



Vidya Prasarak Mandal's

Amolakchand Mahavidyalaya

Godhani Road, Umarsara, Yavatmal, Maharashtra 445001

Affiliated to Sant Gadge Baba Amravati University, Amravati
2(f) and 12(B) Recognition of UGC

Accredited by NAAC with 'B' Grade (Accreditation valid up to 4 November 2021)

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Declaration

This is to declare that information, reports, true copies and numerical data etc. furnished in this file as supporting documents is verified by IQAC and found correct.

Dr. R. A. Mishra

Principal

Amolakchand Mahavidyalaya,
Yavatmal

AMOLAKCHAND MAHAVIDYALAYA, YAVATMAL (MS)

PROGRAM OUTCOMES [UG Level]

Faculty of Science and Technology

After graduating from faculty of Science and Technology;

- To develop a strong foundation in basic sciences such as physics, chemistry, mathematics, and biology.
- To impart analytical and research skills that enable students to identify and solve scientific problems.
- To acquire theoretical and practical knowledge in a chosen specialization such as biology, chemistry, physics, mathematics, electronics or computer science.
- To prepare graduates for higher education and research in leading institutions in India and abroad.
- To instil ethical values and professionalism among students towards scientific research and development.
- To enable students to communicate effectively in scientific discourse and disseminate scientific knowledge to the public.
- To pursue careers in research and development, academia, government, industry, and entrepreneurship.
- To encourage creativity, innovation, and independent thinking among students.
- To provide students with opportunities for experiential learning and hands-on training through laboratory and fieldwork.
- To develop problem-solving skills in students that enable them to apply scientific principles to real-world situations.

PROGRAM OUTCOMES [UG Level]

Faculty of Commerce and Management

After graduating from faculty of Commerce and Management;

- The students will have a comprehensive knowledge of business principles, accounting practices, and financial management.
- The students will be able to analyse and interpret financial data and apply it in decision-making processes.
- The students will possess effective communication skills, both oral and written and be proficient in the use of modern technology for business communication.
- The students will understand the importance of ethical behaviour and social responsibility in the business environment.
- The students will be able to work effectively in teams and appreciate the benefits of collaboration and diversity.
- The students will possess strong analytical and critical thinking skills to solve complex business problems.
- The students will be able to adapt to changing business environments and emerging trends.

- The students will demonstrate entrepreneurial skills and can identify and pursue new business opportunities.
- The students will have a global perspective and be aware of cultural differences in business practices.
- The students will be prepared for further education and lifelong learning opportunities.

PROGRAM OUTCOMES [UG Level]
Faculty of Arts/Humanities/ Social Sciences

After graduating from faculty of Arts;

- The students will have proficiency in the respective language he has chosen (Marathi/Hindi/English).
- The students will have ability to critically evaluate and analyse various literary works and texts.
- The students will have understanding of economic concepts and principles.
- The students will have ability to evaluate critically political theories and systems.
- The students will be able to understand historical events and their impact on society.
- The students will have ability to analyse and critically evaluate philosophical theories.
- The students will have proficiency in music and ability to perform in a professional setting.
- The students will have ability to communicate effectively in both oral and written forms.
- The students will be able to understand cultural diversity and its impact on society.
- The students will have ability to undertake independent research and present findings in a clear and concise manner.

PROGRAM OUTCOMES [PG Level]
Faculty of Science and Technology
Master of Physics

After Post graduation in Physics;

- Students will acquire advanced knowledge of the fundamental principles and concepts of physics.
- Students will develop skills to solve complex problems in various areas of physics, including classical mechanics, thermodynamics, electromagnetism, quantum mechanics, statistical mechanics, nuclear physics, classical mechanics, Digital electronics and microprocessor and condensed matter physics.
- Students will gain proficiency in using mathematical and computational methods for modelling and analysing physical phenomena.
- Students will learn to design and conduct experiments, analyse data, and communicate their findings effectively.
- Students will develop critical thinking, analytical, and research skills necessary for pursuing doctoral studies or a career in academia, research, or industry.

- Students will acquire knowledge and understanding of interdisciplinary areas that intersect with physics, such as materials science, biophysics, nuclear physics, and astronomy.
- Students will demonstrate the ability to work independently, collaborate with peers, and effectively communicate scientific concepts and research findings in written and oral formats.
- Students will acquire the ethical and professional values necessary for scientific research and the responsible conduct of science.

