

Shivaji Mahavidyalaya Gadchiroli

Program Outcomes for Bachelor of Arts(B. A.)

PO: 1 : The program makes learners competent to be the responsible citizen.

PO: 2: The students of the program will be able enough to think and react over various issues and resolve the problems with democratic and scientific method.

PO: 3 : The program enables the students to gain the knowledge for framing and designing the base to resolve the problem encounter in the life.

PO: 4: The program empowers the students with graduation degree to appear various competitive examinations.

PO: 5: The learners become able and competent to shoulder the responsibility of himself and his family.

PO: 6: After completion of graduation the students will be known to social, financial, historical, geographical, political, philosophical, and democratic values in human life.

PO: 7: The students of the program make equipped with the knowledge in the different field they learnt in the program such as social science, literature, humanities etc.

PO: 8: Choose Post Graduation of their choice in related subject.

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Program Outcomes for Bachelor of Commerce (B. Com.)

PO: 1: The students of the program become able for starting business or profession of their own interest or join to government or non-government sector.

PO: 2: The graduate of the commerce faculty will be able to gain the basic and fundamental knowledge for starting the business of their own choice.

PO: 3: The program of commerce make competent to the students to appear various competitive examination including CA, CS etc. And choose Post Graduation of their choice in related subject.

PO: 4: The program of commerce make competent to the students to gain the knowledge of accounting, auditing, management principles, banking, insurance, share market trading, business economics, financial management, corporate law, business law, etc.

PO: 5: The students of the program also manage and skillfully handle the Cash Book and Ledger Book of any business firm, institute or shop.

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Program Outcomes for Bachelor of Commerce (B. Sc.)

PO: 1: The program creates the scientific temperament and attitude among the students.

PO: 2: The programs develops the quality of scientific observation, logical thinking, clarity of expression, reasoning ability, decision making ability, confidence in decision making issues, precision in reaction etc.

PO: 3: The program of science make competent to the students to appear various competitive examination or choose Post Graduation of their choice in related subject.

PO: 4: The graduates of the program train themselves in various fields to analyze and sort out the issue in logical manner.

PO: 5: The program enables the students to join to any jobs in diverse fields including self-business.

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Program Outcomes for Master of Arts (M. A.)

PO: 1: The M. A. program enables the students to gain the knowledge with moral, democratic and human values to resolve the various problems in the human life.

PO: 2: The students gain the sufficient knowledge in the respective subjects having social science, literature, humanities which make them sensitive and competent enough to resolve the various issues.

PO: 3: The post graduates of the arts faculty will be well acquainted with the respective subjects with social, financial, historical, geographical, political, philosophical, and democratic values in human life.

PO: 4: The students will be well taught through the knowledge at PG program to think and react over the various issues to resolve the problems face in the life.

PO: 5: The students of the post graduations can appear for various competitive examinations or pursue research in their respective subject.

PO: 6: The program makes them a responsible citizen.

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Program Outcomes for Master of Commerce (M. Com.)

PO: 1: The Post-Graduation program provides the students advanced and current knowledge of the field of commerce, business, management etc. to perform and to shoulder the responsibility of various profession and business in the concerned area.

PO: 2: The Post-Graduation program provides the students advanced and current knowledge of the field to provide consultancy services in finance, marketing, GST etc.

PO: 3: The Post-Graduation program helps the students to gain a comprehensive knowledge in the field of commerce to train themselves into business leaders contributing in the growth of the country.

PO: 4: The Post-Graduation program helps the students to cultivate potentials to find employments and develop entrepreneurship.

PO: 5: The Post-Graduation program helps the students to foster an interest in research related to business and industries.

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Subject Special Outcomes

Faculty of Humanities (U. G.)

01. Marathi Literature :

SSO: 1: To create an interest about reading among the students.

SSO: 2: To promote the students for creating modern Marathi Literature and innovation of literary style by reading Marathi literary texts.

SSO: 3: To develop communication skills among students.

SSO: 4: To promote the students to collect contemporary literature and literature of ancient saints for critical analysis.

SSO: 5: To inspire the students for higher education.

SSO: 6: To create an employment opportunity through literature.

