preparation of Cost Accounting Records U/S 148 of Companies Act 2013.8. Students will get exposure to details of Cost Audit and Role of a Cost Auditor.
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Date : / / 202

Programme Outcomes

Master of Commerce (M.Com.)

Course Name	Program Outcomes
M.Com	<ol style="list-style-type: none">1) Imbibe employability skills for a career in Commerce and Industry by providing a systematic and rigorous learning and exposure to Advanced Accounting and Taxation.2) Train the student to develop conceptual, applied and research skills as well as competencies required for effective problem solving and right decision making in routine and special activities relevant to financial management and accounting transactions of a business.3) Acquaint a student with conventional as well as contemporary areas in the discipline of Commerce and demonstrate a global outlook to cater to the needs of the business and cross cultural understanding.4) Enable a student well versed in national as well as international trends to facilitate the students for conducting business, accounting and auditing practices, role of regulatory bodies in corporate and financial sectors nature of various financial instruments.5) Employ the creative thinking, analytical ability, skills, knowledge with professional attitude for better organizational performance6) Provide in-depth understanding of all core areas specifically Advanced Accounting, International Accounting, Management, Security Market Operations and Business Environment, Research Methodology and Tax planning.
Course Name	Program Specific Outcomes
M.Com	<ol style="list-style-type: none">1) Develop an ability to apply knowledge acquired in problem solving and to work in teams with enhanced interpersonal skills, administrative and communication skills.2) The students can work in different domains like Accounting, Taxation, Finance, HRM, Banking and Administration.3) Excel in contemporary knowledge of business and emerge as innovative entrepreneurs or acquire the abilities to work in MNCs as well as private, and public companies.4) Prepare to undertake higher learning research programme in commerce and Management and go further for professional courses like CA/ CS/CMA/CFA.

Course Outcome		
Master of Commerce – (M. Com.)		
M.Com. (2019 Pattern)		
Sem. I		
Subject Code	Subject Name	Course Outcome
101	Management Accounting	<ol style="list-style-type: none"> 1. To understand the concept of Financial Accounting and Cost Accounting. 2. To understand the concept of Marginal Costing, its applications, different techniques of managerial cost accounting, Fixed, and Variable Cost Analysis in decision making process. 3. To understand the concept of budget and budgetary control, types of budgets and preparation of functional budgets in an organization. 4. To understand the concept of Working Capital Management, determination of working capital, components of working capital and accounts receivable and inventory management.
102	Strategic Management	<ol style="list-style-type: none"> 1. Understanding of the concept of Strategic management. to understand the process of Strategic Management. 2. Understanding the External and Internal Business Environment for effective Strategy Formulation Development of Strategic analytical skills to design an effective Strategic Plan. 3. Development of Applicability skills for effective plan implementation Developing Technical skills for evaluation of alternatives and analytical skills for choice among alternatives. 4. Development of Technical and Analytical abilities for formulation of sound functional Strategy in various areas of business Development of Analytical and Managerial Abilities for critical evaluation.
113	Production & Operation Management (SP-I)	<ol style="list-style-type: none"> 1. Acquaint the students' knowledge about Production and Operation Management. 2. Recognize the inherent conflict of interest in many business decisions relating to safety consideration and environmental aspects. 3. Understanding the scope and Process of Supply Chain Management. 4. Acquaint the students with knowledge of Production Planning and Control. 5. Motivate the students to develop and innovate ideas for Product Design and Development. 6. Recognize the importance of Total Quality Management. 7. Identification of emerging issues in Production and operation Management
114	Financial Management (SP-II)	<ol style="list-style-type: none"> 1. Understanding Financial Management. 2. Recognizing the Financial System of India. 3. Understanding Financial Statements. 4. Analyzing the Financial Statements. 5. To enable the students to make Investment Decisions. 6. To study the Capital Budgeting Techniques. 7. To understand the meaning and nature of Working Capital. 8. To enable the students to formulate Credit and Collection policy.

<p style="text-align: center;">107</p>	<p style="text-align: center;">Advanced Cost Accounting</p>	<ol style="list-style-type: none"> 1. To understand the classification of costs. 2. To understand the inventory related treatments in Cost Accounting. 3. To understand the concept of Employee Cost and its relevance in the total cost of product or services. 4. To develop Performance Linked Employee Remuneration Systems. to relate the CAS 7 to Employee Cost Concepts. 5. To understand the stages in the process of Accounting of Overheads. 6. To study CAS 3 in relation to Overheads. 7. To develop ability to ascertain cost in different industries.
<p style="text-align: center;">108</p>	<p style="text-align: center;">Costing Technique and Responsibility Accounting</p>	<ol style="list-style-type: none"> 1. To understand the role of Budget in the process of Cost Control and Decision Making. 2. Skills in computation and analysis of various variances. 3. Understand the concepts of Uniform Costing and Inter Firm Comparison. 4. Understand the relevance of Cost Accounting Data as a part of monitoring various segments of business.

M.Com. (2019 Pattern)**Sem. II**

Subject Code	Subject Name	Course Outcome
201	Financial Analysis & Control	<ol style="list-style-type: none">1. Understanding basics of financial analysis.2. To gain knowledge of practically comparing financial results of different years and different companies.3. To understand the importance of cash liquidity in an organization.4. To understand the computation of cash and fund flows under operating, investing and financing categories.5. To develop the skill of appropriate use of different ratios to evaluate the financial performance of entities.
202 A	Industrial Economics	<ol style="list-style-type: none">1. To give students an overview of industrial economics.2. To make the students understand the theories of industrial location. To impart knowledge about industrial imbalance in India.3. To help the students know about industrial productivity and efficiency. To know about industrial productivity, size of firms etc.4. To impart knowledge about industrial finance and its sources. To help the students understand problems of small and micro industries in India.
213	Business Ethics & Professional Values (SP-III)	<ol style="list-style-type: none">1. Understanding Knowledge of established methodologies of solving ethical problems. Recognizing significance of Professional Values.2. Knowing CSR and its scope and forms. Analysis of Corporate Governance and Value Based Management.3. Recognizing the unethical issues in Finance, Marketing, IT, HRM and at workplace.4. Recognizing environmental issues and its impact on Business Achieving Sustainable Development.
214	Knowledge Management (SP-IV)	<ol style="list-style-type: none">1. Developing Conceptual Skill and Improving Analytical Ability.2. Technical and Practical Oriented Skills.3. Value based and Application Oriented Skills.4. Administrative and Management skills.
207	Application Cost Accounting	<ol style="list-style-type: none">1. To conceptualize the need to integrate financial and Cost Accounts.2. Develop understanding about PLC and VCA Concepts.3. Learners are expected to understand the logic behind ABC technique.4. To prepare cost formats under ABC & to compare such results with the Traditional Overhead Accounting.5. Students are expected to understand the importance of Transfer Pricing & Target Costing in the changing scenario.
208	Cost Control & Cost System	<ol style="list-style-type: none">1. To be able to solve problems on Marginal Costing.2. Understand pricing mechanism under global competitive environment.3. Skills to differentiate between Cost Reduction and Cost Control techniques.4. To understand the process of installation of Costing System.5. To understand the relationship between cost and productivity.

**M.Com. (2019 Pattern)
Sem. III**

Subject Code	Subject Name	Course Outcome
301	Business Finance	<ol style="list-style-type: none"> To understand the role and importance of corporate finance, and learn the calculation value of money. To understand the financial planning, theories of capitalization and estimation of finance need of firm. To learn the sources of finance to be tapped for running business successfully. To apply best practice in working capital management.
302	Research Methodology for Business	<ol style="list-style-type: none"> To understand the nature, scope and Types of Research & the basics of good research and research process. To understand the concept and techniques of Research Problem. and methods of testing of Hypotheses. To study the nature of Research design and Sampling. To understand the concept, type and classification of Measurement and Scaling and to understand the process of Analysis and Interpretation of data. To understand types and structure of Research Report. To study various aspects of mode of citation and bibliography
313	Human Resource Management (SP-V)	<ol style="list-style-type: none"> To understand the concepts of HRM and get the knowledge about the approaches, functions and challenges. To understand the objectives of HRP and development. To understand the meaning and Purpose of Training, Importance, Benefits, Training process, methodology, and Develop ability to compare training and aids, evaluation of training programmes. To understand the meaning and concept of retirement, resignation, discharge, dismissals, suspension of an employee and Layoff.
314	Organizational Behavior (SP-VI)	<ol style="list-style-type: none"> To understand the well acquainted organizational environment - technology and structure, network organizations, and global impact on OB. To know the detail knowledge about Organizational Culture. To understand the well acquainted with the concept Personality and its dimensions. To understand the meaning and Types of Motives. To make the students know about the theory of Vroom's Expectancy. To be understand the Concept and characteristics of Emotional Intelligence. To understand the meaning and Causes of Stress, Get detail knowledge about the Conflict. To be understand Concept and Types of Group and Team building.
307	Cost Audit	<ol style="list-style-type: none"> In depth Understanding of basic concepts of cost audit and its applicability in various areas. In Depth Knowledge on Rights, Duties, Responsibilities and Liabilities of Cost Auditor. Knowledge to Conduct the Cost Audit Traditionally and Electronically. Knowledge on Preparation of Cost Audit Report.
308	Management Audit	<ol style="list-style-type: none"> In depth, Understanding of fundamentals of Management audit. Knowledge on Management Audit procedures. Knowledge on different areas of Management audit. Detailed Understanding of operational Audit. In depth Understanding of corporate Image.