PROGRAM OUTCOMES [PG Level]

Faculty of Science and Technology

Master of Chemistry

After Post graduation in Chemistry;

- Students will have ability to conduct theoretical and experimental research in the discipline of chemistry.
- Students will have capability to design and execute chemical experiments, analyse data and interpret results.
- Students will have proficiency in the use of modern laboratory techniques and instrumentation.
- Students will have understanding of the fundamental principles and concepts of various branches of chemistry.
- Students will have knowledge of advanced topics in chemistry such as quantum mechanics, spectroscopy, and thermodynamics.
- Students will have awareness of chemical safety practices and regulations.
- Students will have ability to communicate scientific ideas and results effectively through oral and written presentations.
- Students will have capacity to critically evaluate scientific literature and engage in independent research.
- Students will have understanding of ethical and professional responsibilities in scientific research.
- Students will be prepared for advanced studies or careers in academia, industry, or government sectors.

PROGRAM OUTCOMES [PG Level]

Faculty of Science and Technology

Master of Mathematics

After Post graduation in Mathematics;

- Students will possess advanced mathematical skills that allow them to solve complex problems in various fields such as finance, engineering, statistics, and physics.
- Students will be able to apply their knowledge of mathematical concepts to real-world problems, using mathematical models to analyse and solve problems in various industries.

- Students will have the skills to conduct independent research in mathematics and related fields. They will be able to design experiments, gather and analyse data, and draw valid conclusions.
- Students will be effective communicators, both orally and in writing, able to explain complex mathematical concepts to a range of audiences.
- Students will be able to work collaboratively with other professionals in interdisciplinary teams, applying their mathematical skills to address a range of complex challenges.
- Students will have developed critical thinking skills, able to evaluate different approaches to problem-solving and apply appropriate mathematical methods to address specific problems.
- Students will be committed to continuous learning and professional development, remaining up-to-date with developments in their field and adapting to changing needs and trends.

PROGRAM OUTCOMES [PG Level]
Faculty of Commerce and Management
MASTER OF COMMERCE

After Post graduation in Commerce;

- Students will have advanced knowledge and understanding of the key concepts and theories in commerce that can be applied in diverse settings.
- Students will have a strong ethical foundation and will be equipped with the skills to make complex ethical decisions in the business world.
- Students will be able to communicate effectively both orally and in writing to articulate complex business concepts.
- Students will be able to evaluate and analyse complex, multidimensional business problems and develop creative and innovative solutions.
- Students will have a global mindset and an understanding of how diverse cultural contexts influence business practices and decisions.
- Students will be equipped with the skills to lead and manage teams and organizations effectively.
- Students will be able to think strategically and make evidence-based decisions that help organizations achieve their goals.
- Students will have strong quantitative skills and be proficient in using data and analytics to inform business decisions.
- Students will be proficient in using technology tools and platforms to analyse data, communicate effectively, and solve problems.
- Students will develop professionalism and be equipped with the skills to work effectively in diverse business environments.

PROGRAM OUTCOMES [PG Level]
Faculty of Arts/Humanities/ Social Sciences
M.A. (ECONOMICS)

After Post graduation in Economics;

- Students will demonstrate deep knowledge and understanding of economic theories, principles, and concepts. They will be able to analyse and interpret economic data and apply economic theories in real-world situations.
- Students will develop critical thinking and problem-solving skills by applying economic theories to solve complex economic problems. They will be able to identify economic challenges and propose solutions based on their understanding of economic theories.
- Students will develop effective communication skills, both written and oral, to present economic ideas and data effectively.
- Students will be able to communicate economic concept analysis clearly to different audiences, including policymakers, business executives, and the general public.
- Students will develop research skills to conduct independent research in economics, including data collection, analysis, and interpretation. They will be able to use various economic models, empirical methods, and statistical techniques to design and conduct research projects.
- Students will develop global and cultural awareness by understanding the interconnectedness of economies and societies worldwide. They will be able to analyse and evaluate the impact of economic policies and decisions on different cultures and societies.
- Students will equip them with skills and knowledge to pursue careers in a variety of fields, including government, academia, international organizations, and private sectors such as banking and financial services, consulting and research.

PROGRAM OUTCOMES [PG Level]

Faculty of Arts/Humanities/ Social Sciences

M.A. (POLITICAL SCIENCE)

After Post graduation in Political Science;

- Students will be able to demonstrate an in-depth knowledge of the theories, concepts, and practices of politics and governance.
- Students will be able to analyse and critically evaluate political phenomena, institutions, and policies using various qualitative and quantitative research methods.
- Students will be able effectively to communicate and articulate complex political ideas and arguments through written and oral means.
- Students will be able to develop creative and innovative solutions to political problems, based on sound research and analysis.
- Students will be able to conduct independent research on topics of interest in political science, using appropriate research methods and tools.
- Students will be able to engage in professional and ethical behaviour in all aspects of their work as political scientists.
- Students will be able to demonstrate an understanding of the role of political science in society, including the interface between politics and other sectors such as economics, society, and culture.
- Students will be able to identify and analyse the impact of global, regional, and local events, trends, and actors on politics and governance.

