## 2.6.1 Program outcomes, Program Specific outcomes, for all program offered by the institute are started and displayed on website and communicated to the teachers & students

## Program Outcomes

## Program outcomes of Bachelor of Arts

PO1. Demonstrate a detailed knowledge and understanding of selected fields of study in core disciplines in humanities, social sciences and languages.

PO2. Articulate the relationship between diverse forms of knowledge and the social, historical and cultural contents that produced them.3) Communicate effectively and in the case of those students undertaking a language major, need, write, listen to and speak another language with fluency and appreciate its cultural context.

PO3. Reading, Writing skills and Process:- Students will become accomplished, active readers to appreciate ambiguity and complexity and who can articulate their own interpretations with an awareness and curiosity for other perspectives. Students will be able to write effectively for a variety of professional and social setting. they will develop an awareness and confidence in their own voice as a writer and analyse complex social and natural problems with the help of their degree specialisation.

PO4. Sense of Genre:- Student will develop an appreciation of how the formal elements of language and genre shape meaning and they will develop a facility at writing in appropriate genres for research and other variety of purposes.

PO5. Critical Approaches:- Students will develop the ability to read works of literary, rhetorical, research, cultural criticism and develop idea with the help of their specialisation. They will express their own ideas as informed opinions, small projects, practical, research papers and understand how their own approach compares to variety of critical and theoretical approaches.

PO6. Oral communication skills:- Student will demonstrate the skill needed to participate in conversation that builds knowledge collaboratively. Listening carefully and respectfully to others view points. Articulating their own ideas and questions clearly and situating their own ideas in relation to other voices and ideas. Student will be able to prepare, organise and deliver and engaging oral presentation.

PO7. Ethics:- Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

## Program outcomes of Bachelor of Commerce

PO1. Demonstrate knowledge of major theories and models in key areas of organizational behaviour.

PO2. Analysis Organisational problems and generate realistic solutions based on current academic research in organisational behaviour.

PO3. Apply basic mathematical and statistical skills necessary for analysis of a range of problems in economics actuarial studies, Accounting, Marketing, Management and

Finance.

PO4. **Environment Awareness :** Understand the issues and problems of environmental context and develop environmental awareness in the mind.

PO5. **Consumer Movement :** Make people aware about consumer movement, rights & duties, laws relating to consumers.

PO6. **Sound knowledge of various laws :** Impart the knowledge of basic concepts, terms & provisions of company law, Mercantile law, Income Tax and other laws affecting business, trade and commerce.

## Program outcomes of Bachelor of Science

PO1. Articulate the methods of and science and explain why current scientific knowledge is both contestable testable by future inquiry.

PO2. Apply appropriate methods of research, investigation and design, to solve problem in science, mathematics, technology including the planning and conduct of a significant project problem or investigation.

PO3. Articulate the relationship between different science communities of practice, the international scope of science, mathematics, technology and engineering knowledge and methods and the contributions to their development that have been made by people with diverse perspectives, culture and backgrounds.

PO4. Students will develop the ability to read works of literary, rhetorical, research, cultural criticism and develop idea with the help of their specialisation. They will express their own ideas as informed opinions, small projects, practical, research papers and understand how their own approach compares to variety of critical and theoretical approaches.

## Program outcomes of Bachelor of Computer Science

PO1. To prepare the students for a career in Software Industry.

PO2. To develop problem solving abilities using computer.

PO4. To build the necessary skill set and analytical abilities for developing computer based solutions for real life problems.

PO5. To imbibe quality software development practices.

PO6. Student can work effectively both individually and as member of team.

# Program Specific Outcomes:

POS are to be listed for all graduates program separately i.e.

## Program Specific Outcomes for Marathi

PSO1. Understand basic concepts of Marathi

PSO2. To Known in depth Knowledge of Literature

PSO3. To know the great writers

PSO4. To promote cultural values in them through Marathi language

## Program Specific Outcomes for Hindi

PSO1. Understand basic concepts of Hindi

PSO2. To Known in depth Knowledge of Literature of Hindi

PSO3. To know the great writers

PSO4. To promote cultural values in them through Marathi language

PSO5. Understand the value of nation and society plus health relation with everyone.

## Program Specific Outcomes for English

PSO 1. Teaching of the basic concepts of English language and literature.

PSO 2. Learning of Characteristics of literature in English, diverse literary historical periods and cultures

PSO 3. Application of literary critical perspectives to generate original analysis of literature in English

PSO 4. Promotion of cultural values through English language

## Program Specific Outcomes for Geography

PSO1. Understand the nature and basic concept of geography

PSO2. Understand the applied and professional nature of geography such as fields
of G.I.S. and surveying

PSO3. Understand the application of modern geography techniques such as geographical
information system in society as well as environmental and settlement geography, hazards,
language land cover etc.

## Program Specific Outcomes for Polities

PSO1. Understand social stratification of castes and jatis, from language, religion, ethic and
economic determinants and critically assesses its impact on the political processes

PSO2. To understand the core doctrines of each of the ideologies and to make sense of politics
through different ideological perspectives.

PSO3. Understand legacy of the thinkers is explained with the view to establish the continuity

and change within the Western political tradition.

## Program Specific Outcomes for Economics

PSO 1. Understand the difference between Micro Economics & Macro Economics

PSO2. Understand techniques & diagrams related to employment theory

PSO3. Understand the concept of Foreign Exchange, International Banking & Euro Currency

Market

PSO4. To study the international policies

## Program Specific Outcomes for Psychology

**PSO1**. It makes a person fully aware that no two individuals are exactly alike.

**PSO2.** It helps one gain deep insights in to the significance of many aspect of human desires.

**PSO3.** It helps a person develop himself inti a well integrated and happy individual.

**PSO4**. Theories and findings in psychology may help us to solve important problems .

**PSO5**. Learning about oneself , the field of psychology allows us to learn about others.

**PSO6.** Learning can be viewed as one purpose of life, and self- knowledge can be viewed as an

important element of learning.

**PSO7.** Developmental psychology helps us to better understand how people change and grow

and then apply this knowledge to helping us reach our full potential.

## Program Specific Outcomes for Commerce

PSO1. Understand application of mathematical & Statistical concepts and techniques in solving
business problems.

PSO2. Develop the insights regarding organizational skills, functioning of modern appliances,
e format records in modern office.

PSO3. Stimulate the student's interest by showing the relevance and use of various economic
theories.

PSO4. Develop the capability of students for knowing banking concepts and operations.

PSO5. Analyze the basic concept in marketing and prepare to face the relevant changes in the

field of marketing .

PSO6. Know the basic concepts, terms and provisions of mercantile & business laws.

PSO7. Instill the knowledge about accounting procedures, methods & techniques.

PSO8. Develop business communication skills.

PSO9. Develop cost consciousness and analytical bent of mind.

## Program Specific Outcomes For BBA

PSO1. Recognize the need to adapt business practices to the opportunities and challenges of an evolving global environment.

PSO2. Demonstrate ability to recognize and identify ethical conflicts, apply ethical reasoning and assess response options relative to the needs and interests of relevant stakeholders to address issues in a business context.

PSO3. Identify, evaluate, analyze, interpret and apply information to address problems and make reasoned decisions in a business context.

PSO4. Communicate in a business context in a clear, concise, coherent and professional manner.

PSO5. Apply business discipline knowledge in an integrative manner to business problems.

PSO6. Demonstrate the understanding and ability to apply professional standards, theory, and research to address business problems within specific concentrations.

PSO7. Demonstrate an understanding of the law and its application to business.

## Program Specific Outcomes For BCA

PSO1. To produce employable IT workforce, that will have sound knowledge of IT and business fundamentals that can be applied to develop and customize solutions for Small and Medium Enterprises (SME).

PSO2. To develop skilled manpower in the various areas of information technology like: Data base management, Software Development, Computer-Languages, Software engineering, Web based applications etc

## Program Specific Outcomes for Physics

PSO1.To understands the basic concept of mechanics, electrodynamics, quantum mechanics.

PSO2. To understand the concepts of energy, work, power, the concepts of conservation of energy, elasticity, surface tension and viscosity.

PSO3. To understand optical phenomena such as polarization, birefringence, interference and diffraction in terms of the wave model and to analyze simple examples of interference and diffraction phenomena.

## Program Specific Outcomes for Chemistry

PSO1. Physical chemistry: Review of conventional processes, recent advance techniques. surface properties, ionic properties and other special characteristics of substances,

PSO2. Inorganic chemistry: Introduction to molecular symmetry, co-ordination of compounds and Bio-inorganic chemistry.

PSO3. Organic chemistry: Introduction to fundamental concepts and principles of process synthesis.Proficiency in Synthetic skill, Characterization by various analytical techniques, Micro- techniques and in-depth knowledge in subject is evaluated by allotting synthetic scheme.

## Program Specific Outcomes for Zoology

PSO1. To study the range from diversity to Molecular Biology

PSO2. To serve as a valuable foundation for understanding human anatomy, physiology, genetics, molecular biology and entomology.

PSO3. To study application of Zoology for benefit of mankind.

## Program Specific Outcomes for Botany

PSO1. To understand the physiological process in plants

PSO2. To Study biotechnological process, use of various plants resources at commercial level.

PSO3. To study the variation of plants life at all levels of biological organization.

## Program Specific Outcomes for Microbiology

PSO1. Acquiring the basic concepts of Taxonomy, Biostatistics, Bioinformatics, Biochemistry, Biophysics, Waste water engineering and Virology.

PSO2. Finding the suitability of microorganisms and interlinking its role in industry.

PSO3. Exploring microorganisms in the treatment of waste.

PSO4. Studying the instrumentation involved in isolation, identification of microorganisms, biochemistry and molecular biology.

## Program Specific Outcomes for Computer Science

PSO1. An ability to apply knowledge of computing and mathematics appropriate to the discipline.

PSO2.Those software systems are used in many different domains. This requires both computing
skills and domain knowledge.

PSO3. Software development fundamentals, including programming, data structures, algorithms
and complexity.

PSO4. Systems fundamentals, including architectures and organization, operating systems,
networking and communication, parallel and distributed computation, and security.

PSO5. Mathematics fundamentals, including discrete structures, statistics and calculus.

PSO6. Software engineering fundamentals, including software analysis and design, evaluation
and testing, and software engineering processes.

PSO7. Application fundamentals, including information management and intelligent
applications.

PSO8. Multiple programming languages, paradigms, and technologies.

PSO9. Microprocessors and microcontrollers.

## Program Specific Outcomes for Electronics

PSO1. Understand the basic concept of Electronics as components, symbols, circuits and
programming languages as Assembly, C etc.

PSO2. Perform practical as per laboratory rules and regulations which include build up of
circuits or
programs, taking observations, checking the notebook along with result and conclusion and
checking the practical sheets weekly as per batch etc.

PSO3. Understand how to build and test the circuits through project assign to the students.

PSO4. Understand the application related to Analog and Digital Electronics, Communication
principles and embedded technology.

# Course Outcomes

## Course Outcomes of Marathi Dept

| Sr.no. | Subject Code | Paper | Program Outcomes |
|---|---|---|---|
| 1 | CC-IA | REGULAR<br><br>Marathi sahitya :katha ani kaushalyvikas | At the general level, students are acknowledged with Marathi literature, language and culture. It helps them to develop the interest in understanding the Marathi |
| | CC-IA | | |

| | | | |
|---|---|---|---|
| | CC1A | Marathi sahitya :ekankika<br><br>OPTIONAL<br><br>1 st : vyavharik v upyojit matahthi PART 1 | |
| | CC1A | Vyavharik v upyojit matahthi PART 2<br><br>. | |

| 2 | 2025,<br><br>2026 | S.Y.B.A S-1<br><br>S.Y.B.A. S-2 | At this stage, the special level papers helps students to acquire the deep knowledge of literature its various forms, authors, critics, poetry, history of ancient and modern Marathi literature. It also helps to understand the process of creation of poetry, and methods of evaluation of poetry, conceptual theories, culture and philosophy. The basic outcomes of the course are that the students are introduced with the society, human values through the literature, which helps them to become a person with values. |
|---|---|---|---|
| 3 | 3028,<br>3029 | T.Y.B.A. S-3<br>T.Y.B.A. S-4 | At the third year course, students are introduced with linguistic and literature theories. Through the literary theories they got aware of the development and new aspects in literature as well as society. In fact it is said that , literature is the mirror of the society, At this stage students are prepared f to read, understand the 'isms' movements, values, criticism through literature. It also helps to develop lingual skills. Language is a social tool. Through linguistics students got aware of communication skills. This course helps students to achieve basic skills of life through which they could manage the bread and butter needs and also cultivate human values. |
| 4 | 1523,<br>83111<br>83112 | F.Y.B.COM,<br>S.Y.BSC sem I & II | This course introduces the commercial modern world, its demands, and opportunities of life. A biography, autobiographies, key models, successful personalities in society motivates them to set and achieve goals of life. It helps students to learn commercial aspects of literature and language. Media, newspapers, magazines, DTP skill, communication skills, public relations etc. are the areas where they can make their careers |
| 5 | MA SEM -1<br><br>CC1,<br><br><br>CC2,<br><br><br>CC3, | BHASHAVYA VHAR ANI KAUSHALYE -1<br><br>HISTORY OF MARATHI<br><br><br>ETIHASIK BHASHAVID YAN | This course helps the students to study the basic principles of research, criticism, literature history, and special author study. It helps to develop and promote the students towards the advanced skills. It creates views and vision about research literature and linguistic studies |

| | | | |
|---|---|---|---|
| | CC5, | BHASHAVYA VHAR ANI KAUSHALYE -2 | |
| | CC6, | HISTORY | |
| | CC7 | SAMAJBHAS HVIDHYAN | |
| | | M.A. II | |

| | | sem III (Paper – 5,6,7,8 ) | |
|---|---|---|---|
| | | M.A. II sem III (Paper – 5,6,7,8 ) | |
| 40491,40492, 40493,40494 | | | |