M.Com. (2019 Pattern)
Sem. IV

SubjectCode	SubjectName	Course Outcome
401	Capital Market and Financial Services.	<ol style="list-style-type: none"> 1. To learn the importance and working of capital market. 2. To understand the working of BSE and NSE, and OTCEI in detail. 3. To know the role of inter-mediatory, Mutual funds. Portfolio management. 4. To know the role of SEBI in regulating stock exchanges and investors' education, financial advisors.
402	Industrial Economic & Environment	<ol style="list-style-type: none"> 1. To understand the concept of Economic Environment & its Constituents 2. To know the role & problems of public sector undertakings, small scale Enterprises & Multinational Corporations in global & competitive Environment. 3. Acquaint students with the broad features of industrial policies of Government of India since independence & Recognizing progress & performance of SEZ in India. 4. Acquaint students with the broad features of industrial policies of Government of India since independence. 5. To understand progress & problems of major industries in India.
413	Recent Advances in Business Administration (SP-VII)	<ol style="list-style-type: none"> 1. To understand the concept of change management and get the knowledge about the approaches management change and Important feature. 2. To analyses the challenges before customercentric organization. 3. To know the best practices and way to measure the success of customer centric company. 4. To understand the concept and significance of Global Management. To Know the cross cultural Management issues. 5. To know the concept significance and techniques. 6. To get knowledge about the concept and significance of Restructuring and Reengineering of Business.
414	Project Work (SP-VIII)	<ol style="list-style-type: none"> 1. Describe concepts of Research in business. 2. Prepare synopsis for project report. 3. Construct formulation of research problem. 4. Modify sample and sampling methods. 5. Classify primary and secondary methods of data collection. 6. Describe analysis and interpretation of data. 7. Rewrite report in different areas. 8. Summarize modes of citation amp; bibliography.
407	Recent Advances in Cost Auditing AndCost System	<ol style="list-style-type: none"> 1. Understand Cost Accounting Standards in depth 2. Understand GST and Productive Audi 3. In -Depth knowledge of ERP 4. Knowledge about recent trends in Cost Accounting.
408	Project Work/Case Studies	<ol style="list-style-type: none"> 1. Describe concepts of Research in business. 2. Prepare synopsis for project report. 3. Construct formulation of research problem. 4. Modify sample and sampling methods. 5. Classify primary and secondary methods of data collection. 6. Describe analysis and interpretation of data. 7. Rewrite report in different areas. 8. Summarize modes of citation amp; bibliography



K. K. Wagh Education Society's

K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori,

Tal:- Niphad, Dist:- Nashik- 422201 (Maharashtra)

(Affiliated to Savitribai Phule Pune University)

Accredited by NAAC: 'B+' Grade (CGPA 2.52)

SPPU ID: PU/NS/AC/79/2003

College Code: 755

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Bachelor of Science (B.Sc.)

Programme Outcomes

Course Name	Program Outcomes
B.Sc.	<ol style="list-style-type: none">1. To obtain knowledge with facts and figures related to various subjects in basic science such as Biotechnology, Microbiology, Zoology, physics, chemistry, Botany, Mathematics, Electronics and Geography etc.2. To understand the fundamental concepts, principles, and scientific theories related to various scientific phenomena and their relevance in daily life.3. The students will learn professional ethics including responsibility to work in teams & apply basic ethical principles, also apply knowledge of basic concept of science understand the interdisciplinary nature of Science, also analyze the learned laboratory skills.4. Being a science student become well aware of various pollutants, their sources & their impacts on bio systems. So they become well versed with protection & conservation of environment. developed scientific outlook not only with respect to science subjects but also in all aspects related to life.5. To be able to think innovatively to propose novel ideas in explaining facts or providing new solution to the problems.6. Student should prepare themselves effectively by self-study & work in dependently present information In a clear, concise & logical manner.

Course Name	Program Specific Outcomes
B.Sc.	<ol style="list-style-type: none">1) To provide a broad foundation in science that stresses scientific reasoning and analytical problem solving with a molecular perspective.2) To provide students with the skills required to succeed in graduate school, the science industry or professional school.

Course Outcome

Bachelor of Science

F.Y.B.Sc. CBCS SEMI

Subject Code	Subject Name	Outcome
CH-101	Physical Chemistry	<ol style="list-style-type: none"> Students will be able to apply thermodynamic principles to physical and chemical process. Knowledge of Chemical equilibrium will make students to understand- relation between Free energy and equilibrium and factors affecting on equilibrium constant. Concept of ionization process occurred in acids, bases and pH scale. Related concepts such as Common ion effect, Hydrolysis constant, ionic product, solubility product.
CH-102	Organic Chemistry	<ol style="list-style-type: none"> The students are expected to understand the fundamentals, principles, and recent developments in the subject area. It is expected to inspire and boost interest of the students towards chemistry as the main subject. To familiarize with current and recent developments in Chemistry. To create foundation for research and development in Chemistry.
GG111	Introduction to Physical Geographyl (Geomorphology)	<ol style="list-style-type: none"> To introduce the students with the basic concepts in Geomorphology and Physical Geography and its branches, Geological timescale and Applied Geomorphology. The student understands the importance of the Earth system based on seismic evidences. Theory of Plate tectonics and also Plates and boundaries and associated their landforms. Earthquakes and volcanoes, their types ,causes and effects. The student will be able to understand and classify Rocks and Minerals.
GG112-	Introduction to Physical Geography- II(Geography of Atmosphere and Hydrosphere)	<ol style="list-style-type: none"> Students will understand the concepts about Introduction of atmosphere their definition and evolution, Insulation process and mechanisms of heat transfer and Heat budget of the Earth, Factors affecting on horizontal distribution of temperature, Vertical distribution of temperature- lapse rate and inversion of temperature. Students will become familiar about basic Concepts of atmospheric pressure and wind system. Introduction of students with Hydrosphere.

ZO-111	Animal diversity-I	<ol style="list-style-type: none"> 1. Students will be able to understand diversity and evolutionary concepts of taxonomy & nomenclature of animals. 2. Students will be able to understand the classification, structure, locomotion, protozoa, Paramecium's habits, habitat, characters, digestion excretion, and reproduction, harmful & useful protozoa. 3. Students will be understand origin & importance of multicellular organisms. 4. Students will be understand structure, classification, regeneration & economic importance of pore bearing organisms, cnidarians And Platyhelminthes.
ZO-112	Animal Ecology	<ol style="list-style-type: none"> 1. Students will be able to apply Concepts of Ecology, Environment, Population, Community, Ecosystem, Biosphere, Autecology and synecology. 2. Students will understand the Types of ecosystems, Structure and Composition of Ecosystem. 3. Knowledge of population and Gause's Principle with laboratory and field interactions. 4. Students can study the Animal interactions, Competition and beneficial Associations.
BO111	Plant Life and UtilizationI	<ol style="list-style-type: none"> 1. Students will be able to understand Introduction to plant world. General Unique features of plants and outline of the classification with example. 2. Knowledge of Structure of plant Cell, characteristic feature. 3. To know the Plant Tissues and tissue systems.
BO112	Plant Morphology and Anatomy	<ol style="list-style-type: none"> 1. Students will be able to understand descriptive and interpretative morphology. 2. Students will be able to understand Introduction and definition Importance in Taxonomy, Physiology, Ecological interpretations, Pharmacognosy and Wood identification. 3. To know the different Types of Tissues in plants and internal Primary organization in plants.
MT- 111	Algebra	<ol style="list-style-type: none"> 1. Students will be to understand basic concept of Sets and relations,. 2. Understand the basic property of GCD and LCM, application of division Algorithm. 3. Apply concept of Prime Numbers, Congruence, and application of Euclid's Lemma. 4. Students will be able to understand concept of Complex Numbers. 5. Concepts of atmospheric pressure and wind system. 6. Introduction of students with Hydrosphere.