- Students will be able to collaborate effectively in diverse teams and contexts, including with individuals from different cultural, disciplinary, and professional backgrounds.
- Students will be able to apply their knowledge and skills to various professional and academic contexts, such as public service, non-governmental organizations, academia, or the private sector.

PROGRAM OUTCOMES [PG Level]
Faculty of Arts/Humanities/ Social Sciences
M. A. (HISTORY)

After Post graduation in History;

- Students will be able to develop an advanced understanding and knowledge of historical events, concepts, and theories.
- Students will be able to develop critical thinking and analytical skills to evaluate sources and arguments.
- Students will be able to develop advanced research skills and methodologies to conduct independent historical research.
- Students will be able to demonstrate effective communication skills through written and oral presentations of historical research.
- Students will be able to develop a broad and interdisciplinary approach to the study of history, including the analysis of political, economic, social, and cultural forces.
- Students will be able to demonstrate proficiency in using primary and secondary sources to generate original insights and interpretations.
- Students will be able to develop a nuanced understanding of the complexities and diversity of historical experiences across different cultures, societies, and periods.
- Students will be able to apply historical perspectives to contemporary issues and debates and relate historical knowledge to present-day contexts and debates.

PROGRAM OUTCOMES [PG Level]
Faculty of Arts/Humanities/ Social Sciences
M.A. (ENGLISH)

After Post graduation in English;

- Students will develop advanced skills in analysing literature and language, applying critical thinking to literary and cultural texts.
- Students will develop advanced communication skills in written and oral communication, with the ability to communicate complex ideas clearly and effectively.
- Students will develop advanced research skills, including the ability to conduct independent research, analyse and synthesize existing research, and present findings effectively.
- Students will develop an appreciation for the diversity of perspectives and cultures represented in literature and language, with the ability to apply this knowledge in various contexts.

- Students will develop professional skills applicable to a variety of industries, including critical thinking, problem-solving, oral and written communication, and project management.
- Students will develop skills in creative and innovative thinking, with the ability to explore new ideas and approaches to literature, language, and culture.
- Students will develop an understanding of the ethical and social responsibilities associated with literary and language studies.
- Students will develop leadership skills, including the ability to work collaboratively, delegate responsibilities, and manage projects effectively.
- Students will develop a commitment to lifelong learning and the ability to adapt to new technologies, methodologies, and information relevant to their field of study.
- Students will develop global perspectives, with an understanding of the interconnectedness of language and literature across cultures and nations.

PROGRAM OUTCOMES [PG Level]
Faculty of Arts/Humanities/ Social Sciences
M. A. (MARATHI)

After Post graduation in Marathi;

- Students will be able to demonstrate in-depth knowledge and critical understanding of Marathi literature, including its history, cultural milieu, and literary traditions.
- Students will be able to analyse and interpret various literary genres in Marathi literature, such as poetry, fiction, drama, and literary criticism.
- Students will be able to apply theoretical concepts and literary tools to evaluate Marathi literature and critically assess their cultural, social, and political significance.
- Students will be able to develop advanced research, analytical, and written communication skills through independent research projects and scholarly writing.
- Students will be able to articulate and defend original ideas and perspectives on Marathi literature, both orally and in writing.
- Students will be able to understand the contribution of Marathi literature to regional and national literature and its impact on cultural and intellectual discourse.
- Students will be able to develop intercultural competencies and appreciate diverse perspectives in Marathi literature and society.
- Students will be able to engage in ethical and responsible intellectual discourse on Marathi literature and cultural issues, demonstrating the ability to respect diverse opinions and perspectives.

PROGRAM OUTCOMES [PG Level]
Faculty of Arts/Humanities/ Social Sciences
M.A. (HINDI)

After Post graduation in Hindi;

- Students will have attained a high level of proficiency in reading, writing, speaking, and comprehension of the Hindi language.
- Students will have a deep understanding of the rich traditions of Hindi literature, including its history, major authors, genres, themes, and critical approaches.
- Students will be able to analyse and interpret literary texts independently and critically, using appropriate theories, methods, and evidence.
- Students will have acquired advanced research and writing skills, including the ability to formulate research questions, conduct original research, and produce scholarly papers and presentations.
- Students will have developed an appreciation for the cultural and historical contexts that shape Hindi literature, including its relationships with other literary traditions and social movements.
- Students will be able to communicate their ideas effectively in Hindi and English, using a variety of oral and written formats, such as essays, presentations, and seminars.
- Students will have learned to conduct themselves in a professional and ethical manner, showing respect for scholarly norms, cultural diversity, and intellectual property rights.
- Students will be prepared for careers in fields such as teaching, writing, journalism, translation, publishing, cultural diplomacy, and international business, as well as for further research at the doctoral level.