*(Note: the cell "30493,30494" appears in the first data row and "40491,40492, 40493,40494" in the second row.)*

| | 30493,30494 | sem III (Paper – 5,6,7,8 ) | |
|---|---|---|---|
| | 40491,40492, 40493,40494 | M.A. II sem III (Paper – 5,6,7,8 ) | |

## Course Outcomes of Hindi Dept

| S.N. | CLASS | PAPER | LEARNING OUT COMES |
|---|---|---|---|
| 1. | F.Y.B.A. | 1A Hindi pathcharya<br><br>1B Hindi pathchrya | Through this syllabus student will get the knowledge of Hindi Writers & Poets.<br>They value the national unity through HINDI language. |
| 2. | F.Y.B.Com. | 1A Hindi pathcharya<br><br>1B Hindi pathchrya | Through this syllabus students will understand the correct language to write and speak . |
| 3. | S.Y.B.A. | GENERAL-2<br>1.Kavy Dhara<br>2.Kavyayan<br>SPECIAL-1<br>1.Hindi bhasha ka Vikas<br>SPECIAL-2<br>1.Upanyas<br>2.Natak<br>3.Madhya Yugeen Kavy | Good language will make their personality special among others.<br>Through this study they become a very good writer, poet, novelist, dramatist etc.<br>They can go for journalism course also which will provide them jobs. |
| 4. | T.Y.B.A | GENERAL<br>1.Srajan Sandarbh aur Mai-----Aatmkathyansh<br>2.Kavy Natak-Ek KanthVishpayee<br>SPECIAL-3<br>1.Hindi Sahity ka Itihaas<br>SPECIAL-4<br>1.KAVYSHASHTR | Through Writer's Autobiography student will learn the lessons of great lives.<br>They will understand about the poetic concept of Drama. |
| 5. | M.A. PART-1 [SEM-1] | GENERAL<br>1.Madhy yugeen Kavy [Ameer Khusro aur Jayasi]<br>SPECIAL<br>2. Katha Sahity[Upanyas aur Kahani] | By this paper they will understand the history of Hindi Literature.<br>Through Poetry they will learn all the angle of Kavy, how to understand it, how to write good poetry and what is the role of poetry for the nation and individuals. |

| | | SPECIAL<br>3. Bhartiy kavyashashtr optional<br>4. Vishesh Sahitykar;KABEER | |
|---|---|---|---|
| 6. | SEM-2 | GENERAL<br>5. Kathetar gadya sahitya<br>6. Shodh pravidhi<br>SPECIAL-<br>7. Pashchaty kavyashashtr<br>8.optional<br>-Vishesh<br>Vidha[Hindi Upanyas] | Student will learn about the ancient Poets and their poetries.<br>Course will develop in them the sight as a critic . |
| 7. | Ma part 2<br>SEM-3 | GENERAL<br>9. Adhunik Kavy-1 [Mahakavy-Kamayni,Khandkavy-Gopa Gautam]<br>10. SPECIAL-Bhasha Vigyan<br>11.SPECIAL-Hindi Sahity ka tihas<br>12.SPECIAL-Anuvad Vigyan | To know the importance of Scientific language.<br>To aware with old and new history of Lterature and their Periods.<br>Importance of Translation, to understand the importance of all classic writings in their mother tounge. |
| 8. | SEM-4 | GENERAL-Aadhunik Kavy-Vishesh Kavi –Kuvar narayan tatha nayee kavita<br>SPECIAL-Hindi bhasha ka Aitihasik vikas<br>SPECIAL-Hindi Sahity ka Itihas [Aadhunik kaal]<br>SPECIAL-Loksahity | To get the knowledge of old & new Hindi Language and their places. Hindi Grammar and Hindi as a modern Literature and official Language.<br>Learn to value our Folk Literature. |

## Course Outcomes of English Dept

| S.N. | Class | Subject | Learning Outcomes |
|---|---|---|---|
| 1 | **F. Y. B. A.** | **Compulsory English**<br>Semester -I<br>Prose Pieces:1. A Lesson My Father Taught Me -A.P.J. Abdul Kalam<br><br>.Toasted English -R. K. Narayan<br><br>. Short Stories:1. The Romance of a Busy Broker - O. Henry<br><br>.2. The Open Window –Saki | a) Students familiarized with excellent pieces of prose and poetry in English so that they realized the beauty and communicative power of English<br>b) Exposed them to native cultural experiences and situations in order to develop humane values and social awareness<br>c) Developed overall linguistic competence and communicative skills of the students (F.Y. Comp Eng.) |

| | | | |
|---|---|---|---|
| | | 8.<br>9.<br>Poetry:1<br>1 Sonnet 29:'When in disgrace with Fortune and men's eyes' -William Shakespeare<br><br>2. The World is too much with Us -William Wordsworth<br><br>3. The Listeners -Walter de la Mare<br><br>4. No Men areForeign -James Kirkup | |

| 2 | F. Y. B. A. | Semester –II<br>Short Stories:1. The Doll's House -Katherine Mansfield<br>2. The Thief –Ruskin BondPoetry:1. I remember;I remember – Thomas Hood<br>2. Where the Mind is without Fear - Rabindranath Tagore<br>3. The Mountain and the Squirrel -R. W. Emerson<br>4. Up –Hill -Christina RossettiOne Act Plays:<br>1. The Monkey'sPaw - W.W. Jacobs<br>2. Swansong -Anton Chekhov | a) Students became familiar with the basics of literature and language<br>b) Students familiarized with different types of literature in English, the literary devices and terms so that they understood the literary merit, beauty and creative use of language<br>c) Introduced the basic units of language so that they became aware of the technical aspects and their practical usage<br>d) Students prepared to go for detailed study and understanding of literature and language<br>e) Developed integrated view about language and literature in them |
|---|---|---|---|
| 3 | S. Y. B. A | **Compulsory English** | 1. Developed competence among the students for self-learning<br>2. Students familiarize with excellent pieces of prose and poetry in English so that they realized the beauty and communicative power of English<br>3. Developed students' interest in reading literary pieces<br>4. Exposed them to native cultural experiences and situations in order to develop humane values and social awareness<br>5. Developed overall linguistic competence and communicative skills of the students<br>● |
| 4 | S. Y. B. A | **General English (G-2)** | . a) Students exposed to the basics of short story, one of the literary forms<br>b) Students familiarized with different types of short stories in English<br>c) Students understood the literary merit, beauty and creative use of language<br>d) Introduced some advanced units of language so that they became aware of the technical aspects and their practical usage<br>d) Students prepared to go for detailed study and understanding of literature and language<br>e) Developed integrated view about language and literature in them<br>● |
| 5 | S. Y. B. A | **Special Paper-I (S-1)** | 1. The students acquainted and familiarized with the terminology in Drama Criticism (i.e. the terms used in Critical Analysis and Appreciation of Drama)<br>2. Students encouraged for making a detailed study of a few sample masterpieces of English Drama from different parts of |

| | | | the world<br>3. Developed interest among the students to appreciate and analyze drama independently<br>4. Enhanced students' awareness in the aesthetics of Drama and to empower them to evaluate drama independently |
|---|---|---|---|
| 6 | **S. Y. B. A** | **Special Paper-II (S-2)** | 1. The students familiarized with the terminology in poetry criticism (i.e. the terms used in critical analysis and appreciation of poems)<br>2. Students encourage for making a detailed study of a few sample masterpieces of English poetry<br>3. Students enhanced their awareness in the aesthetics of poetry and to empower them to read, appreciate and critically evaluate the poetry independently<br>• |
| 7 | **T. Y. B. A.** | **Compulsory English** | 1. Students introduced to the best uses of language in literature.<br>2. Students familiarized with the communicative power of English<br>3. Students became competent users of English in real life situations<br>4. Students exposed to varied cultural experiences through literature<br>5. Contributed to their overall personality development by improving their communicative and soft skills |
| 8 | | **General English (G-3)** | 1. Students exposed to some of the best samples of Indian English Poetry<br>2. The students understood how Indian English poetry expressed the ethos and culture of India<br>3. To make them understand creative uses of language in Indian English Poetry<br>4. Students introduced to some advanced areas of language study<br>5. Students prepared to go for detailed study and understanding of literature and language<br>6. Developed integrated view about language and literature among the students |
| 9 | | **Special Paper III (S-3)** | a) Students introduced to the basics of novel as a literary form<br>b) Students exposed to the historical development and nature of novel<br>c) Students made aware of different types and aspects of novel<br>d) Developed literary sensibility and sense of cultural diversity in students<br>e) To expose students to some of the best examples of novel |
| 10 | | **Special Paper IV(S-4)** | **1.** students introduced to the basics of literary criticism<br>**2.** Made them aware of the nature and historical development |

| | | | of criticism |
|---|---|---|---|
| | | | 3. Made them familiar with the significant critical approaches and terms |
| | | | 4. Students encouraged interpreting literary works in the light of the critical approaches |
| | | | 5. Developed aptitude for critical analysis |

## Course Outcomes of Geography Dept

| S.N. | Subject | Learning Outcomes |
|---|---|---|
| 1 | Gg- 110 -Elements of Geomorphology (G-1) | • To introduce the students to the basic concepts in Geomorphology.<br>• To introduce latest concept in Geomorphology<br>• To acquaint the students with the utility and application of Geomorphology in different regions and environment.<br>• To make the students aware of the need of protection and conservation of different landforms |
| 2 | Gg-201 : Fundamentals Of Geographical Analysis(S-2) | • To enable the students to use various Projections and Cartographic Techniques.<br>• To acquaint the students with basic of Statistical data.<br>• To acquaint the students with the principles of surveying, its importance and utility in the geographical study. |
| 4 | Gg 220: Economic Geography (S-1) | • To introduce the students to the basic principles and concepts in Economic Geography<br>• To acquaint the students with the applications of Economic Geography in different areas and development.<br>• The main aim is to integrate the various factors of economic development and to acquaint the students about this dynamic aspect of economic geography. |
| 5 | Gg. 301: Techniques of Spatial Analysis (S-4) | • To Introduce the Students with SOI Toposheets and to acquire the Knowledge of Toposheet Reading/Interpretation.<br>• To familiarize the students with the weather instruments and their applications in Geographical phenomena.<br>• To acquaint the students with IMD weather maps and to gain the knowledge of weather map Reading / interpretation.<br>• To train the students in elementary statistics as an essential part of geography.<br>• To awareness about GIS among the students. |
| 6 | Gg.: 310 Regional Geography of India (G-3) | • To acquaint the students with geography of our Nation.<br>• To make the student aware of the magnitude of problems and Prospects at National level.<br>• To help the students to understand the inter relationship between the subject and the society.<br>• To help the students to understand the recent trends in regional studies. |
| 7 | Gg-320: Population and | • To provide an understanding of spatial and structural dimensions of |

| | | Settlement Geography (S-3) | population <br> • To familiarizing the students with global and regional level problems. <br> • To acquaint the students with the spatial, political and structural characteristics of human settlement under varied environmental conditions. |
|---|---|---|---|

## Course Outcomes of Politcal Science Dept

| Class | Paper Code | Paper Name | Learning Outcome |
|---|---|---|---|
| FYBA | 1167 | Semester –I <br> Unit:1 <br> Making of the <br> U.S. Constitution12 <br><br> a)Historical Background <br><br> b) Preamble <br><br> c) Salient Features <br><br> Unit: 2 Federal System <br> a) Features <br><br> b) State Autonomy <br><br><br> c) Relations between the Federal Government and the States <br><br> Unit: 3 Fundamental Rights <br> a) Nature of Fundamental Rights <br><br> b) Development of Fundamental RightS Constitutional Amendments <br><br> a) Constitutional Provisions <br><br> b) Important Amendments | • This paper focuses in detail on the political processes and the actual functioning of the political system. <br> • It simultaneously studies in detail the political structure both Constitutional and Administrative. <br> • It emphasizes on local influences that derive from social stratification of castes and jatis, from language, religion, ethic and economic determinants and critically assesses its impact on the political processes. <br> • The major contradictions of the Indian Political Process are to be critically analyzed along with an assessment of its relative success and failure in a comparative perspective with other developing countries and in particular those belonging to the South Asian region. |

| | | | |
|---|---|---|---|
| | | (15& 22)

Semester –II

Unit: 5 Legislature1
a) Structure
 b) Powers
c)Role

Unit: 6 Executive
a)  President: Powers and Functions

b)  Vice President: Powers and Function

c)  Secretary: Powers and Functions

Unit: 7
Judiciary
a) Structure
 i) Federal Court
ii) State Court

c)  Powers and Functions

c) Judicial Review

Unit: 8
FederalElection Commission
a)  Structure

 b) Functions | |
| SYBA | 2167 | (GENERAL PAPER-2)