SSO: 7: To make the student a good social citizen.

02. Compulsory Marathi :

SSO: 1: To train the students and develop the skills of news writing for the Newspapers.

SSO: 2: To make the students able to participate in State Level Competition for various job opportunity.

SSO: 3: It helps him to be tutor of Marathi language in various institutions.

SSO: 4: Inculcate moral and human values within themselves.

SSO: 5: Students learn social and human values and morals through literary works.

SSO: 6: Increase vision regarding literary value.

SSO: 7: Get information well known writer in Marathi.

03. Compulsory English:

SSO 1: English subject helps to imbibe the rules of language to learn the language structure and usage to the students.

SSO 2: Students should enhance their language skills especially in the areas of grammar and pronunciation.

SSO 3: English subject creates ability to write and speak good English in all situations.

SSO 4: The course should provide exposure to the learners in good prose texts and poems and expose the learners to value based ideas.

SSO 5: It helps the students to develop style in speech and writing.

SSO 6: It creates ability to use receptive skills through reading and listening to acquire good exposure to language.

SSO 7: Student becomes comfortable with English in use while reading or listening.

SSO 8: It helps to create ability to write and speak good English in all situations.

SSO 9: Students perform various speaking and writing tasks.

SSO 10: To provide an opportunity to build a career in languages and literature, especially towards writing in languages.

SSO 11: To develop analytical, interpretive, and descriptive abilities among themselves.

SSO 12: Becomes able to face competitive examination for job opportunity.

SSO 13: Be ready for achieving higher education and research.

04. English Literature:

SSO 1: It creates literary sense by providing adequate exposure to reading and writing skills among the students.

SSO 2: They know the basic literary terms and upgrade their knowledge.

SSO 3: English literature helps the learners emotionally toward creative writing.

SSO 4: Students would form their literary ideas and be able to compose light literary pieces.

SSO 5: Students will develop critical and analytical ability.

SSO 6: Students acquire a broad perspective of the literature as a literary genre and the relevant historical, geographical, and cultural identical backgrounds.

SSO 7: Students able to analyze various types of literary pieces concerning

thematic and other approaches.

SSO 8: The study of ELT helps the students to expand their vocabulary to understand the structure of sentences and grasp the idea of the author.

SSO 9: By studying ELT thinking and critical analyzing ability enhance.

SSO 10: Students motivate for higher education and research.

SSO 11: It helps him to face competitive examination.

SSO 12 : He should be a tutor of English language at any institution.

05. Geography:

SSO 1: The study of geography enhances the geographical knowledge of the students.

SSO 2: Geography is related to other scientific disciplines, students get knowledge of other sciences.

SSO 3: Students learn about the environment as they study the environment in geography.

SSO 4: Through GIS, remote sensing, students can get jobs in the private sector.

SSO 5: New ideologies in geography, modern concepts help to gain new geographical knowledge through it in geography.

SSO 6: To give students a historical overview of ancient and medieval geography from the point of view of study.

SSO 7: Map science cartography makes it easy to study information from different parts of the world.

SSO 8: Students get career opportunities through the study of geography.

SSO 9: To enhance the technical knowledge of the students through GIS, remote sensing and computer.

SSO 10: Emphasis on adopting modern techniques and ideologies in geography.

SSO 11: Students get career opportunities through the study of geography.

06. Home Economics:

SSO 1: Understand the knowledge of food, food function and nutritive value of foods.

SSO 2: Understand importance of personal cleanliness and hygiene in daily life and demonstrate the same during practical in the lab.

SSO 3: Basic knowledge on diet for early childhood and school children.

SSO 4: To understand the problem of child and develop skill base activities.

SSO 5: Learn practical skills like cooking, food preservation.

SSO 6: Basic knowledge on drafting and stitching.

SSO 7: Develop variety of skills and management and become good home maker.

SSO 8: To train the students for self- employment.

SSO 9: Learn about family resources and home decoration and to become interior decorator.

SSO 10: They could be dietitian.

SSO 11: Learn how to make best out of waste.

07. History:

SSO 1: The students will learn to analyze the various stages of evolution and development of man in the prehistoric, proto-historic and historic age.