PROGRAM SPECIFIC OUTCOMES [UG Level]

Faculty of Science and Technology

- The students will be able to demonstrate a solid understanding of the fundamental concepts, principles, theories, and methodologies in mathematics, physics, chemistry, botany, zoology, computer science, and electronics.
- The students will be able to apply analytical and critical thinking skills to identify, formulate, and solve complex problems in various areas of science and technology.
- The students will be able to develop proficiency in conducting laboratory experiments, collecting data, analysing results, and drawing appropriate conclusions.
- The students will be able to apply scientific methods and approaches to design simple experiments, analyse data, and communicate findings effectively.
- The students will be able to integrate knowledge and concepts from multiple disciplines to address complex scientific problems and challenges.
- The students will be able to utilize mathematical and computational tools to model and analyse scientific phenomena and to solve quantitative problems.
- The students will be able to effectively communicate scientific information and ideas through oral, written, and visual means to both technical and non-technical audiences.
- The students will be able to demonstrate ethical conduct, professionalism, and awareness of societal and environmental issues related to science and technology.
- The students will be able to collaborate effectively with peers, professionals, and interdisciplinary teams to accomplish common goals and projects.

- The students will be able to engage in continuous learning, keep up with advancements in science and technology.

PROGRAM SPECIFIC OUTCOMES [UG Level]

Faculty of Commerce and Management

- Students will be able to understand accounting terminologies and principles, financial statements, accounting procedures, and fundamentals of bookkeeping and ledger maintenance.
- Students will be able to apply mathematical tools and techniques to solve business problems, including algebra, calculus, and statistical methods.
- Students will be able to understand the foundational aspects of commercial laws, including contract law, consumer protection laws, intellectual property laws, and company law.
- Students will be able to understand the principles of management, including planning, organizing, staffing, directing, and controlling.
- Students will be able to learn about the basics of starting and running a business, including market research, business planning, and funding.
- Students will be able to understand financial techniques used for decision-making, including cost and management accounting, working capital management, capital budgeting, and investment appraisal.
- Students will be able to understand basic marketing principles, including market segmentation, product positioning, advertising, sales promotion, and sales management.
- Students will be able to understand the basics of banking and financial services, including credit functions, investment banking, money market operations, and foreign exchange management.
- Students will be able to apply basic computer skills and learn about the basics of computer applications relevant to business.
- Students will be able to develop good communication and interpersonal skills, including the ability to present their ideas effectively, negotiate, and work in teams.
- Students will be able to gain the knowledge and skills necessary for pursuing further studies or professional careers in different fields of commerce and industries.

PROGRAM SPECIFIC OUTCOMES [UG Level]

Faculty of Arts/Humanities/ Social Sciences

- The students will be able to understand and demonstrate the key concepts, theories and historical developments in their chosen subject of study.
- The students will be able to communicate effectively in both written and oral forms of Marathi, English, and Hindi.
- The students will be able to apply critical thinking skills to analyse and evaluate different perspectives on various issues related to their respective subjects.
- The students will be able to demonstrate proficiency in research and data analysis in their chosen field of study, using appropriate methodologies and techniques.

- The students will be able to interpret and analyse historical documents and understand the historical context of events.
- The students will be able to understand the political systems, government structures, and political theories.
- The students will be able to apply ethical principles and practices in academic and community settings as per the values of their chosen subject.
- The students will be able to develop a deep understanding of the impact of music on society and analyse musical traditions with cultural awareness.
- The students will be able to understand and demonstrate diverse philosophical traditions with critical thinking and analytical reasoning.
- The students will be able to display/exhibit a knowledge of the literature and literary techniques of English, Marathi, and Hindi literature.
- Students will be able to explain fundamental economic theories and concepts, such as supply and demand, market equilibrium, production and costs, and macroeconomic principles.
- Students will be able to apply mathematical and statistical models to analyse economic data and draw conclusions from the findings.
- Students will be able to examine the impact of economic policies on different sectors of the economy, such as trade, taxation, globalization, inflation, and unemployment.
- Students will be able to present economic, and political information and ideas clearly and logically.
- The students will acquire the ability to collaborate and work effectively in a team environment.
- Students will be able to develop skills in research, analysis, and synthesis of information.
- Students will be able to gain the knowledge and skills necessary for pursuing further studies or professional careers in the arts.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Science and Technology

MASTER OF PHYSICS

- Students will be able to demonstrate proficiency in fundamental physical principles and theories, as well as advanced topics in various subfields of physics.
- Students will have a deep understanding of the mathematical tools and computational methods used for modelling, analysis, and experimentation in physics.
- Students will be able to develop the ability to design, conduct, and analyse experiments with advanced equipment, instrumentation, and techniques to obtain reliable and accurate results.
- Students will be able to attain the ability of critical thinking, problem-solving, and analytical skills to evaluate the quality of scientific information and to identify open questions and areas for further research.
- Students will be able to develop excellent communication skills to present scientific findings and ideas effectively in written and oral formats to both scientific and non-scientific audiences.