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F.Y.B.Sc.CBCSSEMII

SubjectCode	Subject Name	Outcome
CH-201	Inorganic Chemistry	<ol style="list-style-type: none"> 1. Various theories and principles applied to reveal atomic structure. 2. Explain rules for filling electrons in various orbitals and ionization energies. 3. Attainment of stable electronic configurations. 4. Various types of chemical bonds and basic understanding of geometry and effect of lone pairs
CH-202	Analytical Chemistry	<ol style="list-style-type: none"> 1. Knowledge of Some important units of measurements. 2. Types of organic compounds, characteristic tests and classifications. 3. Introduction to chromatography and types of chromatographic techniques. 4. Introduction to pHmeter and its applications
GG-121	Introduction to Human Geography	<ol style="list-style-type: none"> 1. To introduce the students with Human Geography. 2. Human Evolution and Races Stages of human evolution. 3. Student gain knowledge about Economic activities Of Man like Primary, Secondary, Tertiary and Quaternary.
GG-122	Population and Settlement Geography	<ol style="list-style-type: none"> 1. Sources of Population Data: Census , National Sample Survey and other Sources. 2. Students gain knowledge about Population Dynamic 3. Student is able to understand about Settlements.
PHY-121	Heat and Thermodynamics	<ol style="list-style-type: none"> 1. Concept of thermodynamic state, Equation of state, , Thermal equilibrium and laws of thermodynamics. 2. Student will be able to understand Conversion of heat into work and it's converse. 3. Principle, Construction and Working of thermometers.
PHY-122	Electricity and Magnetism	<ol style="list-style-type: none"> 1. To understand the concept of the electric force, electric field and electric potential for stationary charges. 2. Able to calculate electrostatic field and potential of charge distributions using Coulomb law and Gauss law. 3. To understand the dielectric phenomenon and effect of electric field on dielectric. Introduction to Magnetization, Types of Magnetic Materials 4. To Study magnetic field for steady currents using Biot-Savart and Ampere Circuital laws. 5. To study magnetic materials and its properties.

MT121	Analytical Geometry	<ol style="list-style-type: none"> 1. Students able to understand the Geometry of translation and rotational system. 2. To understand the property of plane. 3. Student will be able to understand the property of Equations of a line in Symmetric and unsymmetrical forms. 4. To understand the Equation of a sphere and circle in different forms..
MT122	Calculus-II	<ol style="list-style-type: none"> 1. Student will be able to understand differentiation and fundamental theorem in differentiation and various rules. 2. Geometrical representation and problem solving on MVT and Rolle's theorem. 3. Finding extreme values of function. 4. Introduction to Ordinary Differential Equation
ZO-121	Animal diversity – II	Students will be able to understand structure and economic importance of annelids, arthropods, Mollusca and echinoderms.
ZO-122	Cell Biology	<ol style="list-style-type: none"> 1. Students will be able to understand the concept of Cell as basic unit of life. 2. Students also study the cell cycle and cell division (mitosis and meiosis).
BO-121	Plant Life and Utilization-II	<ol style="list-style-type: none"> 1. Students will be able to understand Introduction to plant diversity. 2. Students will be able to understand General characters outline classification, Life cycle pattern, Utilization and economic Importance of Pteridophytes, Gymnosperms, Angiosperms.
BO-122	Principle of Plant Sciences	<ol style="list-style-type: none"> 1. Students will be able to know Introduction, definition and scope of plant physiology. 2. To understand Structure of plant cell, differences between prokaryotic and eukaryotic cell. 3. To understand Plant cell wall components of primary cell wall, structure and functions 4. Students will be able to know phases of cell cycle, importance of cell cycle in plants, divisional stages of mitosis and meiosis. 5. Students will be able to know introduction and Scope of molecular biology, central dogma of molecular biology.

S.Y.B.SC (2019 Pattern) SEM III

Subject Code	Subject Name	Outcome
CH-301	Physical and Analytical Chemistry	<ol style="list-style-type: none"> 1. Define/ Explain concept of kinetics, terms used, rate laws, molecularity, Order. 2. Apply adsorption process to real life problem. 3. Apply statistical methods to express analytical results in laboratory. 4. To prepare standard solutions and perform standardization of solutions.

CH-302	Inorganic and Organic Chemistry	<ol style="list-style-type: none"> 1. Explain and apply LCAO principal for the formation of MO's from AO's. 2. Apply IUPAC nomenclature of to coordination compounds. 3. Identify and draw the structure of aromatic hydrocarbons from their names or from structure name can be assigned. 4. Explain important reactions of alkyl/aryl halides. 5. Able to differentiate between alcohols and phenols. 6. To correlate reagent and reaction of alcohols/phenols,
BO-231	Taxonomy of Angiosperms and Plant Ecology	<ol style="list-style-type: none"> 1. Know principals of taxonomy, methods in taxonomy 2. Understand the classification\ application economical and biological importance of Angiosperms 3. Introduction to ecology, Ecosystem Types of Ecosystem.
BO-232	Plant Physiology	<ol style="list-style-type: none"> 1. Applications of plant physiology, Mechanism of Absorption of water, Transpiration. 2. Knowledge of Plant growth and plant growth regulators. 3. Concept to Nitrogen metabolism. 4. To study various metabolic processes in plants like transpiration, ascent of sap, physiology of flowering
ZO -231	Animal Diversity III	<ol style="list-style-type: none"> 1. Students will be able to understand classify and identify the diversity of higher vertebrates. 2. Students will be able to understand different life functions of higher vertebrates. 3. Students will be able to understand diversity, structure,& classification of phylum Chordata ,Sub phylum proto chordata, Class Pisces and Amphibia . 4. Students will be able to understand systematic position, habit, habitat, external characters, digestive system, Nervous system, Female reproductive system and Male Urinogenital system of Scolidon.
ZO -232	Applied Zoology I	<ol style="list-style-type: none"> 1. Students will be able to understand the techniques in Fisheries. 2. Student can study the types of Agricultural Pests and their different control methods. 3. Also study Marks of identification, lifecycle, nature of damage and Control measures of different pests.
MT 231	Calculus of Several Variables	<p>On completion of the course, student will be able to-</p> <p>CO1: Have understood the topics that include functions of several variables, graph and level curves and should be able to draw their graphs in anyone of the mathematics software.</p> <p>CO2: Evaluate limits of multivariable functions, examine the continuity of functions of several variables learn the theory of partial derivatives and its graphical meaning and be able to find partial derivatives, gradient vectors, differentials, directional derivatives and solve problems involving tangent planes and normal lines.</p> <p>CO3: Locate extreme value of functions of several variables using different sets.</p>

		CO4: learn the concepts of multiple integrals and their application to area and volumes.
MT 232	Numerical Methods and its Applications	On completion of the course, student will be able to- CO1: Find Errors , Rounding off numbers to n significant digits, to n decimal places, absolute, relative and percentage errors, know general formula. CO2: Learn Bisection method, the method of false position, the iteration method , Newton- Raphsons Method. CO3: Learn finite Difference Operators and their relations, Differences of a polynomial, Newton's Interpolation Formulas (Forward and Backward) CO4: Understand Fitting a straight line, Nonlinear curve fitting: Power function, polynomials of degree 2 and 3, Exponential function, Trapezoidal rule, Simpsons rule.
PHY 231	Mathematical Methods in Physics I	On completion of the course, student will be able to- CO 1: Understand the complex algebra useful in physics courses. CO 2: Introduction to complex numbers, Chain rule, Change of variables from Cartesian to polar co-ordinates, Conditions for maxima and minima. CO 3: Scalar and vector fields ,understand the role of partial differential equations in physics.
PHY 232	Electronics-I	On completion of the course, student will be able to- CO1: Understand the parameters, characteristics and working of transistors, functions of operational amplifiers. CO2: Voltage and current Divider Circuit, Maximum Power transfer theorem. CO3: Revision of bipolar Junction Transistor, Types, Symbol and basic action, Current Gain Factors (α and β) and their relations.

S.Y.B.SC (2019 Pattern) SEM IV

CH-401	Physical and Analytical Chemistry	<ol style="list-style-type: none"> 1. Student will be able to explain of one component system with respect to : Description of the curve, Phase rule relationship and typical feature for i) Water system ii) Carbon dioxide system iii) Sulphur system 2. Differentiate between ideal and non-ideal solutions and can apply Roul't's law. 3. Apply conductometric methods of analysis to real problem in analytical laboratory. 4. Apply and column chromatographic process for real analysis in analytical laboratory.
CH-402	Inorganic and Organic Chemistry	<ol style="list-style-type: none"> 1. Explain different types of isomerism in coordination complexes. 2. Apply principles of VBT to explain bonding in coordination compound of different geometries. 3. Apply crystal field theory to different types of complexes (Td, Oh, Sq, Pl complexes.)