POLITICAL THEORY

&  CONCEPTS | • This is an introductory paper to the concepts, ideas and theories in political theory.
• It seeks to explain the evolution and usage of these concepts, ideas and theories with reference to individual thinkers both historically and analytically.
• The different ideological standpoints with regard to various concepts and theories are to be critically explained with the purpose of highlighting the differences in their perspectives and in order to understand their continuity and change.
• Furthermore there is a need to emphasize the continuing relevance of these concepts today and explain how an idea and theory of yesteryears gains prominence in contemporary political theory. |

| | 2168 | (SPECIAL PAPER- I) | • This paper studies the classical tradition in political |
|---|---|---|---|

| | | | |
|---|---|---|---|
| | | WESTERN POLITICAL THOUGHT | theory from Plato to Marx with the view to understand how the great Masters explained and analyzed political events and problems of their time and prescribed solutions.<br>• The texts are to be interpreted both in the historical and philosophical perspectives to understand the universality of the enterprise of political theorizing.<br>• The limitations of the classical tradition, namely its neglect of women's concerns and issues and the non-European world are critically examined.<br>• The legacy of the thinkers is explained with the view to establish the continuity and change within the Western political tradition. |
| | **2169** | (SPECIAL PAPER- II)<br><br>POLITICAL SOCIOLOGY | • This Course will introduce the overall scope of the sub-discipline of political sociology. The focus of the course will be on the political sociology of power.<br>• The emphasis is on the nature of power in modern societies—more in the form of organizations and social formations than as individual power.<br>• Students are also expected to understand different forms of justifications of power and the role of ideology in this regard.<br>• State will be studied as a repository of power in society while class and patriarchy are two instances of how the nature of power is shaped by social factors. |
| TYBA | 3167 | (General Paper -3)<br><br>POLITICAL IDEALOGIES | • This paper studies the role of different political ideologies and their impact in politics.<br>• Each ideology is critically studied in its historical context. In course of its evolution and development, the different streams and subtle nuances within each ideology, the changes and continuities in its doctrine and its relevance to contemporary times are highlighted.<br>• The close link between an idea and its actual realization in public policy needs to be explained as well. The philosophical basis of the ideologies is emphasized with special emphasis on key thinkers and their theoretical formulations. The legacy of all the major ideologies is to be critically assessed. |
| | 3168 | PUBLIC ADMINISTRAION | • This paper is an introductory course in Public Administration.<br>• The essence of Public Administration lies in its effectiveness in translating the governing philosophy into |

| | | (Special Paper -3) | programme , policies and activities and making it a part of community living. |
|---|---|---|---|
| | | | • The paper covers personnel public administration in its historical context thereby proceeding to highlight several of its categories, which have developed administrative salience and capabilities to deal with the process of change. |
| | | | • The recent developments and particularly the emergence of New Public Administrations are incorporated within the larger paradigm of democratic legitimacy. |
| | | | • The importance of legislative and judicial control over administration is also highlighted |
| | **3169** | INTERNATIONAL POLITICS<br><br>(Special Paper -4) | • This paper deals with concepts and dimensions of international relations and makes an analysis of different theories highlighting the major debates and differences within the different theoretical paradigms. |
| | | | • The dominant theories of power and the question of equity and justice, the different aspects of balance of power leading to the present situation of a unipolar world are included. |
| | | | • It highlights various aspects of conflict and conflict resolution, collective security and in the specificity of the long period of the post Second World War phase of the Cold War, of Détente and Deterrence leading to theories of rough parity in armaments. |
| Class | Paper Code | Paper Name | Learning Outcome |
| M.A. PART –I SEM-I | | Semester I<br><br>List of Compulsory Courses (C= compulsory)<br><br>PO-C1   Traditions of Political Thought<br><br>PO-C2   Administrative Theory<br><br>PO-C3   Political Institutions in India<br><br>List of Optional Courses (O = optional)<br><br>PO-O1   PO-O1-Modern Political Ideologies<br><br>PO-O2   Political Process in Maharashtra | • This Course introduces Political Theory as a distinctive area of inquiry that is integral to the study of politics. |
| | | | • It highlights contemporary normative debates and places them in a historical perspective. |
| | | | • The Course projects the global and interdisciplinary orientation of Political Theory. |
| | | | • It also emphasizes the interplay of theory and practice in the political |

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| | PO-O3 | India's Foreign Policy | |
| | PO-O4 | Party System in India | |

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| | | | • The course introduces the student to the leading institutions of the Indian political system and to the changing nature of these institutions.<br>• Apart from explaining the structure and functions of the main institutions the course will try to acquaint students with the idea of institutional balance of power as discussed in the Indian constitution and as developed during the functioning of Indian democracy over the past six decades. |
| | | | • The purpose of this course is to acquaint the students with the study of select modern ideologies with the following objectives.<br>I. To understand the difference between ideology and thought as<br>   well as between theory and ideology.<br>II. To understand the relationship between ideas and politics.<br>III. To understand the core doctrines of each of the ideologies and<br>   to make sense of politics through different ideological<br>   perspectives. |
| M.A. PART –I SEM-II | | Semester II<br><br>List of Compulsory Courses (C= compulsory) | • The purpose of this course is to provide students an understanding of the basic concepts, theories and process of public policy.<br>• The course also seeks to help students understand policy processes and actors involved in it by studying specific policies.<br>• It attempts to help students understand and analyze policy making in practical context. |
| | PO-C4 | Comparative Political Analysis | |
| | PO-C5 | Theory of International Politics | |
| | PO-C6 | Public Policy<br><br>List of Optional Courses (O = optional) | |
| | PO-O5 | Politics and the Media | |
| | PO-O6 | Human Rights | |
| | PO-O6 | Social Movements in India | |

| | PO-O7 | Political Thought in Modern Maharashtra | |
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## Course Outcomes of Economics Dept

| Sr. No | Subject - BA | Subject Code | Course Outcomes |
|---|---|---|---|
| 1. | **FYBA**<br>Semester 1<br><br>Unit 1<br>Introduction<br><br>Unit 2<br>Agricultural Environment<br><br>Unit 3<br>Industrial Environment<br><br>Semester 2<br>Unit 1<br>Service Sector Environment<br>Unit 2<br>Banking Environment<br><br><br>Unit 3<br>Overview of Indian economy | G1 | To provide the students with the background of the Indian Economy with focus on contemporary issues like economic environment.<br> •To help the students to prepare for varied competitive examinations<br>•To enable students to understand and comprehend the current business scenario, 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. Programme Outcome:<br>•Ability to develop an understanding of the economic environment and the factors affecting economic environment.<br>•Ability to develop awareness on the various new developments in the different sectors of an economy – agriculture, industry, services, banking, etc. •Ability to compare and contrast Indian Economy with other world economies.<br>•At the end of the course, the student should be able discuss and debate on the various issues and challenges facing the Indian Economic Environment. |
| 2. | Micro Economics | EC-2158 | Teach the tools of Micro Economics |
| | | | Understand the concept of Elasticity of Demand |
| | | | Explain & present the theory of wages |
| 3. | Macro Economics | EC-2159 | understand the concept of Macro Economics & policies |
| | | | Explain & presentation of employment theory |
| 4. | Modern Banking | EC-2157 | Teach the fundamental principal of Banking |
| | | | understand the process of credit creation of Banks |
| | | | Explain & presentation of SLR & CRR |
| 5. | International Economics | EC-3158 | study the international policies |
| | | | Increase in foreign investment |
| | | | understand the concept of BRICS |
| | | | Teach the various types of international organization |
| 6. | Public Finance | EC-3159 | Teach the concept of Private Finance & Public Finance |
| | | | Explain the types of Tax & Public expenditure |

| | | | Explain & presentation of GST in India |
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| 7. | Economic Development & Planning | EC-3157 | Teach the concept of economic development & Planning |
| | | | understand the different types of developmental |

| | | | theories |
|---|---|---|---|
| **Sr. No** | **Subject B.Com** | **Subject Code** | **Course Outcomes** |
| 8. | Business Economics(Micro) | EC-1123 | Teach the concept of Micro Economics & Macro Economics |
| | | | Explain the types of elasticity of demand & wages theory |
| 9. | Business Economics(Macro) | EC-2133 | understand the difference between Micro Economics & Macro Economics |
| | | | understand techniques & diagrams related to employment theory |
| 10. | International Economics | EC-3143 | Teach the concept of International Economics |
| | | | learn the basic concept of FDI,BRICS,NAFTA,SAFTA etc. |
| | | | Explain the various Foreign Trade Policies |
| **Sr. No** | **Subject- M.A- I** | **Subject Code** | **Course Outcomes** |
| 1. | Micro Economic Analysis- I | EC-1001 | Teach the tools of Micro Economics |
| | | | Understand the concept of Elasticity of Demand |
| | | | How to Apply Different Micro Economic Theory in Business |
| 2. | Public Economics- I | EC-1002 | Teach & Explain the Private Goods, Public Goods & Merit Goods |
| | | | Understand the concept of various Budget |
| | | | Analyses the Types of Varies Tax |
| 3. | International Trade | EC-1003 | Teach the concept of International Economics |
| | | | Explain the various Foreign Trade Policies |
| | | | Teach, Explain & Analyses of various International Trade Theory |
| | | | learn the basic concept of FDI,BRICS,NAFTA,SAFTA etc. |
| 4. | Indian Economic Policy | EC-1004 | Teach the basic concept of developing & developed countries |
| | | | Analyses the Changes in GDP since 1991& in the year 2011 India's GDP was 10.3% |
| | | | Analyses the role of service sector in Indian economy |
| 5. | Micro Economic Analysis- II | EC-2001 | Analyses the various Market Structure |
| | | | Explain & present the theory of Distribution |
| | | | Explain the alternative theories of the Firm |
| 6. | Public Economics- II | EC-2002 | Analyses the Fiscal Policy for Stabilization |
| | | | Understand the Indian Tax system |
| | | | Analysis of Central & State Government Budgets |
| 7. | International Finance | EC-2003 | Analyses the Balance of Trade & Balance of Payments |
| | | | Understand the concept of Foreign Exchange |
| | | | Understand the International Banking & Euro |

| Sr. No | Subject- M.A- II | Subject Code | Course Outcomes |
|---|---|---|---|
| | | | Currency Market |
| 8. | Industrial Economics | EC-2005 | Understand the Industrial Structure |
| | | | Teach the Industrial Productivity & Efficiency |
| | | | Understand the Role of MNC'S in India |
| **Sr. No** | **Subject- M.A- II** | **Subject Code** | **Course Outcomes** |
| 9. | Macro Economics- I | EC-3001 | Understand the concept of Macro Economics, National Income GDP, NNP, and GNP. |
| | | | Explain the open economy issues. |
| | | | Understand techniques & diagrams related to employment theory. |
| 10. | Growth & Development- I | EC-3002 | Understand the concept of Development & Underdevelopment. |
| | | | Understand the Theories of Economic Growth & Development. |
| | | | Understand the Problems of Urbanization, Migration. |
| 11. | Modern Banking | EC-3003 | Students aware about the changing scenario of the modern banking role & Problems. |
| | | | Understand the Role of the financial System in economic development. |
| | | | Understand the Progress and present status of E-Banking in India. |
| 12. | Demography | EC-3004 | Understand the world population growth and distribution. |
| | | | Understand the Various Population Theories. |
| | | | Understand the India's population Policy. |
| 13. | Macro Economics- II | EC-4001 | Understand the concepts of Money and Liquidity. |
| | | | Understand the theory of Demand for Money and Money Supply. |
| | | | Understand the theories of Interest Rates, Monetary Policy. |
| 14. | Growth & Development- II | EC-4002 | Understand the role of Agriculture, Industry and Service Sector in development. |
| | | | Understand the concept and relationship between Trade and Development. |
| | | | Analyses the role of IMF, FDI and World Bank. |
| 15. | Research Methodology | EC-4003 | Explain the various data tools Methods of Research. |
| | | | Understand the co-relationship between Hypothesis and Objectives. |
| | | | Understand the using the various test in the research. |
| | | | Using the Null Hypothesis and alternative Hypothesis in the research. |
| 16. | Rural Development | EC-4005 | Understand the Various approaches to Rural Development. |

| Sr. No | Subject- M.Com- I & II | Subject Code | Course Outcomes |
|---|---|---|---|
| | | | Understand the rural Infrastructure in India. |
| 17. | Industrial Economics | EC-202(A) | Understand the Industrial Structure. |
| | | | Teach the Industrial Productivity & Efficiency |
| 18. | Industrial Economics Environment | EC-402(A) | Understand the Industrial Finance. |
| | | | Teach the Industrial growth and Policy in India. |