- Students will be able to understand the ethical principles and professional values that guide scientific research practices in physics, including a commitment to safety and responsible conduct of research.
- Students will be proficient in contemporary software, languages, and tools used for physics research, including those used for data analysis, numerical simulations, and modelling.
- Students will be able to develop the ability to formulate scientific questions, design and execute research projects, and interpret and analyse numerical and experimental results.
- Students will be able to gain expertise in the various subfields of physics, including classical mechanics, quantum mechanics, electromagnetism, and thermodynamics, and their applications in interdisciplinary areas (biophysics, materials science, engineering, etc.).
- Students will be able to attain the ability of teamwork, leadership, interpersonal, and collaboration skills by working in groups and facilitating joint research projects. Develop the ability to design, conduct, and analyse experiments with advanced equipment, instrumentation, and techniques to obtain reliable and accurate results.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Science and Technology

MASTER OF CHEMISTRY

- Students will be able to demonstrate advanced knowledge and understanding of chemical principles and their applications in different fields of chemistry.
- Students will be able to acquire the ability to design, conduct, and analyse chemical experiments using advanced techniques and instrumentation to obtain accurate and reliable results.
- Students will be able to acquire the ability of critical thinking, problem-solving, and analytical skills to evaluate scientific information and identify new areas of chemistry research.
- Students will be able to demonstrate proficiency in communication skills to present scientific findings and ideas effectively in written and oral formats to a range of audiences.
- Students will be able to develop professional and ethical values as a chemist that include the safe handling of chemicals, responsible conduct of research and the proper treatment of scientific data.
- Students will be able to understand advanced concepts and methodologies in the different subfields of chemistry such as organic, inorganic, physical, and analytical chemistry especially organic chemistry.
- Students will be able to attain proficiency in contemporary tools and software used in chemical research and analysis.
- Students will be able to develop the ability to generate scientific questions.
- Students will be able to demonstrate teamwork, leadership, and collaboration skills by working in groups and facilitating collaborative research.
- Students will be able to gain experience and expertise in the practical aspects of chemical research, including laboratory management and dissertation writing.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Science and Technology

MASTER OF MATHEMATICS

- Students will have the ability to apply mathematical methods and techniques in solving complex problems across various fields.
- Students will have proficiency in analytical thinking, quantitative reasoning, and problem-solving skills.
- Students will have advanced knowledge and understanding of the fundamental concepts, theories, and methods in mathematics.
- Students will have Competence in using advanced mathematical software tools and techniques for modelling and simulations.
- Students will have the ability to communicate complex mathematical ideas and concepts effectively to both technical and non-technical audiences.
- Students will be Ready for continuing education, research, or industrial positions that require a strong mathematical background.
- Students will acquire the ability to demonstrate ethical and professional behaviour in applying mathematical practices and principles.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Commerce and Management

MASTER OF COMMERCE

- Students will be able to analyse and interpret complex business scenarios using advanced methodologies and techniques to provide effective solutions.
- Students will be able to develop critical thinking and problem-solving skills to identify and evaluate emerging trends, issues, and opportunities in various industries.
- Students will be able to communicate effectively and persuasively with stakeholders, including employees, customers, shareholders, and government agencies.
- Students will be able to demonstrate strong knowledge in finance, accounting, marketing, and operations management to make informed business decisions.
- Students will be able to leverage advanced technological tools and analytics to create innovative business models and improve organizational performance.
- Students will be able to foster creativity and entrepreneurship to identify and pursue new business opportunities.
- Students will be able to exhibit a strong sense of ethical and social responsibility in decision-making and corporate governance.
- Students will be able to demonstrate the ability to work in interdisciplinary teams, collaborating with professionals from diverse backgrounds and cultures.
- Students will be able to develop leadership competencies that enable effective management of people, resources, and organizational goals.
- Students will be able to engage in lifelong learning and professional development to stay abreast of the latest industry practices and innovations.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Arts/Humanities/ Social Sciences

M.A. (ECONOMICS)