		<p>4. Give synthesis of expected aldehyde, ketones, carboxylic acid and their derivatives, diazonium salt from amines, and their reactions.</p> <p>5. Draw the structure of different conformation of cyclohexene.</p>
BO-241	Plant Anatomy and Embryology	<p>1. Students will be able to apply scope of plant anatomy and types of tissues.</p> <p>2. To study The embryology of plants.</p> <p>3. Know different tissue systems in plants.</p> <p>4. Students will able to understand Fertilization: Mechanism of pollination, germination of pollen grain.</p>
BO-242	Plant Biotechnology	<p>1. Students will be able to apply Interdisciplinary nature of biotechnology.</p> <p>2. Single Cell Proteins and Environmental biotechnology</p> <p>3. Students will be able to understand Basics of plant genetic engineering.</p> <p>4. plant genetic engineering, genomics, proteomics and bioinformatics.</p>
ZO -241	Animal Diversity IV	<p>1. Students will be able to understand diversity, structure and classification of reptiles, aves & mammals.</p> <p>2. Students will be able to understand systematic position, habit, habitat, characters ,digestive system, respiratory system blood vascular system, nervous system ,sense organs, Reproductive system of Rat.</p>
ZO -242	Applied Zoology II	<p>1. Students will gain knowledge about Apiculture in which they study habit, habitat and nesting behavior of different types of honey bees.</p> <p>2. They also studied the Life cycle, Colony organization and division of labour, Polymorphism, Bee behavior and bee communication.</p> <p>3. Students get information about Sericulture.</p> <p>4. Different types of silk moths, their distribution and varieties of silk produced by Mulberry, Tassar, Eri and Muga silk worms also study External morphology and life cycle of Bombyxmori. Cultivation of mulberry (moriculture), harvesting and post harvesting techniques in sericulture.</p>
MT 241	Linear Algebra	<p>1 Understand the concept of Gauss elimination, Gauss - jorden Method.</p> <p>2 Define vector space, Sub space, linear dependence, basis and dimension, vector subspace, examples.</p> <p>3 : Learn definition, examples, properties of linear transformations, equality of linear transformations, kernel and rank of linear transformations, composite transformations.</p> <p>4:To find kernel and rank of linear transformations, composite transformations, Inverse of a linear transformation, Matrix of a linear transformation, change of basis, similar matrices.</p>
MT 242	Vector Calculus	<p>1. Manipulate vectors to perform geometrical calculations in three dimensions.</p> <p>2. Calculate and interpret derivatives up to three dimensions.</p> <p>3. Integrate functions of several variables over curves and surfaces.</p> <p>4. Use Green's theorem and the Divergence theorem to compute integrals.</p> <p>5. Communicate Calculus and other mathematical ideas effectively in speech and in writing.</p>

PHY-241	Oscillations, Waves and Sound	<ol style="list-style-type: none"> 1. Definitions of linear Simple Harmonic Motion (S.H.M) and angular S.H.M. 2. Understand the Logarithmic decrement, Quality factor. 3. Resonance: mechanical, acoustic and electrical, Relation between quality factor and band width. 4. Equation for longitudinal waves and its solution, Qualitative discussion of seismic waves and gravitational waves.
PHY-242	Optics	<ol style="list-style-type: none"> 1. Understand the Concept of magnification, deviation and power of a thin lens, Equivalent focal length of two thin lens System. 2. Understand the Simple Microscope, Eyepiece: Ramsden's eye piece (Expression), Huygens eye piece and Gauss's eyepiece (only qualitative discussion). 3. Understand the Brewster's law, Polarization by double refraction.

T.Y.B.Sc. (CBCS) SEM V

(Chemistry)

CH-501	Physical Chemistry- I	<ol style="list-style-type: none"> 1. Know historical of development of quantum mechanics in chemistry. 2. Pure rotational Raman spectra of diatomic molecules, Energy Expression, Selection rule, Rotational energy level diagram, Rotational Raman spectrum and Problems 3. Various photochemical phenomena like fluorescence and phosphorescence, Chemiluminescence, & Problems. 4. photochemical laws: Grothus - Draper law, Stark-Einstein law, 5. Quantum yield and reasons for high and low quantum yield, 6. Applications to conjugated systems, zero-point energy and quantum tunneling.
CH-502	Analytical Chemistry -I	<ol style="list-style-type: none"> 1. Differentiate / distinguish / Compare among the different analytical terms, process and analytical methods. 2. Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis. 3. Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis. 4. Demonstrate theoretical principles with help of practical.

CH-503	Physical Chemistry Practical-I	<ol style="list-style-type: none"> 1. Students are able determine the specific refractivity's of the given liquids A and B and their mixture and hence determine the percentage composition their mixture C. 2. Students are able determine order of reaction for the oxidation of alcohol by potassium dichromate and potassium permanganate in acidic medium calorimetrically. 3. Students are able determine molecular weight of a high polymer by using solutions of different concentrations. 4. Analysis of the given vibration-rotation spectrum of HCl. 5. Analysis of Riboflavin from vitamin supplementary capsules / syrup / tablet sample by Photofluometry. 6. Students are able to carry out conductometric estimations & titration.
CH-504	Inorganic Chemistry -I	<ol style="list-style-type: none"> 1. Able to compare the different approaches to bonding in Coordination compounds. 2. Gain the knowledge of inorganic reaction mechanisms available in the literature to solve chemical problems. 3. To know trends in periodic properties of these elements w.r.t. size of atom and ions, reactivity, catalytic activity, oxidation state, complex formation ability, color, magnetic properties, non-stoichiometry, density, melting point, boiling point. 4. Use of lanthanide elements in different industries. 5. Meaning of super conductors and their structure. o. Discovery and applications of superconductors.
CH-505	Industrial Chemistry	<ol style="list-style-type: none"> 1. Knowledge of various industrial aspects. 2. Concept of basic chemicals, uses and manufacturing process & students should also know the physico-chemical principals involved in manufacturing process. 3. Importance of sugar industry, Importance & basic requirement of fermentation process, manufacturing of ethyl alcohol by using molasses and fruit juice. 4. Chemistry of soap & Washing action of soap and detergents. 5. Synthesis, Structures, properties and applications of dyes & production processes of zinc oxide and iron oxide.
CH-506	Inorganic Chemistry Practical-I	<ol style="list-style-type: none"> 1. Gravimetric estimations & Analysis of Food/Pharmaceutical sample for ash and sulphated ash example-Aspirin. 2. Preparation of inorganic complexes and spot tests for metal ions and ligands. 3. Qualitative and confirmatory tests of inorganic toxicants. 4. Limit test for iron, chloride and sulphate from pharmaceutical raw materials. 5. Students should able to perform inorganic qualitative analysis.

CH-507	Organic Chemistry-I	<ol style="list-style-type: none"> 1. Describe the synthesis of chemical reactions of polynuclear and heteronuclear aromatic Hydrocarbons. 2. To predict product with reagents or supply the reagent/s for these reactions. 3. To write the mechanism of some named rearrangement reactions and their applications & electrocyclic rearrangement with their mechanisms. 4. E1, E2 and E1cB mechanism with evidences of these reactions & understand stereochemistry by using models and learn reactivity of geometrical isomers, orientation and reactivity in E1 and E2 elimination.
CH-508	Chemistry of Biomolecules	<ol style="list-style-type: none"> 1. Biological composition and organization of cell membrane, structure and function of various cell organelles of plant and animal cell. 2. Biochemical significance in living organisms, structure of carbohydrates and reactions of carbohydrates with Glucose as example. Properties of carbohydrates. 3. The student needs to know the types of lipids with examples, structure of lipids, properties of lipid. 4. Reactions of amino acids, properties of amino acids, peptide bond formation. types of proteins, structural features in proteins, effect of pH on structure of amino acid, determination of N and C terminus of peptide chain. 5. Enzyme specificity, Equations of enzyme kinetics K_m and its significance, features of various types of enzyme inhibitions, industrial applications of enzymes & 6. Basic concepts of Endocrinology. Types of Endocrine glands and their hormones. Biochemical nature of hormones. Mechanism of action of lipophilic and hydrophilic hormones.
CH-509	Organic Chemistry Practical	<ol style="list-style-type: none"> 1. Perform the quantitative chemical analysis of binary mixture, explain principles behind it. 2. Separate, purify and analyse binary water insoluble mixture. 3. Separate, purify and analyse binary water-soluble mixture. 4. Understand the techniques involving drying and recrystallization by various method. 5. Familiarize the test involving identification of special elements. 6. Learn the confirmatory test for various functional groups.
CH-510	Polymer Chemistry	<ol style="list-style-type: none"> 1. Difference between natural, synthetic, organic and inorganic polymers. 2. Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight. 3. Mechanisms of polymerization, polymerization techniques, uses & properties of polymers. 4. Role of polymer industry in the economy & advantages of polymers.