## Course Outcomes of psychology Dept

| SN | Subject | Learning outcomes |
|---|---|---|
| 1 | F.Y.<br><br>DSC-PSY-1A<br>Foundations of Psychology<br><br><br>DSC-PSY-1B<br>Introduction to Social Psychology | • a) Understand the basic psychological processes and their applications in day to day life.<br>• b) Develop the ability to evaluate cognitive processes, learning and memory of an individual.<br>• c) Understand the importance of motivation and emotion of the individual.<br>• d) Understand the personality and intelligence of the individualsby developingtheir psychological processesand abstract potentials.. |
| 2 | S1 – psychology of adjustment | • To acquaint the students with various areas of Adjustment.<br>• To provide the students the empirical approach in Adjustment Psychology.<br>• To acquaint the students with health psychology. |
| | S2 – developmental psychology | • To acquaint the students with the basic concepts of human development processes<br>• To help the students tounderstand influences of various factors on development. |
| 3 | G2 – Social psychology | • Acquaint students with basic concepts, theories and applications of social psychology.<br>• Familiarize students with group behavior.<br>• Underline the importance of close Relationships and Pro-social behavior. |
| | G3 – Applied psychology | • Help students to understand the relationship between theoretical and applied aspects of psychology.<br>• Acquaint students with various applications of psychology.<br>• Apprise students of the role of psychologists in various applied fields. |
| | S3 – Scientific Research and Experimental Psychology | • To acquaint the students with the basic concepts of experimental psychology and research methodology.<br>• To develop the spirit of scientific inruiry in the students.<br>• To help them generate ideas for research as well as develop hypotheses and operational definitions for variables.<br>• To help students understand the basic steps in scientific research.<br>• To enable the students to under take an independentific small-scale research project. |

| 7 | S4 – Psychology practical – Tests and experiments. | • To familiarize the students with the use of elementary statistical techniques.<br>• To give practical experience to the students in |

| | | | • administering and scorimg psychological tests and interpreting the scores. |
| | | | • To acquaint the students with the basic procedure and design of psychology experiments. |
| | | | • To encourage and guide the students to undertake a small-scale research project. |
| | | | • To encourage students to learn practical application through study tour and visit. |

## Course Outcomes of Commerce Dept

| Class | Subject Code | Subject Name | Learning Outcome |
|---|---|---|---|
| F.Y.B.Com | 111 | . Compulsory English-I | 1. To impart the knowledge of various accounting concepts<br>2. To instill the knowledge about accounting procedures, methods and techniques.<br>3. To acquaint them with practical approach to accounts writing by using software package. |
| | 112 | Financial Accounting - I | 1. To expose Students of Commerce to basic micro economic concepts and inculcate an analytical approach to the subject matter.<br>2. To stimulate the student interest by showing the relevance and use of various economic theories.<br>3. To apply economic reasoning to problems of business. |
| | 113 | Business Economics- I | 1. To prepare for competitive examinations<br>2. To understand the concept of Simple interest, compound interest and the concept of EMI.<br>3. To understand the concept of shares and to calculate Dividend<br>4. To understand the concept of population and sample.<br>5. To use frequency distribution to make decision.<br>6. To understand and to calculate various types of averages and variations.<br>7. To understand the concept and application of profit and loss in business.<br>8. To solve LPP to maximize the profit and to minimize the cost.<br>9. To use correlation and regression analysis to estimate the relationship between two variables.<br>10. To understand the concept and techniques of different types of index numbers. |

| | 114A | . Business Mathematics and Statistics - I OR | To impart knowledge of basic accounting concepts<br>2. To create awareness about application of these concepts in business world<br>3. To impart skills regarding Computerised Accounting<br>4. To impart knowledge regarding finalization of accounts of various establishments. |
| | 114B | Computer Concepts and Application- I | |
| | 115 | Optional Group. (A) (Any one of the Following)<br><br>a)Organization Skill Development<br><br>b)Banking and finance<br><br>c)Commercial Geography<br><br>d)Defence Organization and Management in India<br><br><br>e)Cooperation<br>f)Managerial Economics | To introduce the students to the emerging changes in the modern office environment<br>2.To develop the conceptual , analytical , technical and managerial skills of students efficient office organization and records management<br>3.To develop the organizational skills of students<br>4.To develop Technical skills among the students for designing and developing effective means to manage records , consistency and efficiency of work flow in the administrative section of an organsation<br>5.To develop employability skills among the students |
| | 116 | Optional Group. (B) (Any one of the Following)<br><br>a)Essentials of E-Commerce<br><br>b)Insurance & Transport<br><br>c)Marketing & Salesmanship<br><br>d)Consumer Protection and Business Ethics<br><br>e)Business Environment & Entrepreneurship<br><br>f)Foundation Course in Commerce | a) To create awareness about market and marketing.<br>b) To establish link between commerce/Business and marketing. |

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| | 117 | Any one of the following Language<br><br>Additional English/ Marathi/ Hindi/ Guajarati/ Sindhi/ Persian/ Urdu/ French/ German / Sanskrit / Arabic | 1) To acquaint the students with consumer and consumer movement.<br>2) To make the students aware about consumer rights, duties and mechanism for resolving their disputes.<br>3) To make students aware about role of united nations and consumers' associations in protection of consumers.<br>4) To make the students aware about laws relating to consumers.<br>5) To acquaint the students with role of Business Ethics in various functional areas. | |
| | SEM 2 | | | |
| | 121 | Compulsory English-II | 1. To get introduced to the Indian Tax system<br>2. To learn the basics of Tax procedure<br>3. To study various tax practices<br>To learn the use of computers in the Tax procedure and practices | |
| | 122 | Financial Accounting - II | | |
| | 123 | Business Economics-II | | |
| | 124A<br><br>124B | Business Mathematics and Statistics - II<br>OR<br>Computer Concepts and Application- II | | |
| | 125 | Optional Group. – (A) (Any one of the Following)<br><br>a)Organization Skill Development<br><br>b)Banking and finance<br><br>c)Commercial Geography<br><br>d)Defence Organization and Management in India | | |

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| | | e)Cooperation<br><br>f)Managerial Economics | |
| | 126 | Optional Group. (B) (Any one of the Following)<br><br>a)Essentials of E-Commerce<br><br>b)Insurance & Transport<br><br>c)Marketing & Salesmanship<br><br>d)Consumer Protection and Business Ethics<br><br>e)Business Environment & Entrepreneurship<br><br>f)Foundation Course in Commerce Generic | |
| | 127 | Any one of the following Language-II<br><br>Additional English/ Marathi/ Hindi/ Guajarati/ Sindhi/ Persian/ Urdu/ French/ German / Sanskrit / Arabic | |
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| S.Y.B.Com | 201 | Business Communication | 1. To understand the concept, process and importance of communication.<br>2. To develop awareness regarding new trends in business communication.<br>3. To provide knowledge of various media of communication. 4. To develop business communication skills through the application and exercises. |

| | 202 | Corporate Accounting | 1. To make aware the students about the conceptual aspect of corporate accounting<br>2. To enable the students to develop skills for Computerized Accounting |
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| | | | 3. To enable the students to develop skills about accounting standards |
| | 203 | Business Economics (Macro) | 1. The objective of the course is to familiarize the students the basic concept of Macro Economics and application. 2. To Study the behavior of the economy as a whole. 3. To Study the relationship among broad aggregates. 4. To apply economic reasoning to problems of the economy. |
| | 204 | Business Management | 1. To provide basic knowledge & understanding about business management concept. 2. To provide an understanding about various functions of management. |
| | 205 | Elements of Company Law. | 1) To impart students with the knowledge of fundamentals of Company Law. 2) To update the knowledge of provisions of the Companies Act of 2013. 3) To apprise the students of new concepts involving in company law regime. 4) To acquaint the students with the duties and responsibilities of Key Managerial Personnel. 5) To impart students the provisions and procedures under company law. |
| | 206 – A. | Business Administration Special Paper I | 1. To provide basic knowledge about various forms of business organizations 2. To acquaint the students about business environment and its implications thereon. 3. To aware them with the recent trends in business |
| | 206 – E. | Cost and Works Accounting Special Paper I | To Impart The Knowledge Of : 1. Basic Cost concepts. 2. Elements of cost. 3. Ascertainment of Material and Labour Cost. |
| | | Income Tax: Provisions & Procedure of Income Tax | 1) To gain provisional and procedural knowledge about Income Tax Law in force for relevant accounting year, 2) To provide an Insight in to practical aspects and procedural aspects for filling tax returns for various Assesses. |
| T.Y.B.Com | 301. | Mercantile Law | 1. To acquaint students with the basic concepts, terms & provisions of Mercantile and Business Laws. 2. To develop the awareness among the students regarding these laws affecting business, trade and commerce. |

| | | Advanced Accounting. | 1. To impart the knowledge of various accounting concepts. 2. To instill the knowledge about accounting procedures, methods and techniques. 3. To acquaint them with practical approach to accounts writing by using software package. |
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| | 302. | | |
| | 303 (B) | International Economics | 1) To study the theories of International Trade. 2) To highlight the trends and challenges faced by nations in a challenging global environment. |
| | 304 | Auditing & Taxation | 1. To acquaint themselves about the concept and principles of Auditing, Audit process, Assurance Standards, Tax Audit, and Audit of computerized Systems. 2. To get knowledge about preparation of Audit report. 3. To understand the basic concepts and to acquire knowledge about Computation of Income, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961. |
| | 305 – a. | Business Administration Special Paper II | 1. To acquaint the students with basic concepts & functions of HRD and nature of Marketing functions of a business enterprise. |
| | 305 – e. | Cost and Works Accounting Special Paper II | 1. To provide Knowledge about the concepts and principles application of Overheads 2. To provide also understanding various methods of costing and their applications. |
| | 306 – a. | Business Administration Special Paper III | 1. To acquaint the students with the basic concepts in finance and production functions of a business enterprise. |
| | 306 – e. | Cost and Works Accounting Special Paper III | 1 To impart knowledge regarding costing techniques. 2 To provide training as regards concepts, procedures and legal Provisions of cost audit. |
| | 305-b | Central Excise and Custom Duty | 1. To introduce the Constitutional background and laws relating to Excise Act. 2. To study the scope of Levy, Collection & Exemptions from Excise Duty Goods 3. To understand the various definitions of Central Excise Act. |
| | 306-b | Entrepreneurship Development and Project Report | 1. To create awareness about self-employment and motivate the students to go for self employment. 2. To study entrepreneurship concepts and their applicability. 3. To expose the students to the practical world of business. |

## M.Com Course outcomes

| SR.NO | SUBJECT | LEARNING OUTCOMES |
|---|---|---|
| 1 | Management Accounting Course Code -: 101. | 1. To acquire sound Knowledge of concepts ,methods and techniques of management accounting . 2. To make the students develop competence with their usage in managerial decision making and control. |
| 2 | Strategic Management Course Code -: 102. | 1.To enable students to acquire sound knowledge of concepts, nature and structure of strategic management. |
| 3 | (any one of the following ) GROUP A Advanced Accounting and Taxation Special Paper I. Subject Title -: Advanced Accounting. Course Code -: 103. | 1. To lay a theoretical foundation of Accounting and Accounting Standards. 2. To gain ability to solve problems relating to Company Accounts, Valuations and special types of situations. |
| 4 | Advanced Accounting and Taxation Special Paper II. Subject Title -: Income Tax. Course Code -: 104 | 1.To gain knowledge of the provisions of Income - tax including Rules pertaining there to, relating to he following topics. 2. To develop ability to calculate taxable Income of 'Individual', 'Hindu Undivided Family' and 'Firm' assesses. |
| 5 | GROUP B 105 Information system and E-Commerce Practices | 1.To acquaint the students with the significance of Cost Accounting in Global Competitive environment. 2. To enable students to learn application of different methods of costing in Manufacturing and Service Industry. |
| | 106 Intellectual Property Laws | |

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| | GROUP C<br><br>107 Advanced Cost Accounting<br><br>108 Costing Technique Examinations and Responsibility Accounting | |
| | GROUP D<br>109 Co-operative Movement in India<br><br>110 Rural Development | |
| | GROUP E<br>111 Organized Traders and Markets<br><br>112 Business Environment and Policy | |
| | GROUP F<br>113 Production and Operation Management<br><br>114 Financial Management | |
| | GROUP G<br>115 Legal Framework of Banking<br><br>116 Central Banking | |

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| | GROUP F<br><br>117       Marketing Techniques<br><br>118       Consumer Behaviour | |
| SEM 2 | 201 Financial Analysis and Control/ Principals of Financial Accounting<br><br>202  A.  Industrial Economics B. Business Statistics | |
| | (any  one  of  the following  )<br><br>GROUP A<br><br>203 Specialized Areas in Accounting<br><br>204  Business  Tax Assessment & Planning | |
| | GROUP B<br>205 E- Security & Cyber Laws<br><br>206 Laws Regulating to Copyrights & Design | |
| | GROUP C<br>207 Application Cost Accounting<br><br>208 Cost Control & Cost System | |

| | GROUP D<br><br>209 International Co-operative Movement<br><br>210 Management of Co-operative Business | |
| --- | --- | --- |
| | GROUP E<br>211 Modern Business Practices<br><br>212 Business Environment Analysis | |
| | GROUP F<br>213 Business Ethics & Professional Value<br><br>214 Elements of Knowledge Management | |