- Students will be able to demonstrate an advanced understanding of macroeconomic and microeconomic theories, principles, and models and apply them to analyse and solve complex economic problems.
- Students will be proficient in statistical, mathematical, and econometric methods and software relevant to economic analysis and be able to collect, process, and analyse data to produce meaningful economic insights.
- Students will be able to critically evaluate economic policies, both domestic and international, and assess their potential impact on economic growth, welfare, and inequality.
- Students will be able to understand global economic issues such as trade, globalization, and international finance and analyse their impact on the domestic economy.
- Students will have strong oral and written communication skills and be able to effectively communicate complex economic concepts and analyses to diverse audiences.
- Students will understand the ethical and professional standards associated with conducting economic research and analysis and adhere to these principles in their work.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Arts/Humanities/ Social Sciences

M.A. (POLITICAL SCIENCE)

- Students will be able to understand and analyse the core concepts and theories of political science, such as democracy, governance, power, and authority, and apply them to practical situations.
- Students will be equipped with the knowledge and skills to carry out independent research, including data collection, analysis, and interpretation, and present their findings to a wide audience.
- Students will develop the ability to assess complex political issues and identify potential solutions to problems faced within the political arena.
- Students will learn to communicate complex ideas effectively through written and oral presentations and demonstrate critical thinking abilities when writing research papers, policy briefs, and other professional documents.
- Students will have the necessary knowledge to understand the political dynamics of different regions and the interrelationship between national, regional, and global political institutions.
- Students will possess a thorough understanding of ethical principles and be able to work by professional ethical norms.
- Students will be able to apply political science theories to unpack the phenomena of current events and have the skills to devise practicable policies in diverse political contexts, making informed judgments on contemporary political issues.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Arts/Humanities/ Social Sciences

M.A. (HISTORY)

- Students will be able to demonstrate comprehensive knowledge and understanding of the key events, themes, and issues in global and local history.
- Students will be able to evaluate and analyse historical sources critically and use them to develop sophisticated and nuanced arguments.
- Students will be able to demonstrate advanced research skills, including the ability to identify and use primary and secondary sources, conduct original research, and produce a substantial research paper.
- Students will be able to demonstrate proficiency in written and oral communication, including the ability to effectively present historical arguments and analysis to different audiences.
- Students will be able to demonstrate a deep understanding of historical methodology and debates, and the ability to engage with different historical traditions and approaches.
- Students will be able to develop a critical awareness of contemporary issues and debates related to history, and the ability to reflect on the implications of historical knowledge for contemporary society.
- Students will be able to demonstrate the ability to work independently and collaboratively in a variety of contexts, including conducting research, presenting findings, and engaging with different stakeholders.
- Students will be able to develop a global perspective on history, including an understanding of the interconnectedness of historical events and processes across different regions and cultures.
- Students will be able to demonstrate proficiency in the use of digital tools and techniques in historical research and presentation.
- Students will be able to develop a professional attitude and ethical framework for historical research and dissemination, including a commitment to objectivity, accuracy, transparency, and respect for diverse perspectives and voices.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Arts/Humanities/ Social Sciences

M.A. (ENGLISH)

- Students will be able to analyse and interpret a variety of literary works and genres from different historical periods and geographical regions.
- Students will be able to demonstrate advanced research skills and the ability to engage in scholarly discourse.
- Students will be able to apply critical and theoretical frameworks to literary analysis and interpretation.
- Students will be able to develop advanced writing skills and produce original scholarly work.

- Students will be able to evaluate the cultural, historical, and social contexts in which literature is produced and received.
- Students will be able to demonstrate an understanding of the diversity of perspectives and experiences represented in literature and culture.
- Students will be able to communicate effectively and present complex ideas accurately and persuasively.
- Students will be able to collaborate effectively with peers in academic and professional settings.
- Students will be able to analyse and interpret literary texts from a variety of cultural and historical contexts.
- Students will be able to demonstrate critical thinking and communication skills through written and oral modes.
- Students will be able to understand and engage with major literary theories and methodologies.
- Students will be able to conduct independent research using scholarly sources and draw evidence-based conclusions.
- Students will be able to evaluate literary works in terms of their social, political, and cultural relevance.
- Students will be able to apply their knowledge of literary works to broader issues and questions in the humanities and beyond.
- Students will be able to develop a sophisticated understanding of the relationship between literary texts, language, and culture.
- Students will be able to demonstrate the ability to produce original literary criticism and analysis.
- Students will be able to apply their knowledge and skills in diverse professional settings, including education, publishing, media, and the arts.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Arts/Humanities/ Social Sciences

M.A. (MARATHI)

- Students will be able to analyse and critically evaluate various literary genres, styles, and themes in Marathi literature.
- Students will develop proficiency in reading, writing, and speaking Marathi with clarity and fluency.
- Students will be able to understand the historical, cultural, and social contexts of Marathi literature and their influence on literary production.
- Students will be able to conduct independent research and produce scholarly work related to Marathi literature.
- Students will develop proficiency in using contemporary research methodologies and critical tools to interpret Marathi texts.
- Students will be familiar with the major literary movements and figures in Marathi literature.
- Students will be able to Understand the role of Marathi literature in shaping regional, national, and global cultural discourses.