CH-511A	Environmental Chemistry	<ol style="list-style-type: none"> 1. Importance and conservation of environment & importance of biogeochemical cycles. 2. Students should know water resources, hydrological Cycle, organic and inorganic pollutants, water quality parameters. 3. Water quality parameters and standards, domestic water quality parameters, surface water, sampling, preservation, Monitoring techniques and methodology. 4. Water pollutants, eutrophication, waste water treatment.
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T.Y.B.SC (CBCS) SEM VI
(Chemistry)

CH-601	Physical Chemistry- II	<ol style="list-style-type: none"> 1. Applications of emf measurements- Determination of pH of a solution by using hydrogen electrode, quinhydrone electrode and glass electrodes ,potentiometric titrations: i) Acid-base titrations, (ii) Redox titrations and (iii) Precipitation. 2. Types of concentration cells: Concentration cells without and with transference Concentration cells with liquid junction potential. 3. X ray analysis of NaCl crystal system and Calculation of d and λ for a crystal system & numerical problems. 4. Application of radioisotopes as a tracer: Chemical investigation- Esterification, Friedel - Craft reaction and structure determination w.r.t PCl_5, Age determination use of tritium and C^{14} dating & numerical problems.
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CH-602	Physical Chemistry- III	<ol style="list-style-type: none"> 1. Relation between Vant Hoff's factor and degree of dissociation of electrolyte by colligative property. 2. Rate laws for reactions in solid state ,applying rate laws for solid state reactions, results of kinetics studies. 3. Conductors and insulators – Its correlation with Extent of energy in energy bands 4. Practical significance of polymer molecular weights determination.
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CH-603	Physical Chemistry Practical	<ol style="list-style-type: none"> 1. Potentiometric estimations of Cl^-, Br^- and I^-, determine the formal redox potential of Fe^{2+}/Fe^{3+} system, solubility product and solubility of $AgCl$. 2. Students should be able to dissociation constant & pH metric titration. 3. To determine the molecular weight of solute by different colligative methods. 4. To determine the molecular weight of solute by depression in freezing point method & study the association of Benzoic acid in benzene by Beckmann Method. 5. To determine the molecular weight of a given polymer & SO_4^{2-} and Cl^- ions by turbidometry. 6. Analysis of crystal structure from X-ray diffraction spectra.
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CH-604	Inorganic chemistry-II	<ol style="list-style-type: none">1.To understand the uses of organometallic compounds in the homogenous catalysis, & chemistry of ferrocene.2. Understand the phenomenon of catalysis, its basic principles and terminologies & the catalytic reactions used in industries.3. Identify the biological role of inorganic ions & compounds, know the abundance of elements in living system and earth crust.4. understand the polymers of Si, B, Si and P, Inorganic polymers and their use.5. Ionic liquids, their preparations, and their significance w.r.t green chemistry & technological importance of ionic liquids.
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K. K. Wagh Education Society's

K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori,

Tal:- Niphad, Dist:- Nashik- 422201 (Maharashtra)

(Affiliated to Savitribai Phule Pune University)

Accredited by NAAC: 'B+' Grade (CGPA 2.52)

SPPU ID: PU/NS/AC/79/2003

College Code: 755

A. I. S. H. E. Code: C-42064

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Department of Computer Science

Programme Outcomes, Programme Specific Outcomes & Course Outcomes (PO, PSO, CO)

Mechanism of Communication:

Clear learning outcomes of the programs and courses are stated by the college. Following is the mechanisms which are followed by the institution to communicate the learning outcomes to the teachers and students. Hard Copy of syllabi and Learning Outcomes are available in the departments for ready reference to the teachers and students.

Course Name	Program Outcomes
B. Sc. Computer Science	<p>1. Disciplinary knowledge: Apply knowledge of basic concepts of computer and mathematics appropriate to discipline and to provide effective solution in the area of computer.</p> <p>2. Sense of inquiry: Discuss, explain and illustrate a computational system to meet professional skills related to software industry like programming languages, web designing.</p> <p>3. Effectual communication: Illustrate the concept of system fundamentals including architecture, an organization, networking and communication.</p> <p>4. Proficient in subject matter: Describe mathematics fundamentals including discrete structure, statistics, calculus and electronics.</p> <p>5. Social and ethical values: Develop ability to perform professionally with social, cultural and ethical responsibility as an individual or as a team member positively.</p> <p>6. Modern tool usages: Differentiate between microprocessor and microcontroller also design their various applications in real world.</p> <p>7. Critical thinking: Gain the knowledge about software engineering fundamental including software analysis and design also evaluation, testify of software engineering process.</p> <p>8. Self-directed and Lifelong learning: Capable of adapting to new technologies and constantly upgrade there skills with an attitude towards lifelong learning.</p>

Program Specific Outcomes

1. Ability to understand the principles and develop different applications of computer system in various fields.
2. Explore technical knowledge in diverse areas of Computer Science and experience an environment in cultivating skill for successful career, entrepreneurship and higher studies.

Sr. No	Course Title	Course Outcomes
1	FYBSC (Comp. Sci.) SEM-I Problem Solving using Computers and C Programming	1. Acquire basic knowledge of computing, programming and problem solving using computers
		2. Explore algorithmic approaches to problem solving.
		3. Able to formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems
		4. Ability to implement algorithms in the 'C' language
		5. Develop modular programs using control structures and arrays in 'C'.
2	FYBSC (Comp. Sci.) SEM-I Database Management Systems	1. Discuss database concepts, applications, data models in the field of computer science along with other areas and develop the design of database.
		2. Identify the databases and relationships between them by analyzing the information.
		3. Apply the knowledge of database concepts with normalization to write and execute the queries and operations in SQL.
		4. Test the queries and operations to detect the errors.
		5. Integrate the concepts of queries, joins, aggregate functions in SQL.
		6. Develop the strong ability to use the database concepts for writing queries and operations in SQL.
3	FYBSC (Comp. Sci.) SEM-I Practical Course based on CS-101 and CS-102	1. Define algorithms and flowcharts for given problems in C programming. Describe an information model expressed in the form of an entity-relationship diagram.
		2. Illustrate the use of simple data types, operators and control structures in C programming. Transform entity-relationship diagram into a relational database schema.
		3. Implement various standard library functions in C programming and divide the programs into separate modules by writing user-defined functions.
		4. Implement SQL data definition, constraints, schema to organize data in database.
		5. Evaluate the programs and DBMS queries using appropriate debugging methods to test and validate the output.
		6. Design and write programs to implement the concepts of functions, arrays in C programming and queries, aggregate functions in DBMS.
4	FYBSC (Comp. Sci.) SEM-II Advance Programming using C	1. Define the basic concepts of C Programming to design more complex programs for solving problems.
		2. Illustrate efficient memory handling techniques in programs with the concepts of pointers and dynamic memory management.
		3. Implement various string and file handling functions.
		4. Identify and organize data in structures and files to develop small applications.

		<ol style="list-style-type: none"> 5. Test and validate the data stored in the structures and files and perform various operations on it. 6. Design simple data processing applications for real-world problems. Develop the concepts for advanced programming like data structures and Object Oriented Programming.
5	FYBSC (Comp. Sci.) SEM-II Relational Database Management System	<ol style="list-style-type: none"> 1. Outline the fundamental concepts of relational database management systems. 2. Illustrate the transaction management and recovery management techniques adopted in relational database management systems. 3. Write queries, functions, triggers, cursors and views using PL/SQL. 4. Determine various methods of database security and access control techniques. 5. Validate the queries by implementing error and exception handling techniques. 6. Discuss and differentiate between various types of databases.
6	FYBSC (Comp. Sci.) SEM-II Practical Course based on CS-201 and CS-202	<ol style="list-style-type: none"> 1. Identify the concepts of programming in C programming and RDBMS to design solutions for more complex problems. 2. Explain the use of advanced concepts of pointers, structures, file handling in C programming and cursors, triggers and functions in PL/SQL. 3. Execute the dynamic memory management techniques using the concept of pointers, string handling functions and structures in C Programming. 4. Implement RDBMS concepts of nested queries, functions, cursors, triggers and views. 5. Test and validate the outputs of the C programs and RDBMS queries. 6. Develop programs to design applications using advanced concepts of C programming and relational database concepts.
7.	SYBSC (Comp. Sci.) SEM-III Data Structures and Algorithms – I	<ol style="list-style-type: none"> 1. To use well-organized data structures in solving various problems. 2. To differentiate the usage of various structures in problem solution. 3. Implementing algorithms to solve problems using appropriate data structures.
8.	SYBSC (Comp. Sci.) SEM-III Software Engineering	<ol style="list-style-type: none"> 1. Compare and chose a process model for a software project development. 2. Identify requirements analyze and prepare models. 3. Prepare the SRS, Design document, Project plan of a given software system.
9.	SYBSC (Comp. Sci.) SEM-IV Data Structures and Algorithms – II	<ol style="list-style-type: none"> 1. Implementation of different data structures efficiently 2. Usage of well-organized data structures to handle large amount of data 3. Usage of appropriate data structures for problem solving
10.	SYBSC (Comp. Sci.) SEM-IV Computer Networks- I	<ol style="list-style-type: none"> 1. Have a good understanding of the OSI and TCP/IP Reference Models and in particular have a good knowledge of Layers. 2. Understand the working of various protocols. 3. Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies
11.	TYBSC (Comp. Sci.) SEM-V Operating Systems – I	<ol style="list-style-type: none"> 1. Processes and Thread Scheduling by operating system 2. Synchronization in process and threads by operating system 3. Memory management by operating system using with the help of various schemes