## Department of BBA(CA)

| Sub code | Subject name | Learning Outcomes |
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|---|---|---|---|
| SEM1<br>CA-101 | Business Communication | 1) To produce skill oriented human resource.<br>2) •To import practical skills among students.<br>3) •To make industry ready resource.<br>4) •To bring the spirit of entrepreneurship. | |
| CA-101 | Principles of Management | | |
| CA-101 | C Language | | |
| CA-101 | Database Management System | | |
| CA-101 | Statistics | | |
| CA-101 | Computer Laboratory Based on 103 &104 | | |
| CA-101 | Add-On (PPA) | | |
| **Sem2**<br><br>CA201 | Organization Behavior & Human Resource Management | | |
| CA202 | Financial Accounting | 1. To enable the students to acquire sound knowledge of basic concepts of accounting<br>2. To impart basic accounting knowledge<br>3. To impart the knowledge about recording of transactions and preparation of final accounts<br>4. To acquaint the students about accounting software packages | |
| CA203 | Business Mathematics | 1. To develop Analytical / Logical Thinking and Problem Solving capabilities | |
| CA204 | Relational database | Students are able to conceptualize a complex issue into coherent written statement and oral presentation. | |
| CA 205 | Web Technology HTML- | Students are able to define ,analyze and devise solutions for structured and unstructured business problems and issue using cohesive and logical reasoning patterns for evaluating information, materials and data. | |

| | | JS-CSS | |
|---|---|---|---|
| | CA-206 | Computer Laboratory Based on 204 & 205(2 credits each) | |
| | 207 | Add-On (Advance C) | |
| **SY** | 301 | Relational Database Management System | 1. Enables students to understand relational database concepts and transaction management concepts in database system. 2. Enables student to write PL/SQL programs that use: procedure, function, package, cursor and trigger. |

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| 302 | Data Structures Using C | 1) Student will learn the systematic way of solving problem and understand the different methods of organizing large amount of data.<br>2)They will learn to efficiently implemented the different data structures and implement solutions for specific problem. |
| 303 | Operating System Concepts | 1) To understand design issues related to process management and various related algorithms.<br>2) To understand design issues related memory management.<br>3To understand design issues related to file management and various related algorithms. |
| 304 | Business Mathematics | To learn how to develop the and how to implement it in software development. |
| 305 | Software Engineering | 1) Design and implement Data structures and related algorithm.<br>2)Understand several ways of solving the same Problem |
| 401 | OOP's Using C++ | 1) Student acquires an understanding of basic object oriented concept and the issues involved in effective class design.<br>2) They are able to write c program s that use object oriented concept. |
| 402 | Programming Using Visual Basic | To learn properties and events, methods of controls and how to handle events of different<br>controls To understand the use of active controls and how to design VB application<br>To learn connectivity between VB and databases. |
| 403 | Computer Networking | 1. To know about computer network.<br>2. To understand different topologies used in networking<br>3. To learn different types of network.<br>4. To understanding the use of connecting device used in network. |
| 404 | Enterprise resource planning | 1. To know what is ERP.<br>2. To learn different ERP technologies. |
| 405 | Human Resource Planning | To acquaint the students with the Human Resource Management its different functions in an organization and the Human Resource Processes that are concerned with planning, motivating and developing suitable employees for the benefit of the organization. |
| 501 | Java Programming | 1. To learn the basic concept of Java Programming.<br>2. To understand how to use programming in day to day applications. |
| 502 | Web Technology | 1. To know & understand concepts of internet programming.<br>2. To understand how to develop web based applications using |

| | | | PHP. |
|---|---|---|---|
| 503 | Dot Net Programming | | 1. This will introduce visual programming and event driven programming practically.<br>2. This will enhance applications development skill of the student. |
| 504 | Object Oriented Software Engineering | | 1. To Understand concept of system design using UML.<br>2. To understand system development through object oriented techniques. |
| 505 | Software Project 1 | | Projects are a formal evaluation methodology to document student growth, knowledge, skills and attitude across the program of study. |
| 601 | Advance Web Technology | | 1. To know & understand concepts of internet programming.<br>2. To understand the concepts of XML and AJAX.<br>Unit |
| 602 | Advance Java | | 1. To know the concept of Java Programming.<br>2. To understand how to use programming in day to day applications.<br>3. To develop programming logic. |
| 603 | Recent Trend In IT | | 1. To introduce upcoming trends in Information technology.<br>2. To study Eco friendly software development |
| 604 | Software Testing | | 1. To know the concept of software testing.<br>2. To understand how to test bugs in software.<br>3. To develop programming logic. |
| 605 | Software Project 2 | | Projects are a formal evaluation methodology to document student growth, knowledge, skills and attitude across the program of study. |

## BBA Course Outcomes

| Class | subject code | Subject Name | Learning Outcome |
|---|---|---|---|
| FYBBA | **SEM 1**<br>101 | Principles of Management | To understand the basic concepts in commerce,trade & Industry.<br><br>Students will be exposed to modern business world. |
| | 102 | Business Communicatio n Skills | 1.To gain knowledge of media of communication.<br><br>2. To help students to acquiant with application of communication skill in the business world. |
| | 103 | Business Accountin g | 1. To impart basic accounting knowledge. |

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| | 104 | Business Economics – Micro | 1. To apply economic analysis in the formation of business policies.<br><br>2. To use economise reasoning to problems of business. |
| | 105 | Business Mathematics | 1. To understand the concepts and applications of Profit and Loss in Business.<br><br>2. To understand application of matrices in business. |
| | 106 | Business Demography | 1. To develop knowledge base for demographic and environmental factors affecting business.<br><br>2. To make the students aware of environmental problems. |
| | **SEM2**<br>201 | Business Organization and System | 1. To provide a basis of understanding to the students with reference to working of Business Organisation through the process of managament. |
| | 202 | Principles of Marketing | 1. To study and critically analyse the basic concepts in marketing.<br>2. To cater the needs of markting industry. |
| | 203 | Principles of Finance | 1. To providing understanding of nature,importance and structure of finance.<br><br>2. To impart knowledge regarding source of finance for a business. |
| | 204 | Basics of Cost Accounting | 1. To impart the knowledge of basic cost concepts and preparation of cost sheet.<br><br>2. To provide knowledge of important methods and techniques of costing. |
| | 205 | Business Statistics | 1. To understand the concept of population and sample.<br>2. To use frequency distribution to make decision. |
| | 206 | Fundament als of Computers | 1. To know the fundamentals of computers.<br><br>2. To understand how to use computer applications in a day to day application. |
| SYBBA | 301 | Personality Development | 1. To make the students aware about the importance of effective personality. |

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| | | | 2. To understand personality traits in the world of business. |
| | 302 | Business Ethics | 1. To impart knowledge of business ethics to the students.<br>2. To promote ethical practices in business. |
| | 303 | Human Resource Management and Organisational Behaviour | 1. To introduce to the srtudents the functional department of HRM.<br><br>2. To introduce Human Resource processes for the benefit of the organisation. |
| | 304 | Management Accounting | 1. To impart basic knowledge of management Accounting.<br>2. to understand the concept of Budgetary Control in Business. |
| | 305 | Business Economics (Macro) | 1. To study the behaviour of working of the economy as a whole.<br>2. To apply economic reasoning to problems of business. |
| | 306 | IT in Management | 1. To understand the role of IT in Management.<br><br>2. To know the current happenings. |
| | 401 | Production and Operations Management | 1. To understand manufacturing technology and its role in developing business.<br><br>2. To identify the role of operation function. |
| | 402 | Industrial relations and labour Law | 1. To impart the students with the knowledge about complexities between labour and management relationship. |
| | 403 | Business Taxation | 1. To understand basic concepts and defination under the income tax Act 1961.<br><br>2. To develop ability to calculate taxable income of firms, co-operative societies and charitable trusts. |
| | 404 | International Business | 1. To understand the importance of foreign trade of trade for Indian Economy.<br><br>2. To study the impact of international business environment on foreign market operations. |

| | 405 | Management Information System | 1. To understand the concepts of Information System.<br>2. To study the concepts of system analysis and design. |
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| | 406 | Business Exposure | 1. To develop the understanding of the student with a realistic and practical perception of the industry, its layout, its procedures and organisation structure. |
| TYBBA | 501 | Supply Chain and Logistics Management | 1. To introduce the fundamental concepts in material and logistics management.<br><br>2. To familiarize with issues in core functions in material and logistics management. |
| | 502 | Entreprenurship Development | 1. To create entreprenurial awareness among the students.<br>2. To develop knowledge and understanding in creating and managing new venture. |
| | 503 | Business Law | 1. To impart knowledge of various business laws to the student.<br>2. To understand residing applications of business laws in different context. |
| | 504 | Research Methodology | 1. To expose students to the areas of commercial and business research activities. |
| | 505-A | Analysis of Financial Statements | 1. To study various financial statements of corporate organisations.<br><br>2. To make the students acquainted with current financial practices |
| | 505-B | Sales Management | 1. To provide the students with basic understanding of the processes and skills necessary to be successful in personal direct selling. |
| | 506-A | Long term finance | 1. To make the study of long term financing.<br>2. To make the students well acquainted regarding current financial structure. |
| | 506-B | Retail Management | 1. To identify and understand the significance of distribution and retailing in the current business environment.<br>2. To identify the decision areas in distribution and retailing. |

| | 601 | Business Planning and Project Management | 1. To acquaint the students with planning,process in business and familiarise them with the functions and techniques of project management. |
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| | 602 | Event Management | 1. To acquint the students the concepts,issues and various aspects of event management. |
| | 603 | Management Control System | 1. To introduce to the students the fuctions of MCS, its nature, functional areas and techniques. |
| | 604 | E-commerce | 1. To know the concept of electronic commerce.<br><br>2. To know internet marketing techniques. |
| | 605-A | Financial Services | 1. To make the study of various financial services in India.<br>2. To make the student well acquainted regarding financial market. |
| | 605-B | Advertising and Sales Promotions | 1. To provide the students with basic understanding of the processes and skills necessary to be successful in personal direct selling. |
| | 606-A | Project/cases in finance | 1. To analyse and interpret financial statement with the help of techniques like ratio analysis,fund flow and cash flow analysis. |
| | 606-B | Project/cases in Marketing | 1. To understand the application of theory into proactive. |

## Course Outcomes of Physics Dept

| Class | Course / Paper | Learning Outcomes |
|---|---|---|
| F.Y.B.Sc | Sem 1<br>pHY-111Mechanics and Properties of Matter<br><br>PHY-112<br>Physics Principles and Applications<br><br>PHY-113<br>Physics Laboratory-IA1. | ¬To foster scientific attitude, provide in-depth knowledge of scientific and technological concepts of Physics.<br>¬To enrich knowledge through problem solving, minor/major projects, seminars, tutorials, review of research articles/papers, participation in scientific events, study visits, etc.<br>¬To familiarize with recent scientific and technological developments.<br>¬To create foundation for research and development in Physics.<br>¬To help students to learn various experimental and computational tools thereby developinganalytical abilities toaddressreal world problems.<br>¬To train studentsin skills related to research, education, industry, and market.<br>¬To help students to build-up a progressive and successful career in Physics |

| | | Sem2<br>Compulsory<br>Course<br>PHY-121Heat and<br>Thermodynamics<br><br>PHY-122Electricity<br>and Magnetism<br><br><br>PHY-123Physics<br>Laboratory-IB | |
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| **S.Y.B.Sc.** | **Semester - I Paper-I : PH211 :** Mathematical Methods in Physics - I | • Understand the complex algebra useful in physics courses<br>• Understand the concept of partial differentiation.<br>• Understand the role of partial differential equations<br>• Understand vector algebra<br>• Understand the singular points of differential equation |
| | **Semester - I Paper-II : PH212:** Electronics - I | • To apply laws of electrical circuits to different circuits.<br>• To understand the relations in electricity<br>• To understand the properties and working of transistors.<br>• To understand the functions of operational amplifiers. |

| | | • To design circuits using transistors and operational amplifiers.<br>• To understand the Boolean algebra and logic circuits. |
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| | **Semester - II**<br>**Paper – I**<br>**PH221:**<br>Oscillations,<br>Waves and Sound | • To understand the physics and mathematics of oscillations.<br>• To solve the equations of motion for simple harmonic, damped, and forced oscillators and understand their physical content in a variety of applications along with their problems.<br>• To describe oscillatory motion with graphs and equations, and use these descriptions to solve problems of oscillatory motion.<br>• To explain oscillation in terms of energy exchange, giving various examples.<br>• To understand the mathematical description of travelling and standing waves and the one-dimensional classical wave equation and solutions to it.<br>• To explain the Doppler effect, and predict in qualitative terms the frequency change that will occur for a stationary and a moving observer.<br>• To define the decibel scale qualitatively, and give examples of sounds at various levels.<br>• To explain in qualitative terms how frequency, amplitude, and wave shape affect the pitch, intensity, and quality of tones produced by musical instruments |
| | **Semester - II**<br>**Paper – II**<br>**PH222:**<br>OPTICS | • To understand to acquire the basic concepts of wave optics.<br>• To describe how light can constructively and destructively interfere<br>• To explain why a light beam spreads out after passing through an aperture<br>• To summarize the polarization characteristics of electromagnetic waves<br>• To appreciate the operation of many modern optical devices that utilize wave optics<br>•To understand optical phenomena such as polarization, birefringence, interference and diffraction in terms of the wave model and to analyze simple examples of interference and diffraction phenomena.<br>• To be familiar with a range of equipment used in modern optics. |
| | **PH223:**<br>Practical Course | • To use various instruments and equipment.<br>• To design experiments to test a hypothesis and/or determine the value of an unknown quantity.<br>• To investigate the theoretical background to an experiment.<br>• To set up experimental equipment to implement an experimental approach and to analyze data, plot appropriate graphs and reach conclusions from your data analysis.<br>• To work in a group to plan, implement and report on a project/experiment. |
| **T.Y.B.S** | **Semester - III** | • To understand the Cartesian, spherical polar cylindrical and |