SSO 2: To have and depth knowledge about the ancient civilization of India like Indus-Saraswati civilization.

SSO 3: To acquaint the civilization, Vedic civilization, latter Vedic civilization etc and compare them with the other contemporary civilization of the world.

SSO 4: The students learn in detail about golden past of India during the Maurya and Gupt period, their conquest, architecture and literature etc.

SSO 5: Student will able to write meaningful essay on the brave and courageous South Indian dynasties of India

SSO 6: Student will get knowledge about Indus culture, Vedic- culture, sixteen Mahajanapadas and Republic of Buddhist period.

SSO 7: The students learn the political commentary of important imperial of Maurya dynasty, Gupta dynasty and Vardhana dynasty.

08. Economics:

SSO 1: Students understand basic concepts and theories of economics.

SSO 2: Understand the relation/conflict between economic growth &

environmental problems as well as economic growth & social inequality.

SSO 3: Have the idea of government economic policies both at national & international level.

SSO 4: Enhance the ability to comprehend and evaluate economic policies at various levels.

SSO 5: Develop ability to understand Financial Markets & it's working.

SSO 6: Students familiarize with basic quantitative tools and their applications in economics.

SSO 7: Develop analytical ability and other cognitive skills.

SSO 8: Develop interest in taking up higher studies in economics, including research.

09. Political Science:

SSO 1: Students understand the unique characteristics of the Indian federal system.

SSO 2: Students motivate to critically study the functioning of the constitution.

SSO 3: Students become aware about major issues in Indian Political system.

SSO 4: Students understand Political theory and the basic concepts.

SSO 5: Students understand various approaches to the study of Political theory.

SSO 6: Students understanding basic concepts of Liberty, Equality, Rights, Law and Justice.

SSO 7: Students familiarize the structure and functions of the organs of

government.

SSO 8: Students understand concept of State Sovereignty: Monistic and Pluralistic Theories. Analyzing the changing concept of Sovereignty in the context of Globalization.

SSO 9: Students familiarize the ideas of ancient and medieval political thinkers.

SSO 10: To build in the minds of students an overall outlook about political thought.

SSO 11: To study about the relevance of ancient and modern political thought in the modern world.

10. Sociology:

SSO 1: Students understand the various sociological concepts and basic theories.

SSO 2: Students understand the ideas inculcated in western and Indian sociological thoughts.

SSO 3: Students understand various sociological thoughts.

SSO 4: Students understand the social problems of Indian society with relation to its structure and culture.

SSO 5: Students understand the basic concepts in sociology.

SSO 6: Students understand the major sociological perspectives.

SSO 7: Students understand the theoretical roots of caste and social changes.

SSO 8: Students understand the ideas of founders of sociology.

SSO 9: Students understand the views of various social reformers.

SSO 10: Students understand the caste structure, inequality and constitutional provisions.

SSO 11: Students understand various social issues of various societies.

Subject: Information Technology

SSO 1: Business Knowledge:

Graduates will acquire a comprehensive understanding of key business disciplines, including accounting, finance, marketing, management,

economics, and business law. They will develop a solid foundation of business principles, concepts, and practices.

SSO 2: Analytical and Critical Thinking Skills:

B.Com graduates will develop strong analytical and critical thinking skills, enabling them to evaluate business problems, analyze data, and make informed decisions. They will learn to apply business theories and frameworks to real-world situations and propose effective solutions.

SSO 3: Quantitative and Numerical Skills:

B.Com programs often emphasize quantitative and numerical skills. Graduates will gain proficiency in financial analysis, data interpretation, statistical analysis, and other quantitative methods relevant to business decision-making.

SSO 4: Communication Skills:

Effective communication is essential in the business world. B.Com graduates will develop strong written and oral communication skills, enabling them to convey ideas, present information, and negotiate effectively. They will be able to communicate with diverse stakeholders, including colleagues, clients, and customers.

SSO 5. Problem-Solving and Decision-Making:

Students will develop problem-solving and decision-making skills, allowing them to identify business challenges, analyze alternatives, and implement effective solutions. They will learn to consider ethical implications, evaluate risks, and weigh various factors in making informed business decisions.