12.	TYBSC (Comp. Sci.) SEM-V Computer Networks - II	<ol style="list-style-type: none"> 1. Student will understand the different protocols of Application layer. 2. Develop understanding of technical aspect of Multimedia Systems 3. Develop various Multimedia Systems applicable in real time. 4. Identify information security goals. 5. Understand, compare and apply cryptographic techniques for data security.
13.	TYBSC (Comp. Sci.) SEM-V Web Technologies - I	<ol style="list-style-type: none"> 1. Understand how to develop dynamic and interactive Web Page
14.	TYBSC (Comp. Sci.) SEM-V Foundations of Data Science	<ol style="list-style-type: none"> 1. Perform Exploratory Data Analysis 2. Obtain, clean/process, and transform data. 3. Detect and diagnose common data issues, such as missing values, special values, outliers, inconsistencies, and localization. 4. Demonstrate proficiency with statistical analysis of data. 5. Present results using data visualization techniques. 6. Prepare data for use with a variety of statistical methods and models and recognize how the quality of the data and the means of data collection may affect conclusions.
15.	TYBSC (Comp. Sci.) SEM-V Object Oriented Programming using Java - I	<ol style="list-style-type: none"> 1. Understand the concept of classes, object, packages and Collections. 2. To develop GUI based application.
16.	TYBSC (Comp. Sci.) SEM-V Theoretical Computer Science	<ol style="list-style-type: none"> 1. Understand the use of automata during language design. 2. Relate various automata and Languages.
17.	TYBSC (Comp. Sci.) SEM-V Practical Course based on CS - 351	<ol style="list-style-type: none"> 1. Process synchronization 2. Processes and Thread Scheduling by operating system 3. Memory management by operating system using with the help of various schemes.
18.	TYBSC (Comp. Sci.) SEM-V Practical Course based on CS - 353 and CS - 354	<ol style="list-style-type: none"> 1. Understand how to develop dynamic and interactive Web Page 2. Prepare data for use with a variety of statistical methods and recognize how the quality of the data may affect conclusions. 3. Perform exploratory data analysis
19.	TYBSC (Comp. Sci.) SEM-V Practical Course based on CS - 355	<ol style="list-style-type: none"> 1. Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs. 2. Read and make elementary modifications to Java programs that solve real-world problems. 3. Validate input in a Java program.
20.	TYBSC (Comp. Sci.) SEM-V Python Programming	<ol style="list-style-type: none"> 1. Develop logic for problem solving 2. Determine the methods to create and develop Python programs by utilizing the data 3. structures like lists, dictionaries, tuples and sets. 4. To be familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc. 5. To write python programs and develop a small application project.
21.	TYBSC (Comp. Sci.) SEM-V Blockchain Technology	<ol style="list-style-type: none"> 1. Learn the fundamentals of Blockchain Technology. 2. Learn Blockchain programming 3. Basic knowledge of Smart Contracts and how they function.

22.	TYBSC (Comp. Sci.) SEM-VI Operating Systems-II	1. Management of deadlocks and File System by operating system 2. Scheduling storage or disk for processes 3. Distributed Operating System and its architecture and the extended features in mobile OS.
23.	TYBSC (Comp. Sci.) SEM-VI Software Testing	1. To understand various software testing methods and strategies. 2. To understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software. 3. To design test cases and test plans, review reports of testing for qualitative software. 4. To understand latest testing methods used in the software industries.
24.	TYBSC (Comp. Sci.) SEM-VI Web Technologies - II	1. Build dynamic website. 2. Using MVC based framework easy to design and handling the errors in dynamic website.
25.	TYBSC (Comp. Sci.) SEM-VI Data Analytics	1. Use appropriate models of analysis, assess the quality of input, and derive insight from results. 2. Analyze data, choose relevant models and algorithms for respective applications 3. Understand different data mining techniques like classification, prediction, clustering and association rule mining 4. Apply modeling and data analysis techniques to the solution of real world business problems
26	TYBSC (Comp. Sci.) SEM-VI Object Oriented Programming using Java – II	1. To access open database through Java programs using Java Data Base Connectivity (JDBC) and develop the application. 2. Understand and Create dynamic web pages, using Servlets and JSP. 3. Work with basics of framework to develop secure web applications.
27	TYBSC (Comp. Sci.) SEM-VI Compiler Construction	1. Understand the process of scanning and parsing of source code. 2. Learn the conversion code written in source language to machine language. 3. Understand tools like LEX and YACC.
28	TYBSC (Comp. Sci.) SEM-VI Practical Course based on CS - 361	1. Management of deadlocks by operating system 2. File System management 3. Disk space management and scheduling for processes
29	TYBSC (Comp. Sci.) SEM-VI Practical Course based on CS - 363 and CS - 364	1. Build dynamic website. 2. Using MVC based framework easy to design and handling the errors in dynamic website
30	TYBSC (Comp. Sci.) SEM-VI Practical Course based on CS - 365	1. To Learn Database Programming using Java 2. Understand and Create dynamic web pages using Servlets and JSP. 3. Work with basics of framework to develop secure web applications
31	TYBSC (Comp. Sci.) SEM-VI Software Testing Tools	1. To understand various software testing methods and strategies. 2. To understand a variety of software metrics and identify defects and managing those defects for improvement in quality for given software. 3. To design test cases and test plans, review reports of testing for qualitative software. 4. To understand latest testing tools used in the software industries

F.Y.B.Sc.(Comp. Sci.) Statistics

Name of Course	Course Outcome
Course CSST-111: Descriptive Statistics SEM-I	CO1: Describe basic features of the data.
	CO2: Analyze the data using different quantitative measures.
	CO3: Summarize and interpret the data using different graphs.
	CO4: Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.
	CO5: Build predictive models for the data.
	CO6: Compare different data sets and conclude the best fit.
Course CSST-112: Mathematical Statistics SEM-I	CO1: To understand the concept of Probability & how to determine deterministic and non-deterministic models, events, random experiment.
	CO2: To learn calculation of posterior probabilities using conditional probability and Bayes theorem.
	CO3: Students will understand the concept random variables and types of random variables & they will be able to obtain the probability distributions of random variables.
	CO4: To understand the concept of discrete random variables and will be able to apply the standard discrete probability distributions like Binomial ,Poisson, Geometric to different real life situations.
Course CSST-113: Statistics Practical Paper-I SEM-I	CO1: Problem solving skills of students are enhanced.
	CO2: Theoretical concepts are strengthened by solving maximum number of problems
	CO3: Students learn how to apply mathematical concepts to practical and real life problems.
	CO4: Analyze Statistical data using MS-Excel.
Course CSST-121: Methods of Applied Statistics SEM-II	CO1: Build advanced predictive models.
	CO2: Analyze data related to time and predict its future behaviour.
	CO3: Explain and interpret different models of forecasting
	CO4: Identify the skill set required for data analysis.
	CO5: Apply appropriate simulation techniques to match simulated outcomes closely with real outcomes
	CO6: Select the best prediction method in case of multivariate situations.
Course CSST-122: Continuous Probability Distribution & Testing of Hypothesis SEM-II	CO1: Apply different forms of continuous probability distributions.
	CO2: Explain research questions using the sample data.
	CO3: Infer the reliability of hypothesis scientifically using different tests of hypothesis.
	CO4: Test an assumption regarding population parameters using sample data.