| c. | **Paper-I :** **PH331 :** Mathematical Methods in Physics - II | general curvilinear co ordinate system.<br>• To understand the partial differential equation method of separation of variables frobenius method for power series solution.<br>• To understand the special function legendre hermite and Bessel function with its generating function.<br>• To understand the Newtonian relativity , Michelson Morley experiment and concept of special theory of relativity. |
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| | **Semester - III** **Paper-II :** **PH332 :** Solid State Physics | • Understand the properties of metals on the basis of the free and nearly-free electron gas models.<br>• Understand the magnetic properties of condensed matter.<br>• Understand the optical properties of solids and the relation to their electronic properties. |
| | **Semester - III** **Paper-III :** **PH333 :** Classical Mechanics | • Understand the Newtonian mechanics and solve the problem related the motion of system of particles.<br>• Understand central force and their features Kepler's laws of planetary motion.<br>• Understand the scattering of particles with laboratory and center of mass system.<br>• Understand the Hamiltonian formulations.<br>• Understand the passion bracket. |
| | **Semester - III** **Paper-IV :** **PH334 :** Atomic and Molecular Physics | • Understand the atomic structure.<br>• Understand the Pauli's exclusive principle and spin orbit interaction.<br>• Understand the concept of Zeeman effect , Raman effect.<br>• Understand the concept of X rays spectroscopy.<br>• Understand the types of molecular spectroscopy. |
| | **Semester - III** **Paper-V :** **PH335 :** Computational Physics | • To identify modern programming methods and describe the extent and limitations of computational methods in physics.<br>• To identify and describe the characteristics of various numerical methods.<br>• To formulate and computationally solve a selection of problems in physics.<br>• To use the tools, methodologies, language and conventions of physics to test and communicate ideas and explanations. |
| | **Semester - III** **Paper-VI :** **PH336 :** **(Optional)** Renewable Energy Sources | • To describe the various renewable energy sources and the possible conversion paths to a useful form of energy.<br>• To study the different Characteristics of Sun.<br>• To explain the principles that underlie the ability of various natural phenomena to deliver solar energy and to study the technologies that are used to harness the power of solar energy.<br>• To discuss the positive and negative aspects of solar energy in relation to natural and human aspects of the environment.<br>• To describe the working principle of photovoltaic effect in solar cell and to discuss its use as the integration of intermittent |

| | | renewable electricity into the grid system through laboratory exercises and its efficiency. |
| | | • To study the wind energy and its power, energy production and the effect of the blade design. |
| | | • To describe how biomass is used as a source of energy in providing energy and in producing alternative fuels. |
| **Semester - IV** **Paper-I :** **PH341 :** Classical Electrodynamics | | • To study the formulation of Maxwell's equations. |
| | | • To use the Lorentz transformation to transform fields and sources from one inertial frame to another. |
| | | • To illustrate the boundary value problems of electrodynamics. |
| | | • To derive detailed expressions for the nature of electromagnetic power emitted by various sources. |
| | | • To apply Maxwell's equations to solve problems in classical electrodynamics. |
| | | • To understand transport of energy and Poynting vector. |
| **Semester - IV** **Paper-II :** **PH342 :** Quantum Mechanics | | • To study the historical aspects of development of quantum mechanics. |
| | | • To understand and explain the differences between classical and quantum mechanics. |
| | | • To understand the idea of wave function. |
| | | • To understand the uncertainty relations. |
| | | • To solve Schroedinger equation for simple potentials. |
| | | • To study, identify and relate the eigenvalue problems for energy, momentum, angular momentum and central potentials with the idea of spin. |
| **Semester - IV** **Paper-III :** **PH343 :** Thermodynamics and Statistical Physics | | • To identify and describe the statistical nature of concepts and laws in thermodynamics, in particular: entropy, temperature, chemical potential, Free energies, partition functions. |
| | | • To use the statistical physics methods, such as Boltzmann distribution, Gibbs distribution, Fermi-Dirac and Bose-Einstein distributions to solve problems in some physical systems. |
| | | • To apply the concepts and principles of black-body radiation to analyze radiation phenomena in thermodynamic systems. |
| | | • To apply the concepts and laws of thermodynamics to solve problems in thermodynamic systems such as gases, heat engines and refrigerators etc. |
| | | • To analyze phase equilibrium condition and identify types of phase transitions of physical systems. |
| | | • To design, set up, and carry out experiments; analyze data recognizing and accounting for errors; and compare with theoretical predictions. |
| **Semester - IV** **Paper-IV :** **PH343 :** Nuclear Physics | | • To describe the properties and structure of stable nuclei. |
| | | • To understand the properties of the nuclear force properties and their theoretical descriptions. |
| | | • To the constraints on a quantum model of the nucleus. |

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| | | • To understand the shell model and be able to explain radioactive processes.<br>• To study beta decays and its properties for nuclear reactions.<br>• To demonstrate quantitative problem solving skills in all the topics covered. |
| | **Semester - IV Paper-V : PH345 :** Electronics - II | • To understand the basic working principles of different semiconductor diodes.<br>• To classify the different types of amplifiers with reference to their mode of operation, efficiency.<br>• To study the basic working principle and characteristics of JFETs, MOSFETs and their applications.<br>• To study the different applications of OPAMP and Timer circuits with illustrative problems.<br>• To study the special ICs designed for regulator power supply and their characteristics.<br>• To the different combinational and sequential logic circuits and their applications. |
| | **Semester - IV Paper-VI : PH346 : Optional** Microcontrollers | • To understand the fundamentals of microcontroller systems .<br>• To study the architecture of Microcontroller 8051.<br>• To study the programming model, working principle of assembler; assembler directives.<br>• To use instruction set of assembly languages of 8051 microcontroller in developing programs.<br>• To interface to external memory, use of stack in subroutine calls and interrupt services, access of built-in I/O ports, timers and counters.<br>• To study I/O Interfacing of the different applications like keyboard scanning, display multiplexing, LCD controllers, interface of IC's analogue and digital conversion ( ADC / DAC), serial interface standards RS-232 in communication systems. |
| | **PH347:** Laboratory Course -I | • To design experiments in General Physics to test a hypothesis and/or to determine the value of an unknown quantity.<br>• To investigate the theoretical background to an experiment.<br>• To set up experimental equipment to implement an experimental approach and to analyze data, plot appropriate graphs and reach conclusions from your data analysis.<br>• To work in a group to plan, implement and report on a project/experiment. |
| | **PH348:** Laboratory Course -II | • To design experiments in Applied Physics to test a hypothesis and/or determine the value of an unknown quantity.<br>• To set up experimental equipment to implement an experimental approach and to analyze data, plot appropriate graphs and reach conclusions from your data analysis.<br>• To formulate and computationally solve a selection of problems |

| | | in physics using C programming. |
| | | • To demonstrate the interfacing techniques for General Physics experiments using Phoenix / Pinnacle Microcontroller Software. |
| | **PH349:** Laboratory Course -III (Project Work) | • To develop a set of skills pertaining to the project work with necessary involvement of student under the proper guidance. |
| | | • To develop a clear and strong link with the principles of basic physics and/or their applications through project work. |
| | | • To understand the theme chosen should be such that it promotes better understanding of physics concepts and brings out the creativity by that student. |
| | | • To evaluate the project work periodically with experimental work and data/observations. |
| | | • To present the final report for the viva voce with necessary references and which is clearly referred to and acknowledged by the guide. |
| | | • To face the viva voce at least for 30 minutes with proper presentation of experimental data/observations, results and conclusion. |

## Course Outcomes of Chemistry Dept

## B.Sc (Chemistry)

| S.N. | **Subject** | Learning Outcome |
|---|---|---|
| 1 | Theory CH-101 : Physical Chemistry ( 2 credit , 36L) Theory CH-102 :Organic Chemistry (2 credit, 36L) PracticalCH-103 : Chemistry Practical –I (1.5 Credit, 46.8L)II TheoryCH-201 :Inorganic Chemistry ( 2 credit , 36L) TheoryCH-202 :Organic Chemistry (2 credit, 36L) PracticalCH-203 : | To know the meaning of terms catalyst, catalysis, positive catalysis and negative Catalysis. Mathematical background required for derivations & problem solving. Understand the concept of oxidation, reduction & mole concept. |

| | Chemistry Practical –II (1.5 Credit, 46.8L) | |
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| 4 | PAPER – II | Structure, nomenclature, Preparation & reactions of organic |

| | Organic & Inorganic Chemistry ( term-II) | compound.<br>To write electronic configuration of any element. |
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| 5 | Chemistry Practical | Basic principles in qualitative analysis<br>Characteristic tests for different functional groups |
| 6 | CH-211 Physical and Analytical Chemistry | Concepts of kinetics, terms used, rate laws, types of order.<br>To solve problem.<br>Understand about Photochemistry.<br>To introduce basics of Analytical Chemistry. |
| 7 | CH-212 Organic & Inorganic Chemistry | To study chiral molecules. Identify chiral centre in the given organic compound.<br>Define & classify heterocyclic compound.<br>To differentiate between ores & minerals |
| 8 | CH-221 Physical and Analytical Chemistry | To Know free energy concepts types & its variations.<br>To know different to express concentrations of the solutions. |
| 9 | CH-222 Organic & Inorganic Chemistry | To understand the concepts of different reagents used in the one type of conversion.<br>To know different biomolecules.<br>To understand multiple bonding due to carbonyl ligands. |
| 10 | CH-223 Practical Course in Chemistry | Student should know -<br>Importance of Analytical chemistry.<br>Basic principles in qualitative analysis & Group reagent and precipitating agent. |
| 11 | CH-331: Physical Chemistry | Students are expected to know- Expression for rate constant k for third order reaction, Experimental determination of conductance. Rotational / Microwave spectroscopy & Derivation of phase rule. |
| 12 | CH-332: Inorganic Chemistry | A student should Know the meaning of various terms involved in coordination chemistry.<br>To study the coordination compound |
| 13 | CH-333: Organic Chemistry | Students should know –<br>Definition and types of organic acid and base. To draw different types of disubstituted cyclohexane in Chair form. Different types of carbon-carbon unsaturated compounds |
| 14 | CH-334: Analytical Chemistry | Student should know,<br>Principles of common ion effect and solubility product. Methods of thermo gravimetric analysis. Principles of Spectrophotometric analysis and properties of electromagnetic radiations |
| 15 | CH-335: Industrial Chemistry | Student should know :<br>Knowledge of various industrial aspects.<br>Fuels and eco-friendly fuels, use of solar energy etc. |

| | | Learn importance of various industries. |
|---|---|---|
| 16 | CH-336-E<br>Agriculture<br>Chemistry | Students should know –<br>Know the role of agriculture chemistry and its potential. Understand basic concept of soil, properties of soil & its classification on the basis of pH. Have the knowledge of various pesticides, insecticides, fungicides and herbicides |
| 17 | CH-341:<br>Physical Chemistry | Students are expected to know- Construction, representation, working and limitation of various Electrodes. Nuclear energy & its application. |
| 18 | CH-342:<br>Inorganic<br>Chemistry | A student should know:<br>The meaning of term f-block elements, Inner transition elements, lanthanides, actinides. The meaning of metal & semiconductor. Know the nature of solids. |
| 19 | CH-343:<br>Organic Chemistry | Students should know –<br>Definition and formation of carbanions. Meaning of terms Disconnection, Synthons, Synthetic equivalence, Functional Group, Interconversion, Target Molecule. |
| 20 | CH-344:<br>Analytical<br>Chemistry | A student should know,<br>i) Principles of solvent extraction, chromatographic methods, GSC and GLC analysis, electrophoresis , HPLC etc. |
| 21 | CH-345:<br>Industrial<br>Chemistry | Students should know : Basics of polymer, Importance of sugar industry, Basic requirement of fermentation process, Students should know about various cosmetics. |
| 22 | CH-346-E<br>Dairy Chemistry | Students should know : Knowing importance of the subject from the point of rural economy. Knowing the composition of milk, its food & nutritive value. Knowing various milk products, their composition, manufacture and uses. |
| 23 | CH-347: Physical<br>Chemistry<br>Practicals | A student should know -<br>To understand the concept of chemical kinetics, To understand the applications of Conductometer, Potentiometer, pH-meter, Colorimeter. |
| 24 | CH-348: Inorganic<br>Chemistry<br>Practicals | A student should know -<br>i)      Basic principles in qualitative analysis<br>ii)     Separation for basic radicals |
| 25 | CH-349: Organic<br>Chemistry<br>Practicals | Perform the complete chemical analysis of the given organic compound and should be able<br>to recognize the type of compound.<br>Follow the progress of the reaction by using TLC technique.<br>Acquire skill of crystallization, record correct m. p. / b. p. |