- Students will be able to apply literary theories and critical approaches to Marathi texts.
- Students will acquire skills in communicating ideas and insights related to Marathi literature effectively, both orally and in writing.
- Students will be sensitive to the issues of gender, caste, class, and identity in Marathi literature, and its representation.

PROGRAM SPECIFIC OUTCOMES [PG Level]

Faculty of Arts/Humanities/ Social Sciences

M.A. (HINDI)

- Students will gain an in-depth understanding of Hindi literature concerning its historical, cultural, social and linguistic aspects.
- Students will be able to analyse literary texts, critically evaluate literary works and their socio-cultural context, and draw meaningful conclusions.
- Students will be proficient in the Hindi language, both written and spoken. They will be able to use Hindi language resources, literature and criticism.
- Students will develop effective communication skills in the Hindi language, which will enable them to express their thoughts and ideas clearly and concisely, both in oral and written form.
- Students will be able to apply critical thinking and research skills to various literary texts, analyse and evaluate arguments and assumptions, and conduct in-depth research on the subject.
- Students will have extensive knowledge of Hindi literary traditions, including classical, medieval and modern literature, and various literary genres such as poetry, drama, fiction, and non-fiction.
- Students will develop an understanding of cultural nuances and sensitivities which are inherent to Hindi literature and their impact on societal and political structures.
- Students will be able to appreciate Hindi literature beyond their cultural boundaries, shedding light on its universal appeal and the beauty of its words and thoughts.
- Students will be able to incorporate interdisciplinary approaches to the study of Hindi literature and appreciate the richness and complexity of various theories and perspectives.
- Students will have excellent career advancement opportunities in academia, research, publishing, journalism, and other fields related to language and literature.

AMOLAKCHAND MAHAVIDYALAYA, YAVATMAL-445001

COURSE OUTCOME (CO)[Subjects covered under faculty of Science& Technology]

Subject- Botany		
Class	Course	Outcome (Students will be able to.....)
B. Sc. I, Sem.-I	Diversity and applications of microbes and cryptogams	Know about Plant kingdom, Diversity of cryptogams, Viruses, Bacteria and importance of microbes.
		General characters of algae like Habitat, Thallus organization, Pigmentation reserve food and reproduction and classification of algae.
		Know the general characters of Fungi along with subdivision of Mastigomycotina, Ascomycotina, Basidiomycotina and Deuteromycotina with their specific example of Albugo, Aspergillus and Puccinia with whole life cycle.
		General characters of Bryophytes along with Class Hepaticopsida and Bryopsida with their specific genus of Marchantia and Funaria with whole life cycle.
		General characters of the following classes Sphenopsida and Filicopsida with special reference to examples Equisetum and Marsilea. Students would be able to identify the different types of steles and understand the evolution about the seed habit in plants.
		Role of Algae and Fungi in Industries, Medicine, Food & Agriculture, Mycorrhiza, PlantDiseases- viral, bacterial and fungal diseases.
		Identify and learn the difference between Algae, Fungi, Bryophytes and Pteridophytes.
		Identify and learn to handle the lab equipment's like, compound microscope, dissecting microscope and their detail structure etc
		Observe the material carefully and prepare a temporary slide or permanent slide by using different stain.
		Know the internal structure or anatomy and life cycle of Algae, Fungi, Bryophytes and Pteridophytes with their specific examples by using permanent slide or with the help of charts and by using images through internet sources
Study the symptoms of fungal, viral, bacterial and Mycoplasmal diseases and Lichens		