SSO 6: Business Ethics and Social Responsibility:

B.Com programs emphasize ethical and responsible business practices. Graduates will understand the importance of ethical conduct, corporate social responsibility, and sustainability in business operations. They will demonstrate ethical decision-making and understand the social impact of business activities.

SSO 7: Teamwork and Leadership:

B.Com graduates will acquire strong teamwork and leadership skills. They will learn to collaborate effectively in team settings, contribute to group dynamics, and leverage diverse perspectives. They will also develop leadership qualities, such as the ability to motivate others, manage projects, and drive organizational success.

SSO 8: Technology and Digital Literacy:

B.Com programs incorporate technology and digital literacy skills. Graduates will be proficient in using business software, data analysis tools, and digital platforms. They will understand the impact of technology on business operations and be prepared to adapt to technological advancements.

SSO 9: Global Perspective:

B.Com programs often emphasize the global dimension of business. Graduates will gain an understanding of global markets, international business practices, and the cultural and economic diversity of the global business environment. They will be able to navigate global challenges and opportunities.

These program outcomes aim to equip B.Com graduates with the knowledge, skills, and mindset necessary for careers in various business sectors, such as finance, accounting, marketing, human resources, consulting, entrepreneurship, and more. Additionally, the B.Com degree can serve as a foundation for further education, such as pursuing a Master's in Business Administration (MBA) or other advanced business degrees.

Faculty of Commerce and Management (U. G.)

Subject Special Outcomes

Subject – Accountancy

- SSO 1 . Apply the generally accepted accounting principles with recording transactions and preparing financial statements.
- SSO 2 . Demonstrate accounting process under computerized accounting system .
- SSO 3 . Measure business income applying relevant accounting standard .
- SSO 4 . Prepare cash book and other accounts necessary while running a business .
- SSO 5 . Prepare financial statements of co-operative society .
- SSO 6 . Apply the generally accepted accounting principles with recording transactions and preparing financial statements .
- SSO 7 . Preparation of receipt and expenditure account and balance sheet of profession.
- SSO 8 . Learn about Hire Purchase system and installment purchase system and their accounting treatment .

Subject – Statistics and Business Mathematics

- SSO 1. Collect, Classify and represent data .
- SSO 2 . Analyze statistical data using Measure of Central Tendency , Dispersion

and Skewness .

SSO 3 . Understand the basic knowledge on Data Collection and various statistical elementary tools .

SSO 4 . Use simple Interest , compound interest and percentage to do business calculations .

Subject – Economics

SSO 1 . Familiarizes the students with the basic concepts of micro economics and its applications to business situations.

SSO 2 . Enables understanding of the relationship between different market structures and how they compare and contrast with one another.

SSO 3 . Enables understanding of how a firm sets price for its products by using different methods.

SSO 4 . Guides the students towards understanding the real world market situations & business applications.

Subject – Marketing Management

SSO 1: students will be able to demonstrate effective understanding of relieving function area of marketing and its application .

SSO 2: Updates students about current trends in advertising.

SSO 3. Acquaints students about various tools of IMC and careers in advertising.

Subject – Human Resource Management

SSO 1: Effectively manage and plan key human resource functions within organizations

SSO 2: Examine current issues, trends, practices, and processes in HRM

SSO 3: Contribute to employee performance management and organizational effectiveness

SSO 4: Develop effective written and oral communication skills

Subject – Business Communication and Management

SSO 1: Corporate communication helps future managers and employees in performing managerial functions smoothly.

SSO 2: Creates awareness, imparts knowledge, shapes attitudes and overall improves overall interaction between people.

SSO 3: Provides students with basic understanding of the concepts of business , communication and public relation.

SSO 4: Develops critical understanding of different practices associated with business communication.

Subject – Auditing and Income Tax

SSO 1: The graduate will possess technical training in taxation, finance, accounting & auditing which offers a strong base in domain of taxation, accounting & auditing.

SSO 2: File Income tax return and compute the tax liability of individuals .

SSO 3: To collect the basic concepts and definitions of Income Tax Act 1961 .