	CO5: Identify the errors involved in using sample data for prediction.
	CO6: Develop application of test procedures to different hypothesis problems.
Course CSST-123: Statistics Practical Paper-II SEM-II	CO1: Problem solving skills of students are enhanced.
	CO2: Theoretical concepts are strengthened by solving maximum no. of problems.
	CO3: Students learn how to apply mathematical concepts to practical and real life problems.
	CO4: Analyze Statistical data using MS-Excel.

Electronics F.Y.B.Sc(Computer Science). Electronics

Name of Subject	Semester	Course Outcome
Course ELC-111(Theory) Semiconductor Devices and Basic Electronic Systems SEM-I	First	1: To Obtain knowledge of technological aspects of electronics.
		2: To familiarize with current and recent technological developments.
		3: To enrich knowledge through activities such as industrial visits, seminars, projects etc.
		4: To develop analytical abilities towards real world problems.
		5: To help students to build-up a progressive and successful career.
Course ELC-112(Theory) Principles of Digital Electronics SEM-I		1: To obtain knowledge of fundamental concepts in digital system.
		2: To understand logic gates to develop ability for advanced studies.
		3: To get the skills of digital circuits to develop the knowledge of computer based solutions.
		4: To create the foundation for research and development in Electronics/ Computer.
Course ELC-113(Practical) Practical course(Electronics) SEM-I		1: To acquire technical and manipulative skills in using laboratory equipment's, tools and materials.
	2: Understanding of lab procedures including safety and scientific techniques.	
	3: Skill development in collaborative learning and teamwork in lab setting.	
	4: To develop practical skill towards hardware system.	
	5: To analyze the output of the circuits through Observation Tables and Graphic representation.	
Course ELC 121 (Theory) Instrumentation System SEM-II	Second	1: To obtain knowledge of instrumental system aspects of electronics.
		2: To build the necessary skill of sensors along with their type.
		3: To realize the Smart Instrumentation system and develop the ability to use of Smart Sensors in real life applications.
		4: To get the knowledge of operational amplifier for developing the skill.
Course ELC 122 (Theory) Basics of Computer Organization SEM-II		1: To develop the ability of digital circuits for computer based solutions.
		2: To acquire the knowledge of electronic hardware in computer.
		3: To enhance the knowledge of fundamental concepts of computer system.
		4: To create foundation for research and development in Electronics/Computer.
Course ELC-123 (Practical) Practical course SEM-II		1: To acquire the knowledge of project development process through Circuit Simulation and other tools.
		2: To develop the skill of PCB making, designing, assembling, and soldering processes for industrial applications.
	3: To develop skills of analyzing test results of given experiments.	
	4: To develop the ability of Computer Hardware System, assembling, debugging etc. for advanced studies and research in computer science.	

S.Y.B.Sc(Computer Science). Electronics

Name of Subject	Course Outcome
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Course (ELC-231) (Theory) Microcontroller Architecture & Programming SEM-III	1. To write programs for 8051 microcontroller .
	2: . To interface I/O peripherals to 8051 microcontroller
	3: To design small microcontroller based projects
Course (ELC-232) (Theory) Digital Communication and Networking SEM-III	1: Define and explain terminologies of data communication
	2: Understand the impact and limitations of various digital modulation techniques
	3: To acknowledge the need of spread spectrum schemes.
	4: Identify functions of data link layer and network layer while accessing communication link
Course (ELC-233) (Practical) Practical Course III SEM-III	1: To design and build his/her own microcontroller based projects.
	2: To acquire skills of Embedded C programming
	3: To know multiplexing and modulation techniques useful in developing wireless application.
	4: Do build and test own network and do settings.
Course (ELC-241) (Theory) Embedded System Design SEM-IV	1: To understand the difference between general computing and the Embedded systems
	2: To know the fundamentals of embedded systems..
	3: Understand the use of Single board Computer (Such as Raspberry Pi) for an embedded system application. .
	4: . Familiar with the programming environment to develop embedded systems and their interfaces with peripheral devices..
Course (ELC-242) (Theory) Wireless Communication and Internet of Thing SEM-IV	1: Know working of wireless technologies such as Mobile communication, GSM, GPRS.
	2 Become familiar with 3G and 4G Cellular Network Technologies for Data Connections.:
	3 Understand working principles of short range communication application.
	4: Get introduce to upcoming technology of Internet of Things
Course ELC-243 (Practical) Practical course IV SEM-IV	1: To design and develop own smart applications using Raspberry-Pi
	2 To write Python program for simple applications
	3: To build own IoT based system.

F.Y.B.Sc.(Comp. Sci.) Mathematics

Name Of Subject	Course Outcome
Course MTC-111: Matrix Algebra SEM-I	CO1: Use computational techniques and algebraic skills essential for the study of systems of linear equations, matrix algebra, vector spaces.
	CO2: Critically analyse and construct mathematical arguments that relate to the study of introductory linear algebra.
	CO3: Use technology, where appropriate, to enhance and facilitate mathematical understanding, as well as an aid in solving problems and presenting solutions (Technological Skills).
	CO4: Communicate and understand mathematical statements, ideas and results, both verbally and in writing, with the correct use of mathematical definitions, terminology and symbolism
Course MTC-112: Discrete Mathematics SEM-I	CO1: Develop ability to write an argument using logical notation and determine if the argument is or is not valid.
	CO2: Demonstrate the ability to write and evaluate a proof or outline the basic structure of and give examples of each proof technique described.
	CO3: Students will get equipped with the basic techniques of counting, numerous examples to illustrate the use of these techniques in solving problems
	CO4: Equipped with the knowledge of counting problems that can be modelled using recurrence relation and compute the solution of homogeneous & non homogeneous recurrence relation.
Course MTC-113: Mathematics Practical SEM-I	CO1: Problem solving skills of students are enhanced.
	CO2: Theoretical concepts are strengthened by solving maximum number of problems
	CO3: Due to one to one interaction with the teacher doubts of the students get cleared if any.
	CO4: Students learn how to apply mathematical concepts to practical and real life problems.
	CO5: Interdisciplinary approach is developed.
	CO6: The use of <i>WxMaxima</i> Software could help students learn calculus more effectively, this being especially true among students who use the deep study approach.
Course MTC-121: Linear Algebra SEM-II	CO1: Comprehend vector spaces and subspaces and computing the solution of problems.
	CO2: Understand fundamental properties of matrices including determinants, inverse matrices, matrix factorizations, eigenvalues and linear transformations and developed the ability to analyze appropriate solution of a problem.
	CO3: Students will be developed the skill solve linear systems of equations
	CO4: Students will be get knowledge of geometric concepts of distance, length and perpendicular in a vector space R^n and powerful tools for solving many applied problems

Course MTC-122: Graph Theory SEM-II	CO1: Get the knowledge of Solve problems using basic concepts, terms of graph theory. Identify induced subgraphs
	CO2: Understand the definition of connected graph, isthmus and cut vertex . Compute the solution problems related shortest path between two vertices.
	CO3: Determine whether graphs are Hamiltonian and/or Eulerian, Model real world problems using graph theory. Applications of Travelling salesman and Chinese postman problems
	CO4: Developed a ability to analyze used of trees in different field like data storage, searching and communication.
Course MTC-123: Mathematics Practical SEM-II	CO1: To make students able to apply their skills and knowledge ,that is to teach them translate the information presented verbally into mathematical form.
	CO2: To help the students to select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusions.
	CO3: Enhancing students' overall development and to equip them with mathematical modelling abilities and problem solving skills
	CO4: The use of <i>WxMaxima</i> Software could help students learn calculus more effectively, this being especially true among students who use the deep study approach.

S.Y.B.Sc.(Comp. Sci.) Mathematics

Subject Code & Name	Course Outcomes
MTC-231 Groups & Coding Theory SEM-III	On completion of the course, student will be able to- CO1: Study core properties of integers. CO2: Study concepts from group theory such as binary operations and the properties of binary operations CO3: Understanding concept of groups, subgroups and group of permutation. CO4: Understanding concept of transmission techniques, detecting & correction errors of transmission.
MTC-232 Numerical Technique SEM-III	On completion of the course, student will be able to- CO1: apply appropriate numerical methods to solve the problem with most accuracy. CO2: study different algorithmic techniques that are used to solve problems of approximation and of interpolation. CO3: learn different methods to solve problems of numerical integration CO4: determine approximate solution of ODE and system of linear equation.
MTC-233 Mathematics Practical: Python Programming Language I SEM-III	On completion of the course, student will be able to- CO1: Make students familiar with python programming language. CO2: Explain the use of python programming to solve linear algebra and numerical problems related to integration and solution of equations. CO3: Enable students to develop a positive attitude towards mathematics as an interesting and valuable subject to study. CO4: Develop problem solving skills and creative talent using python.