# M.Sc. (Organic Chemistry)

| S.N. | Subject | Learning Outcome |
|------|---------|------------------|
| 1. | CCTP-1<br>CHP-110<br>Physical Chemistry-I<br>(Fundamentals of Physical Chemistry)<br><br>CCTP-2<br>CHI-130<br>Inorganic Chemistry-I(Molecular Symmetry and Chemistry of Main Group Elements)<br><br>CCTP-3CHO-150Organic Chemistry-I(Basic Organic Chemistry)<br><br>CBOP-1 CHG-190<br><br>Section-I: General Chemistry-I,<br> Theory Course (Any one option)<br><br>Elective Option-A: Introduction to Solid State of Matte<br>Elective Option-B: Mathematics for Chemists<br><br>Elective Option-C: Introduction to Chemical Biology-I)<br><br>Section-II: General Chemistry Practical (Any one)<br>Elective Option-A :Inorganic Chemistry-Material Analysis, Synthesis and Applications<br><br>Elective Option-B :<br><br>Chemical BiologyPractical-<br><br>CCPP-1<br>CHP-107<br>Basic Practical Chemistry-<br><br>Semester-II<br><br>CCTP-4 | To understand the concepts of thermodynamics.<br>To understand the rate and mechanism of the reaction.<br>To solving the problems. |

| | CHP-210<br>Physical Chemistry -<br>II(Molecular Spectroscopy<br>and Nuclear Chemistry)<br><br>CCTP-5<br>CHI-230<br>Inorganic Chemistry-<br>II(Coordination and<br>Bioinorganic Chemistry)<br><br>CCTP-6<br>CHO-250Organic<br><br>Chemistry-II<br>(Photochemistry,<br>Pericyclic and Organic<br>spectroscopy)<br>CBOP-2<br>CHG-290<br><br>Section-I: General<br>Chemistry-II,<br>Theory (Any one option)<br><br>Elective Option-A:<br>Material Characterization<br>Technique<br>Elective Option-B:<br>Organometallic and<br>Inorganic Reaction<br>Mechanism<br><br>Elective<br>Option-C: Introduction to<br>Chemical Biology-II<br><br>Section-II: General<br>Chemistry, Practical (Any<br>one option)<br>Elective Option-A:<br>Electroanalytical<br>Techniques of Analysis<br><br>Elective Option-B:<br>Chemical<br>BiologyPractical-II<br>CCPP-2<br>CHP-227<br>Basic Practical Chemistry-<br>II | |

## Course Outcomes of Botany Dept

| S.N | Class | Subject | Learning Outcomes |
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|---|---|---|---|
| 1. | F. Y. B. Sc. | Sem 1<br>Compulsory Course<br>BO111Plant life and utilization<br><br>BO 112Plant morphology and Anatomy<br><br>BO 113Practical based on BO 111 & BO 1121<br><br>Sem2<br>Compulsory Course<br><br><br>BO121Plant life and utilization<br><br>BO122Principles of plant science<br><br>BO123<br>Practical based on BO 121 & BO 122 | To know the plant diversity<br>To know the variation of plant life at all levels of biological organizations |

| S.N | | | Learning Outcomes |
|---|---|---|---|
| 3. | | S. Y. B. Sc. | Sem. – I<br>Paper – I<br>Taxonomy of Angiosperms Plant Community | To develop skills of correct Identification of plant species<br>To insite basic principles of Taxonomy<br>To understand the evolutionary relationship between plant species<br>To inculcate habit of understanding of surrounding environment |
| 4. | | S. Y. B. Sc. | Sem. – I<br>Paper – II<br> Plant Physiology | To understand physiological processes in plants<br>To know various functions performed by plants |
| 5. | | S. Y. B. Sc. | Sem. – II<br>Paper – I<br>Structural botany | To know internal structure of plants<br>To study different types of internal organization of plant body<br>To know the various developmental stages in plants |
| 6. | | S. Y. B. Sc. | Sem. – II<br>Paper – II<br>Plant Biotechnology | To know biotechnological process, use of various plant resources at commercial level |

## Course Outcomes of Zoology Dept

| S.N | | Subject | Learning Outcomes |
|---|---|---|---|
| 1. | F.Y.B.Sc | SEMESTER I<br>ZO-111 Animal Diversity I<br>ZO-112 Animal Ecology<br>ZO-113 Zoology Practical Paper<br><br><br>SEMESTER II<br>ZO-121 Animal Diversity II<br>ZO-122 Cell Biology<br>ZO-123 Zoology Practical Paper | To study rules for taxonomy<br>To study classification of non chordates and chordates with examples |
| 2. | Course 2: | Cell Biology | To study cell and its organelles<br>To study cell cycle and cell division |
| 3. | Course 3: | Genetics | To study genes and its importance in heredity and variation<br>To study application of genetics for betterment of species |
| 4. | Course 4: | Applied Zoology | To study useful organisms and their benefits to mankind |

| 5. | **Course 5:** | **Agriculture pests and their control** | To study Agriculture pests with respect to the economic loses they cause and their preventive and control measures. |
|----|---------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|

| Course Outcomes of Microbiology Dept | | |
|---|---|---|
| **Class** | **Subject** | **Learning Outcomes** |
| | FYBSC<br><br>SEM1<br>MB 111 PAPER I<br>Introduction to Microbial World<br><br>MB 112 II<br>Basic Techniques in Microbiology<br><br>MB113III<br><br>Practical Course based on theory paper I and II | Microbiology is a broad discipline of biology which encompasses five groups of microorganisms i.e. bacteria, protozoa, algae, fungi, viruses. It studies their interaction with theirenvironments as well as how these organisms are harnessed in human endeavour and their impact on society. The study has its extensions in various other conventional and advanced fields of biology by employing microbes as study models. Since inception of microbiology as a branch of science, it has remained an ever-expandingfield of active research, broadly categorized as pure and applied science. |
| | SEM2<br><br>MB121I<br>Bacterial Cell and Biochemistry<br><br>MB122 II Microbial cultivation and growth<br><br>MB123 III<br>Practical Course based on theory paper I and II | Microorganisms were discovered over three fifty years ago and it is thought that a huge diversity yet remains to be explored.Knowledge of different aspects of Microbiology has become crucial and indispensable to the society. Study of microbes has become an integral part of education and human progress. There is a continuous demand for microbiologists as work force –education, industry and research. Career opportunities for the graduate students are available in industry and research equally.. |
| **S.Y.B.SC.** | Sem.-I<br>Theory Paper-I<br>Bacterial systematics and physiology | To study the microbial physiology with different instruments.<br>To study bacterial physiology and different biochemical pathways.<br>To study the enzyme and effect of environmental parameters. |
| | Sem.-I<br>Theory Paper-II<br>Industrial and soil microbiology | To study Industrial microbiology and soil microbiology. |
| | Sem.-II<br>Theory Paper-I<br>Bacterial Genetics | To understanding DNA,RNA,Replication,Expression,Mutations and Reversions.<br>To study Plasmid Genetics. |

| | Sem.-II<br>Theory Paper-II<br>Air and Water Microbiology | To study the air microbiology.<br>To study the water microbiology. |
|---|---|---|
| | Practical course based on Theory Papar-I and Theory Paper-II (Both Semisters) | To study Growth curve,Cell dimentions, Test of Potability of water.<br>To study biochemical characterization and identification of bacteria.<br>To study air flora and primary screening of industrially important microorganisms. |
| **T.Y.B.Sc.** | Sem.-III<br>Theory Paper-I<br>Medical Microbiology-I | To study the infectious diseases of different human systems.<br>To study the epidemiology. |

| | | To study the different bacterial pathogens. |
|---|---|---|
| | Sem.-III<br>Theory Paper-II<br>Genetics and Molecular Biology-I | To study gene linkage , crossover and DNA replication.<br>To study the Transcription and Translation in Prokaryotes and Eukaryotes. |
| | Sem.-III<br>Theory Paper-III<br>Enzymology | To study enzyme, Assays and enzyme purification.<br>To study enzyme kinetics, molecular regulation and Immobilization of enzymes<br>. |
| | Sem.-III<br>Theory Paper-IV<br>Immunology-I | To study Immunity, Organs of Immune system, Innate Immunity, Antigen, Immunoglobulin.<br>To study Adaptive Immunity and Transplantation and Immunity. |
| | Sem.-III<br>Theory Paper-V<br>Fermentation Technology-I | To study strain improvement, media optimization, sterilization of media.<br>To study scale up and scale down and principles and methods of downstream processing.<br>To study Quality assurance (QA) of fermentation product and fermentation economics. |
| | Sem.-III<br>Theory Paper-VI<br>Food and Dairy Microbiology | To study dairy development in India, milk chemistry and constituents and microbiology of milk<br>To study preservation of milk by pasteurization and storage and microbial analysis of milk.<br>To study classification of food based on stability, food spoilage and food preservation. |
| | Sem.-IV<br>Theory Paper-I<br>Medical Microbiology-II | To study chemotherapy .<br>To study the different viral pathogens.<br>To study the different parasites and fungal pathogens. |
| | Sem.-IV<br>Theory Paper-II<br>Genetics and Molecular Biology-I | To study Gene transfer by Transformation, transduction and conjugation.<br>To study DNA Damage repair ,Recombination and Tools of recombination. |
| | Sem.-IV<br>Theory Paper-III<br>Metabolism | To study membrane transport, bioenergetics, biosynthesis and degradation.<br>To study bacterial photosynthesis. |
| | Sem.-IV<br>Theory Paper-IV<br>Immunology-I | To study Major Histocompatibility complex, cytokines, antigen-antibody Interaction ,Immunohematology.<br>To study Public health immunology, hypersensitivity. |
| | Sem.-IV<br>Theory Paper-V<br>Fermentation Technology-I | To study the solid state fermentation and submerged fermentation<br>To study large scale production of primary and secondary |

| | | metabolites, enzymes,,steroids,milk products, vaccines, immunesera and biomass based products. |
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| | Sem.-IV<br>Theory Paper-VI<br>Agricultural and Environmental microbiology | To study the effect of microbes on agriculture and environment. |
| | Practical course –I<br>Applied Microbiology | To study laboratory scale fermentation and tests for milk and dairy products.<br>To study Isolation and identification of different plant pathogens , pesticide degraders lactic cultures.<br>To study Quality assurance tests.<br>To study biosynthesis of nanoparticles |
| | Practical course –II<br>Biochemistry and Molecular biology | To study random sugar estimation and lipid profiling<br>To study enzyme kinetics<br>To study the protocols for plasmid isolation DNA isolation and transformation.<br>To study bacteriophages. |
| | Practical course –III<br>Diagnostic Microbiology and Immunology | To study immune hematology, agglutination test, immune precipitation and hemogram<br>To study clinical microbiology<br>To study how to prepare survey for epidemiology. |
| Class | Course | Outcome |
| M.Sc I | Core Compulsory<br><br>Theory Papers<br><br>MB501Microbial Systematics<br><br>MB502<br>Quantitative Biology<br><br>MB503<br>Biochemistry and Metabolism<br><br>Optional Papers Elective/Departmental Course<br>MBTE11Fungal Systematics and Extremophiles<br><br>MBPE11<br>Practicals Based on Fungal Systematics and | The main theme of teaching microbiology course is the application of basic principles of life sciences to develop into technology. Modern biology combines the principles of chemistry and biological sciences (molecular and cellular biology, genetics, and immunology) with technological disciplines (engineering, computer science) to produce goods and services and for environmental management. Tools of molecular biology play an important role in preparation of an engineered clone, a recombinant or a geneticallymanipulated organism (GMO). The objective of the Master's Programme in Microbiology is to equip the students with updated knowledge of prokaryotic and eukaryotic cellular processes, microbial taxonomy, biostatistics, molecular biophysics, molecular biology and biochemistry. |

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| Extremophiles<br>OR<br>MBTE12<br>Experimental Design and<br>Quantitative approaches<br>for Biologist<br><br>MBPE12<br>Practical's based on<br>Experimental Design and<br>Quantitative approaches<br>for Biologist<br><br>OR<br><br>MBTE13Microbial<br>communication, Membrane<br>transport and signal<br>transduction<br><br>MBPE13Practicals Based<br>on Microbial<br>communication, Membrane<br>transport and signal<br>transduction<br><br>Core Compulsory<br> Practical paper<br>MBCP1<br>Biochemical<br>Techniques(Practical based<br>on compulsory theory<br>credits)<br><br><br>Course Structure: Semester<br>IICourse<br><br> Compulsory Theory<br>PapersMB601Instrumentati<br>on and Molecular<br>Biophysics<br>MB602<br>Molecular Biology<br><br>MB603<br>Enzymology,<br>Bioenergetics and<br>Metabolism<br><br>Optional | |

| | PapersElective/Departmental Course MBTE21Bioinformatics and Bio-nanotechnology | |
| --- | --- | --- |
| | MBPE21 Practicals based on Bioinformatics and Bio-nanotechnology | |
| | MBTE22 Molecular Biology tools and applications | |
| | MBPE22Practical based on Molecular Biology tools and applications | |
| | MBTE23 Nitrogen Metabolism, respiration and Photosynthesis | |
| | MBPE23 Practicals based on Nitrogen Metabolism, respiration and Photosynthesis | |
| | Core Compulsory Practical paper | |
| | MBCP2 | |
| | Molecular biology, enzymology and instrumentation Techniques(Practical based on compulsory theory ) | |
| Class | Course | Outcome |
| M.Sc II | MB701 Immunology | To study history of immunology and immune response to various diseases like Cancer. To study immunological regulation and immunological disorders |
| | MB 702 Molecular Biology I | To study the latest techniques and online tools in molecular biology to study the gene with respect to structure, sequence and its role in various pathways. To study protein synthesis and post transcriptional and translational modifications in Prokaryotes and Eukaryotes . |

| | MB 703 Industrial Waste Water Treatment | To study waste water management and waste water treatment process with respect to different industries. To study environmental impact assessment of waste water. |
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| | MB 711 Practical: Immunology, Pharmaceutical microbiology and environmental microbiology. | To study antigen antibody reactions, agglutination and precipitation. To study various parameters of waste water treatment process. To study antimicrobial effect of medicinal plants. |
| | MB 712 Practical: Molecular biology I and II and Microbial technology | To study Plasmids ,transformation and its isolation protocol. To study different methods of characterization of bacteria and different online tools in molecular biology To study immobilization, bioemulsifiers and |

| | | bioabsorption of dye. |
|---|---|---|
| | MB 801 Pharmaceutical and medical microbiology | To study drug discovery and drug delivery system. To study quality assurance and validation in pharmaceutical industry. |
| | MB802 Molecular Biology II | To study different recombinant DNA technology, genetically modified animals and plants. To study genomics and gene annotation |
| | MB 803 Microbial technology | To study different bioreactor designs and operations To study various microbial processes and IPR. To study Validation Process in fermentation industry. |
| | MB811 Dessertation I | To develop research attitude in students To develop scientific writing skills. |