SSO 4: To know the residential status of assessee and incomes exempted from tax .

SSO 5: To familiar with the computation of income from salary .

SSO 6: To familiar with the computation of income from house property .

SSO 7: To familiar with the computation of income from business and profession .

Subject – Commercial law

SSO 1: Ability to know the details of Contract, Sale of Goods and Negotiable Instruments.

SSO 2. Ability to know the formation and some laws of Company, Partnership and Limited Liability Partnership.

SSO 3. Ability to know the Intellectual Property Rights, Competition Law and Law of Consumer Protection.

Faculty of Science and Information Technology (U. G.) n

Subject Special Outcomes

Subject : Physics:

SSO 1: Students gain knowledge and skill in Physics.

SSO 2: Apply the knowledge and perform various experiments based on the knowledge of physics.

SSO 3: Analyze Newtonian mechanics, Dynamics of rigid body, various properties of matter like elasticity, viscosity, surface tension.

SSO 4: Understands the oscillatory motion, special theory of relativity, electrostatics, magneto-statics, thermodynamics and light phenomenon like interference of light, diffraction, polarization their role in various technological instrumentations.

SSO 5: Understand the failure of classical physics in some modern experiments and development of quantum mechanics.

SSO 6: Gain knowledge of crystal structures, radioactivity, nuclear physics and classical and quantum statistics.

SSO 7: Understands the role of LASER, X-ray and radioactive rays in the field of medical science.

SSO 8: Understand the role of semiconductor devices in electronic, digital and computer industry.

Subject : Zoology:

SSO 1: Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms.

SSO 2: Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.

SSO 3: Analyze complex interactions among the various animals of different phyla, their distribution and the interrelationship with the environment

SSO 4: Understands the complex evolutionary processes and behavior of Animals.

SSO 5: understand the physiological processes of animals and relationship of organ Systems

SSO 6: Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, and vermin-compost preparation.

SSO 7: Understands about various concepts of genetics, molecular biology and its importance in human health.

SSO 8: Understand the physiological aspects of human and other vertebrates

Subject : Mathematics:

SSO 1: Build logic to deal with problems in mathematics.

SSO 2: Make students understand the basic structure of mathematics i.e. sets, relation, functions and relation among them.

SSO 3: Develop the ability to understand concepts in mathematics on their own.

COURSE OUTCOMES:-

DIFFERENTIAL AND INTEGRAL CALCULUS

After completion of this course students will be able to :

- Revise concepts of limit, continuity and differentiability.
- Learn Mean Value Theorems and their applications.
- Deal with Taylor's series, Maclaurin's series of $\sin(x)$, $\cos(x)$, $\exp(x)$, $\log(1+x)$ etc.

DIFFERENTIAL CALCULUS AND TRIGONOMETRY

After completion of this course students will be able to :

- Find limit, continuity of two variable functions.
- Understand the concept of partial differentiation and various method to find them.
- Learn about homogeneous functions, Taylor's series of two variable functions.

ORDINARY DIFFERENTIAL EQUATIONS AND DIFFERENCE EQUATIONS.

After completion of this course students will be able to :

- Deal with first order differential equation.
- Find integrating factor.
- Deal with linear equations, Bernoulli's equation and first order higher degree equations solvable for x, y, p .

PARTIAL DIFFERENTIAL EQUATION

After completion of this course students will be able to :

- Understand linear partial differential equation of first order and formation of partial differential equation by eliminating the arbitrary constants and arbitrary functions.
- Solve total differential equation, Lagrange's linear partial differential equation.
- Solve various types of partial differential equations, such as

$$(p, q) = 0$$

$$z = px + qy + f(p, q)$$

$$(z, p, q) = 0$$

$$f(x, p) = g(y, q)$$

REAL ANALYSIS

After completion of this course students will be able to :

- Understand the concepts of real sequence, their convergence and divergence and Cauchy convergence criterion for sequence.

- Understand the concepts of infinite real series their convergence and divergence.
- Find convergence of series by using various tests such as comparison test, P- series test, ratiotest, Leibnitz's test.