<p>MTC-241 Computational Geometry SEM-IV</p>	<p>On completion of the course, student will be able to-</p> <p>CO1: Demonstrate knowledge of key notions and principles related to 2 dimensional transformations. Analyze problem and compute the appropriate solution</p> <p>CO2: Demonstrate knowledge of key notions and principles related to 3 dimensional transformations. Analyze problem and compute the appropriate solution</p> <p>CO3: State and apply different types of projections on an object.</p> <p>CO4: Compute points of standard curves using recursive formulae. Construct Bezier curves of order 2 and order 3.</p>
<p>MTC-242 Operation Research SEM-IV</p>	<p>On completion of the course, student will be able to-</p> <p>CO1: Understanding the concept of modelling with linear programming and simplex method.</p> <p>CO2: Understanding the concept of duality of linear programming problems.</p> <p>CO3: Understanding the concept of assignment models.</p> <p>CO4: Understanding the concept of transportation models.</p>
<p>MTC-243 Mathematics Practical: Python Programming Language II SEM-IV</p>	<p>On completion of the course, student will be able to-</p> <p>CO1: Explain the use of Python programming for 2D and 3D graphs and 2D Transformations.</p> <p>CO2: Get familiar with Python libraries. (Like matplotlib, numpy)</p> <p>CO3: Explain use of python Programming for solving problems related with Linear programming and Simplex Method using Python.</p> <p>CO4: Enable the students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.</p> <p>CO5: Develop problem solving skills and creative talent using Python which will be helpful for various kinds of employment.</p>



K. K. Wagh Education Society's

K. K. Wagh Arts, Commerce, Science & Computer Science College, Chandori,

Tal:- Niphad, Dist:- Nashik- 422201 (Maharashtra)

(Affiliated to Savitribai Phule Pune University)

Accredited by NAAC: 'B+' Grade (CGPA 2.52)

SPPU ID: PU/NS/AC/79/2003

College Code: 755

A. I. S. H. E. Code: C-42064

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Department of Computer Science

Programme Outcomes, Programme Specific Outcomes & Course Outcomes (PO, PSO, CO)

Mechanism of Communication: Clear learning outcomes of the programs and courses are stated by the college. Following is the mechanisms which are followed by the institution to communicate the learning outcomes to the teachers and students. Hard Copy of syllabi and Learning Outcomes are available in the departments for ready reference to the teachers and students.

Program Outcomes

Course Name	Program Outcomes
MSc. Computer Science	<ol style="list-style-type: none"> 1. Disciplinary Knowledge Be technology-oriented with the knowledge and ability to develop creative solutions, and better understand the effects of future developments of computer systems and technology on people and society 2. Critical Thinking Provide advanced and in-depth knowledge of recent computer technology such as network programming, Advanced Networking, Project Management etc. 3. Ethics One should command responsibility and moral properties while taking decisions. Learning without ethics and moral concerns is meaningless. 4. Design/Development of Solutions Design, Analyze Computer programs or applications in the areas functional programming, web services, Algorithms, Artificial Intelligence and recent technologies 5. Individual and Team Work Function effectively as an Individual and as a member or leader in diverse teams and in multidisciplinary settings. 6. Effectual Communication The PG Students are expected to speak, read, write and listen clearly in person and through electronic media in English and Hindi and make meaningful communication by communicating people, ideas, knowledge media and to recent technology.

Program Specific Outcomes

Course Name	Program Specific Outcomes
MSc. Computer Science	1. Understand, Analyze and Develop computer programs for advance design of computer based system of varying complexity. 2. Industrial exposure through 6 months Industrial Internship provides a way to become good programmer or entrepreneur

Course Outcomes

SR.NO	Course Code	Course Name	Course Outcomes
1	CSUT111	Paradigm of Programming Language	<ol style="list-style-type: none"> 1. Develop a greater understanding of the issues involved in programming language design and implementation. 2. Students will be introduced with several paradigms of Programming Languages. Develop ability to learn new languages more quickly. 3. They will get in-depth knowledge of various concepts related to programming, compiler etc. 4. To understand the concept of functional programming language 5. Develop ability to learn and write small programs in different programming Languages 6. They will be able to apply various algorithms to solve some real life problems/issues. 7. Able to Understand the Various concept of Scala Programming Language.
2	CSUT112	Design and Analysis of Algorithms	<ol style="list-style-type: none"> 1. To study Basics of Algorithms 2. To study Divide and conquer strategy 3. To study Greedy Method 4. To study Dynamic Programming 5. To study Decrease and Conquer 6. To study Backtracking method 7. To study Branch and Bound 8. To study Problem Classification
3	CSUT113	Database Technologies	<ol style="list-style-type: none"> 1. Students will be able to understand the mechanism for storage and retrieval of data other than tabular relations model used in relational databases. 2. Knowledge related to NoSQL . 3. It is essential for students to have knowledge of Schema Migrations in detail related with NoSQL. 4. Students will understand a polyglot persistence term. Also students will learn a multi-model database.. 5. It gives an overview of modern databases for today's business needs. 6. Students will be able to understand which database should be selected based on their product needs.
4	CSDT114C	Web Services	<ol style="list-style-type: none"> 1. To understand the details of web services technologies like WSDL, UDDI, SOAP 2. To learn how to implement and deploy web service client and server 3. To explore interoperability between different frameworks 4. To understand the concept of RESTful system.
5	CSDP114C	Web Services Practical Assignments	To understand how to develop web services using Java/PHP/.Net
6	CSUT121	Advanced Operating System	<ol style="list-style-type: none"> 1. To learn about Unix System Architecture and concepts of Linux Programming. 2. Students will be able to understand Buffer pool and Buffer header, structure of regular file, Atomic operations on file, manipulating file permissions, different file access functions. 3. Students learn about the Process Environment, Process Control and Process Relationships. Different system calls to handle process creation, process termination, and manipulation of process. 4. Students will be able to learn memory management of operating systems. Different system calls related to Memory allocation, Memory mapping, and anonymous memory allocation.

			5. Students are able to understand the signal handling concept. 6. To manipulate signal different system calls are implemented
7	CSUT122	Mobile Technologies	<p>1. Students will be able to understand the concept of mobile computing and its need, also Mobile and Wireless devices, Mobile Applications, Mobile Operating system – IOS, BlackBerry, Windows phone, Palm OS, Symbian OS, Phone Gap</p> <p>2. Knowledge of Android Fundamentals are studied in detail 3. Android UI Design knowledge and its use is studied in detail</p> <p>4. It is essential for students to have knowledge of Android Thread and Notification</p> <p>5. Students will be able to learn Advanced Android Programming in detail and they will be able to create apps by learning Advanced Android Programming.</p> <p>6. Knowledge of Phone Gap Programming is studied in detail and students will be able to create apps by learning Phone Gap Programming.</p> <p>7. Knowledge of iOS Fundamentals are studied in detail</p>
8	CSUT123	Software Project Management	<p>1. To study Introduction to Project Management</p> <p>2. To study Project Management Components</p> <p>3. To study Scope Management</p> <p>4. To study Time management</p> <p>5. To study Cost Management</p> <p>6. To study Quality Management</p> <p>7. To study Human Resource Management</p> <p>8. To study Communication Management</p> <p>9. To study Risk Management</p> <p>10. To study Procurement Management</p> <p>11. To study Software Metrics</p> <p>12. To study Software Reliability</p> <p>13. To study Planning a measurement program</p> <p>14. To study Quality Standards</p>
9	CSUT231	Software Architecture and Design Patterns	<p>1. Recognize the characteristics of patterns that make it useful to solve real-world problems.</p> <p>2. Process available data using python libraries and predict outcomes using Machine Learning algorithms to solve given problem.</p> <p>3. Able to use specific frameworks as per applications need. 4. Design java application using design pattern techniques.</p>
10	CSUT232	Machine Learning	<p>1. Recognize the characteristics of machine learning that make it useful to real-world problems. 2. Process available data using python libraries and predict outcomes using Machine Learning algorithms to solve given problem. 3. Able to estimate Machine Learning models efficiency using suitable metrics. 4. Design application using machine learning techniques.</p>
11	CSUT233	Web Frameworks	<p>1. Students will be ready with the technology which is used widely in Industry as a part of full stack developer.</p> <p>2. Students will know the powerful way to develop the web application in Python.</p> <p>3. Students will understand what really the asynchronous programming.</p> <p>4. Build and deploy robust Django Web App.</p> <p>5. Integrate with Restful web services.</p>
12	CSDT234A	Big Data Analytics	<p>1. Recognize the characteristics, applications of big data that make it useful to real-world problems.</p> <p>2. Process available data using big data tools hadoop file system and predict outcomes to solve given problem.</p> <p>3. Study & Design various case studies using big data tools/commands and analyse it.</p>