## Course Outcomes of Electronics Dept

| Sr. No. | Subject | Learning outcomes |
|---|---|---|
| 1 | SEM1 EL-111IBasics of Applied Electronics<br><br>EL-112 II Electronic Devices and Circuits<br><br>EL-113IIIElectronics Lab IA<br><br>SEM2 EL-121 I Fundamentals of Digital Electronics<br><br>EL-122 II Analog and Digital device Applications<br><br>EL-123IIIElectronics Lab IB | • To study the basic circuit components and different symbols and Electrical circuits.<br>• Students will learn Circuit Theorems.<br>• To study characteristics features of semiconductor devices.<br>• To understand basics of Operational amplifiers. |
| 3 | Digital system hardware CS-21321 | • to study application of logic gates.<br>• to study digital circuit designing using k-map.<br>• students will understand basics of k-map<br>• to understand fundamentals of multicore technology.<br>• students design digital systems. |

| 4 | Analog systems CS-21322 | • To understand basics of Analog Electronics. <br> • Study of different types of sensors and Transducers. <br> • To understand different types of signal conditioning circuits. <br> • To learn data conversion techniques. |
|---|---|---|

| | | • To apply the knowledge of analog systems in different applications. |
|---|---|---|
| 5 | 8051 Architecture, Interfacing and Programming CS-22321 | • Students acquire the knowledge of 8051 Microcontroller.<br>• To study Programming and Interfacing techniques of 8051.<br>• To study designing different application circuits using 8051.<br>• To introduce basic concepts of advance Microcontroller. |
| 6 | Communication Principles CS-22322 | • To understand basics communication systems.<br>• To study Modulation, Demodulation and Multiplexing of signals.<br>• Students will learn Digital communication systems.<br>• To study Wireless Communication. |

## Mathematics Course Outcomes

| SR.NO. | SUBJECT | LEARNING OUTCOMES |
|---|---|---|
| 1. | Semester –I<br>Paper I<br>MT-111 Algebra<br><br>Paper II<br>MT-112 Calculus –I<br><br>Paper III<br>MT-113Mathematics Practical<br><br><br>Semester –II<br>MT-121<br> Analytical Geometry<br><br>MT-122<br> Calculus –II<br><br>MT-123<br><br>Mathematics Practical | 1. Student will understand idea of permutation and combination.<br>2. Student will understand basic proof envolving sets and function.<br>3. Student will understand various type of tree and method for traversing tree.<br>4. Student will understand boolean algebra and truth table.<br>5. Student improve their logic |

| 2. | (MTC-102)ALGEBRA AND CALCULUS | i. apply rule of limit to calculate limits. <br> ii. student will understand find derivative of function. <br> iii. student will understand the fundamental theorem to calculate evaluate definite integral and to differentiate funtion definite as a integral . <br> iv. use the derivative to find tangent line to curves . |
|---|---|---|
| 3. | (MTC-103) MATHEMATICS PRACTICAL COURSE | i. to better appritiate the variety of subjects m1 and m2. <br> ii. the course intents to help the students think logically and critically about mathematical information. <br> iii. we introduced to some ecxiting idea in mathematics that come from a wide variety to |

| | | deciplines along with real world applications. |
|---|---|---|
| 4. | (MTC-211) APPLIED ALGEBRA | i. present basic concept of matrices and matrix algebra . <br> ii.   present basic concept of vector space . <br> iii. present concept of linear transformation . <br> iv. present method of computing and using eigen value and eigen vector. |
| 5. | (MTC-212) NUMERICAL ANALYSIS | i.  develop appropriate numerical method to approximate the function . <br> ii. develop appropriate numerical method to solve a differential equation. <br> iii. derive appropriate numeriacal method to evalute a derivative at a value. <br> iv. performe an error analysis for various numerical  method. <br> v . student apply these methods in various field . |
| 6. | (MTC-221) COMPUTATIONAL GEOMETRY | i.  an introductory course to computatinal geometry and it's application. <br> ii. we discuss techniques neede in designing and analysing efficient algorithm for problem in geometry. <br> iii.  we develop idea geometric data structur e and motion  planning. <br> iv. student use these ideas in animation . |
| 7. | (MTC-222) OPERATION RESEARCH | i.  identify and develope operational research models from the verbal descreption of the real system. <br> ii. understand the mathematical tools that are neede to solve optimization problem. <br> iii. develop a report that decsribe the model and solving techniques. <br> iv. student use these ideas in various managerical problem  . |
| 8. | (MTC-223) PRACTICLE | i. to solve mathematical problem by using c-programme. <br> ii. represent geometrical diagrams using scilab. <br> iii. student can solve any methematical problems by using scilab and c programing . <br> iv student can interact with mathmatics and computer . |
| 9. | STATISTICAL METHODS-I | i.the fundamentle perpose of statistics is to identify out a sample, results that are valid for entire population. <br> ii. descriptive statistics allow an easy introduction to the theory to the probablity . <br> iii.  at a prilimanary stage the sample should be |

| | | simplified through it's representation in graphs and charts as presise as possible without loosing to much information iv. to devloed logic of the student. v student can handle statistical models . |
|---|---|---|
| 10. | STATISTICAL METHODS-II | i. student will understand idea of permutation , combination and various counting . ii. to motivate the use of statistical infrances in practicle data analysis . iii. to study elementary cocepts and techniques in statistical methodology. iv. to provide a introduction to subsequent statics courses . |
| 11. | STATISTICS PRACTICLE | i.the various design probablities for a reseach project and the important cosideration for obsevasitional studies and randomised the trials ii. the types of the data generated in research studies . iii. perticulers methods are appropriate and how to interpriate theire resuls. iv. the focus is mainly on interpritation and understanding appropriate methodlogy. |

## Course Outcomes of Computer science Dept

| S.N. | Subject | Learning Outcomes |
|---|---|---|
| 1. | F.Y.B.Sc Sem 1 CS-101: Problem Solving Using Computers and 'C' Programming | • To develop problem solving abilities usinga computer. • To build the necessary skill set and analytical abilities for developing computer based solutions for real life problems. • To train students in professional skills related to Software Industry. • To prepare necessary knowledge base for researchand development in Computer Science. • To help students build-up a successful career in Computer Science and to produce entrepreneurs who can innovate and develop software products. |
| 2. | CS-112 Database Management Systems | • To understand data processing using computers • To teach basic organization of data using files • To understand creations, manipulation and querying of data in databases |
| 3. | CS-113 Practical course based on CS101and | • Students will learn the systematic way of solving problem and understand the different methods of organizing large amount of data. • They will learn to efficiently implement the different data structures and implement solutions for specific problems |

| 4. | Sem 2 CC-II* Mathematics –I, II and III | |
|---|---|---|
| | CC-III*Electronics –I,II and III | |
| | CC-IV*Statistics –I, II and III | |
| | SEM2 CC-V CS-121Advanced 'C'Programming | |
| | CS-122Relational Database Management Systems | |
| | CS-123Practical course based on CS201and CS202 | |
| | CC-VI* Mathematics –I,II and III | |
| | CC-VII* Electronics –I, II and III | |
| | CC-VIII* Statistics –I,II and III | |

| 5. | SY BSC CS-212:Relational Database Management System | • To teach fundamental concepts of RDBMS (PL/PgSQL)<br>• To teach principles of databases<br>• To teach database management operations<br>• To teach data security and its importance<br>• To teach client server architecture |
|---|---|---|
| 6. | CS-222: Software Engineering | • Design and implement Data structures and related algorithms<br>• Understand several ways of solving the same problem. |
| 7. | CS-331: System Programming | • To understand the design structure of a simple editor.<br>• To understand the design structure of Assembler and macro processor for an hypothetical simulated computer.<br>• To understand the working of linkers and loaders and other development utilities.<br>• To understand Complexity of Operating system as a software. |
| 8. | CS-332: Theoretical Computer Science | • To have an understanding of finite state and pushdown automata.<br>• To have a knowledge of regular languages and context free languages.<br>• To know the relation between regular language, context free language and corresponding recognizers.<br>• To study the Turing machine and classes of problems. |
| 9. | CS-333: Computer Networks-I | • Understand different types of networks, various topologies and application of networks based on different parameters.<br>• Understand types of addresses, data communication.<br>• Understand the concept of networking models, protocols, functionality of each layer used for data communication.<br>• Learn basic networking hardware and tools. |
| 10. | CS-334: Internet Programming I | • Learn Core-PHP, Server Side Scripting Language<br>• Learn PHP-Database handling. |
| 11. | CS-335: Programming in Java-I | • To learn Object Oriented Programming language<br>• To handle abnormal termination of a program using exception handling<br>• To create flat files<br>• To design User Interface using Swing and AWT |
| 12. | CS-336: Object Oriented Software Engineering | • Understanding importance of Object Orientation in Software engineering<br>• Understand the components of Unified Modeling Language<br>• Understand techniques and diagrams related to structural modeling<br>• Understand techniques and diagrams related to |

| | | behavioral modeling<br>• Understand techniques of Object Oriented analysis, design and testing |
|---|---|---|
| 13. | CS-341: Operating System | • To understand design issues related to process management and various related algorithms<br>• To understand design issues related to memory management and various related algorithms<br>• To understand design issues related to File management and various related algorithms |
| 14. | CS-342: Compiler Construction | • To understand design issues of a lexical analyzer and use of Lex tool<br>• To understand design issues of a parser and use of Yacc tool<br>• To understand issues related to memory allocation<br>• To understand and design code generation schemes |
| 15. | CS-343: Computer Networks-II | • Basic networking concepts.<br>• Understand wired and wireless networks, its types, functionality of layer.<br>• Understand importance of network security and cryptography. |
| 16. | CS-344: Internet Programming II | • Learn different technologies used at client Side Scripting Language<br>• Learn XML,CSS and XML parsers.<br>• One PHP framework for effective design of web application.<br>• Learn JavaScript to program the behavior of web pages.<br>• Learn AJAX to make our application more dynamic. |
| 17. | CS-345: Programming in Java-II | • To learn database programming using Java<br>• To study web development concept using Servlet and JSP<br>• To develop a game application using multithreading<br>• To learn socket programming concept |
| 18. | CS-346: Computer Graphics | • To study how graphics objects are represented in Computer<br>• To study how graphics system in a computer supports presentation of graphics information<br>• To study how interaction is handled in a graphics system<br>• To study how to manipulate graphics object by applying different transformations<br>• To provide the programmer's perspective of working of computer graphics |

# MCA course outcomes

| S.N. | Subject | Outcomes |
|------|---------|----------|
| 1 | CS-101 Principles of Programming Languages | Think about programming languages analytically |
| 2 | CS-102 Advanced Networking | Implementation of Networks with Cryptography |
| 3 | CS-103 Distributed Database Concepts | The principles and foundations of distributed databases |
| 4 | CS-104 Design and Analysis of Algorithms | Understand different design strategies, Learn a variety of useful algorithms |
| 5 | CS-105 Network Programming | Understand Socket Programming |
| 6 | CS-201 Digital Image Processing | Fundamental methods for processing image from acquisition till recognition |
| 7 | CS-202 Advanced Operating Systems | Theory and practical applications of AOS Concepts using Unix/Linux and Windows |
| 8 | CS-203 Data Mining and Data Warehousing | Techniques to abstract data from different resources |
| 9 | CS-204 Project | Developing software |
| 10 | CS-205 Programming with DOT NET | Understand the DOTNET framework, C# language features and Web development using ASP.NET |
| 11 | CS-206 Artificial Intelligence | Understand and gain the knowledge of AI concepts using programming language PROLOG |
| 12 | CS-301 Software Metrics & Project Management | Learn to select and apply project management techniques for software Development |
| 13 | CS-302 Mobile Computing | Understand the GSM architecture and the issues relating to Wireless applications |
| 14 | CS-303 Soft Computing | understand the concepts of how an intelligent system work and its brief development process |
| 15 | CS-304 Project | Developing software |
| 16 | CS-305 Web Services | Understand implementation model for SOA and cloud computing as a web service |
| 17 | CS-308 Business Intelligence | Understand the role of BI in enterprise performance management and decision support, (OLAP) concepts, Learn data analysis and reporting using an available BI software |
| 18 | CS-401 Industrial Training | Developing software as an Intern in IT Company |