SET THEORY AND LAPLACE TRANSFORM

After completion of this course students will be able to :

- Gain basic knowledge of sets, subsets, classes of sets and countability of sets.
- Learn basic concepts of relation and types of relations.
- Learn basic concepts of Fuzzy sets, examples of Fuzzy sets and operations on Fuzzy sets.

ALGEBRA

After completion of this course students will be able to :

- Understand the basic concept of Groups, their various types, its properties.
- Learn basic of Normal Subgroups, Cosets, their properties.
- Find homomorphism and isomorphism of Groups, Kernel of homomorphism.

ELEMENTARY NUMBER

THEORY

After completion of this course students will be able to :

- Find Greatest Common Divisor of more than two integers by using Euclidean algorithm and Least Common Multiple.
- Solve linear Diophantine equation.

- Gain knowledge about fundamental theorems of arithmetic and unique factorization theorem.

LINEAR ALGEBRA

After completion of this course students will be able to :

- Understand the basic concepts of Vector spaces, subspaces and their properties.
- Learn about linearly dependence and independence and their basic properties.
- Learn about basis and dimension of Vector spaces.

MATRICES AND THEORY OF EQUATIONS

After completion of this course students will be able to :

- Gain basic knowledge of matrices, types of matrices.
- Operate elementary operations on matrices.
- Reduce matrices to normal form.

NUMERICAL

METHODS

After completion of this course students will be able to :

- Solve nonlinear equations $f(x) = 0$ by using various methods such as
 - 1) Bisection method
 - 2) Regula falsi method
 - 3) Secant method
 - 4) Newton- Raphson method
- Solve linear algebraic equation $Ax = b$ by using various methods such as

- 1) Gauss elimination method
 - 2) Partial pivoting
 - 3) Gauss- Jordan elimination
 - 4) LU decomposition method
 - 5) Gauss- Jacobi method of iteration
 - 6) Gauss- Seidel method of iteration.
- Gain knowledge about Finite difference operator, Central difference operator.

COMPLEX ANALYSIS AND VECTOR CALCULUS

After completion of this course students will be able to :

- Learn about analytic function, Cauchy- Riemann equation and harmonic function.
- Find Mobius transformation and cross ratio of complex numbers.
- Find complex integration.
- Use Cauchy's integral theorem and Cauchy integral formula.

Subject : Chemistry:

- SSO 1: Students understand the fundamentals principle, instrumentation, application of various spectroscopic techniques like NMR, IR, and U.V-Visible spectroscopy.
- SSO 2: Know Organic Synthesis and reaction mechanisms via several organic chemical reactions.
- SSO 3: Demonstrate good laboratory practices and safety to develop research-oriented skills.
- SSO 4: Promotes towards use modern techniques, decent equipment's and Chemistry software's.
- SSO 5: To know fundamental and shapes s, p and d atomic orbital and electronic configuration of elements.
- SSO 6: Understand basics of organic reaction mechanism, aromaticity and stereochemistry of molecule. Learn the types of hydrocarbons its chemical properties and its uses.
- SSO 7: To know the Mathematical Concepts: Logarithmic relations, linear graphs, calculation of slopes.
- SSO 8: Achieve pure and applied knowledge of physical chemistry through principle, observation, hypothesis derive conclusion and evaluate their significance with broad scientific context.
- SSO 9: Understand the synthesis and significance of polymer and fabrics in

everyday life.10 – Attentive about sources of water pollution and industrial waste management.

SSO 10: To know about photochemical reaction through various laws and fluorescence, phosphorescence, chemiluminescence.

SSO 11: To Understand the Postulates of quantum mechanics, by application in Derivation of Schrodinger wave equation.

SSO 12: To know about spectroscopic technique Nuclear Magnetic resonance (NMR).

SSO 13: Make them aware with some fundamental classes of synthetic drugs.

SSO 14: To know quantitative analysis of different element.

Subject: Computer Science

SSO 1: Proficiency in Programming:

Students will demonstrate the ability to write, debug, and analyze computer programs using multiple programming languages, showcasing a strong understanding of programming principles and concepts.

SSO 2: Understanding of Computer Systems and Architecture:

Students will acquire knowledge about computer organization, architecture, and the functioning of hardware components such as processors, memory, and storage devices.

SSO 3: Design and Implementation of Data Structures and Algorithms:

Students will be able to design and implement efficient data structures and algorithms to solve complex computational problems. They will understand the time and space complexities associated with various algorithms.

SSO 4: Software Application Development:

Students will develop the skills necessary to design, develop, and test software applications while adhering to software engineering principles and best practices. They will be competent in working individually or as part of a team to create reliable and functional software solutions.

SSO 5: Problem Analysis and Solving:

Students will develop critical thinking and problem-solving skills to analyze intricate problems and devise appropriate computational solutions. They will apply algorithms, data structures, and logical reasoning to address real-world challenges.

SSO 6: Proficiency in Database Systems:

Students will gain a thorough understanding of database management systems, including database design and implementation, data querying using structured query languages (SQL), and ensuring data integrity and security.

SSO 7: Application of Artificial Intelligence and Machine Learning:

Students will be familiar with fundamental concepts of artificial intelligence (AI) and machine learning (ML). They will comprehend data mining, pattern recognition, and machine learning algorithms, applying them to solve AI-related problems.

SSO 8: Effective Communication:

Students will develop strong written and verbal communication skills to effectively convey technical concepts, ideas, and solutions to both technical and non-technical audiences. They will be proficient in documenting their work and delivering clear presentations.

SSO 9: Teamwork:

Students will demonstrate the ability to collaborate efficiently in teams, working towards common objectives. They will possess strong interpersonal skills and adaptability to work effectively in diverse and interdisciplinary environments.

SSO 10: Ethical and Professional Responsibility:

Students will be knowledgeable about ethical considerations within computer science, including privacy, security, and intellectual property. They will understand their professional responsibilities and adhere to ethical guidelines and legal regulations.

SSO 11: Adaptability to Technological Advancements:

Students will develop the capability to adapt to emerging technologies, tools, and programming languages. They will cultivate a mindset of lifelong learning and continuous professional development to stay abreast of the rapidly evolving field of computer science.

Subject: Microbiology:

- SSO 1:** Understand the contributions of various scientist in microbiology andscope of various branches .
- SSO 2:** Understand various kinds of prokaryotic & eukaryotic microbes andtheir interactions .
- SSO 3:** Explain and describe importance of organic compounds and itschemistry found in living cells .
- SSO 4:** Understand and explain various processes of metabolism ofcarbohydrates amino acids and vitamins .
- SSO 5:** Explain DNA, RNA and protein structure and their synthesis .
- SSO 6:** Understand the concept of disease development, spread, control and eradication from society .
- SSO 7:** Understand the basic concepts of gene and their regulation of action .
- SSO 8:** Explain and write various industrial fermentations and bioinstrumentation.
- SSO 9:** Analyze the determination of specific nutrients by bacteria .
- SSO 10:** Understand the chemistry of different kinds of carbohydrates .
- SSO 11:** Describe importance of vitamins to human body and their

deficiency syndrome .

SSO 12: Understand the mechanism of enzyme.

Subject: Botany:

SSO 1: Understand the general characteristic of life.

SSO 2: Understand the classification of plant diseases, pathogen, symptoms and causes with control measures of various plants.

SSO 3: Understand morphological characteristic, classification, economic importance of plants.

SSO 4: Know about mechanism of photosynthesis and respiration

SSO 5: Understand the role of plant in human welfare.

SSO 6: Learn more about defense mechanism and hyper sensitive reaction in plants.

SSO 7: Understand plant community dynamics, ecological adaptation in plant and phytogeographical regions of India and local region.

SSO 8: Understand the basic information on mushroom and their cultivation techniques.

SSO 9: Understand the life cycle and symptoms of causal agent.

SSO 10: Understand the process of Parasexuality, Homothallic,

Heterothalism.

SSO 11: Understand the mechanism of Biological N₂ fixation.

SSO 12: Understand the tissue culture technique and learn more about Mendelism laws.

SSO 13: Learn about typical plant cells and cell organelles and various steps of cell division.

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