B. Sc. I, Sem.-II	Gymnosperms, Morphology of Angiosperms and Plant Utilization	Know about Paleobotany, and different types of fossils, Geological time scale which is divided into different Eon, Era, Period and Epoch, fossil gymnosperms- Pteridospermales and Bennettitales.
		Gymnosperms- Classification of Gymnosperms, Morphology, anatomy, life cycle and taxonomic position of Pinus and Gnetum, and Economic importance.
		Types of roots, stem, leaf and its modifications, parts of leaf, phyllotaxy, venation.
		Know types of inflorescences and flower and its parts along with its functions, different position of ovules and types of pollination.
		Fruits types and along with their examples and Morphology, varieties and economic importance of the Food plant including Wheat and Potato, fibre plants Cotton and oil yielding plant like Groundnut.
		Origin or history and economic importance of the spices like Black pepper, Clove, Cinnamon and Cardamom, sources of firewood, timber and Bamboos. Pharmacognosy and Phytochemistry with respect to following medicinal plants.
		Learn hand techniques like cutting thin section, staining and mounting an object.
		Acquire the knowledge of preparation of double stain permanent slide of Pinus stem, needle and Gnetum stem and leaf.
		Study the Morphology and anatomy of the following members Pinus, Gnetum.
		Study of fossils like Lyginopteris and Bennettites.
		Learn the different morphological types of roots and its modification, stem and its modification, leaf venation, phyllotaxy and its modification. Different forms of corolla and different types of placentation.
		Types of fruits and morphology of plant of medicinal properties and uses like Aloe-vera, Adathodavasica etc. Morphology and economic importance of spices like Black pepper, Clove, Cinnamon and Cardamom etc., Food plant like Wheat, Potato and Groundnut and Cotton plant.
B. Sc. II, Sem.-III	Angiosperm Systematic, Anatomy and Embryology	Origin and evolution of angiosperm, Plant nomenclature, Herbarium, Botanical Garden, Concept of biodiversity and its conservation by ex-situ and in-situ method and importance of biodiversity.
		Bentham and Hookers and Engler and Prantle's classification and systematic studies & economic importance of following Families of Dicotyledons (Polypetalae) like Malvaceae, Brassicaceae, Leguminosae, Apiaceae.
		Taxonomy, Systematic studies and economic importance of Asteraceae, Asclepiadaceae, Apocynaceae, Solanaceae, Verbenaceae and Lamiaceae, Euphorbiaceae, Liliaceae and Poaceae.
		Types of meristematic and permanent tissue, characteristics of growth rings, Sapwood and heartwood and primary and secondary structure of root.

		<p>Primary structure of the monocot and dicot stem and secondary growth in dicot stem. Anomalies structure in Bignonia, Dracaena and Boerhavia stem. Internal structure Nerium and Maize leaf</p> <p>Structure of microsporangium and megasporangium, development of male and female gametophytes. Types of ovules, double fertilization, classification of embryo endosperm types & significance.</p> <p>Students will learn about the different Angiospermic families by utilising the knowledge of plant taxonomy.</p> <p>Also, they will learn different floral structures and other morphological characters.</p> <p>Besides, they would be able to understand the concept of embryology and with the help of permanent slides, learn the structure of anther, ovule and embryo</p> <p>In addition, they will upgrade themselves with the knowledge of anatomy and through the study of double staining, able to make permanent slides of plant materials.</p>
B. Sc. II, Sem.-IV	Cell Biology, Genetics and Biochemistry	<p>Concept of cell, Prokaryotic and Eukaryotic cell and its structure. Structure and functions of Cell wall, Plasma membrane and ultrastructure of Nucleus and its function.</p> <p>Structure and functions cell organelles like Endoplasmic Reticulum, Golgi complex, Vacuole, Ribosome, Peroxisome etc. Cell cycle: different stages of Mitosis and Meiosis.</p> <p>Chromosome Morphology: structure and type. Chromosomal aberrations, Structural aberrations and Numerical aberrations</p> <p>Basics of Genetics and Mendel's law and developed problem-solving ability on the Mendelism and Interaction of genes.</p> <p>Concepts of Linkage, crossing over, Gene mutation, Extra nuclear genome i.e. mitochondrial DNA and chloroplast DNA.</p> <p>Nomenclature and characteristics of enzymes, holoenzyme, coenzyme, cofactor, Mechanism of action of enzyme and structure of carbohydrates.</p> <p>Acquire a knowledge of Cell cycle, Mitosis and Meiosis and through this knowledge they will be able to learn and identify their different stages.</p> <p>Able to know about Genetics, Mendel's work on inheritance, and how Mendel's law of inheritance had formed. Furthermore, they will learn about the Monohybrid and Dihybrid ratio and its practical significance.</p> <p>Besides they will gain an ability to solve problems on interaction of genes.</p> <p>Also, through the study of Biochemistry they will gain knowledge to demonstrate the presence of starch, proteins and lipids.</p>
B. Sc. III,	Plant Physiology and Ecology	<p>Know importance of water to plant life, Active and passive absorption of water, Ascent of sap, transpiration</p>

Sem.-V		and mineral uptake.
		Understand the concepts of Photosynthesis and Respiration.
		Understand Tropic, Nastic Plant movements, Concept and types of stress- biotic and abiotic.
		Know phenomenon of photoperiodism, role of phytochrome, concept of florigen and vernalization and plant response to light and temperature.
		Understand components of environment, scope and importance of ecology, ecological factors, edaphic factor and ecological adaptations.
		Understand the concepts of Ecosystem- Structure and function, ecological succession, types of ecosystem and population ecology.
		Know the Importance of the Subject, Departmental Discipline, Laboratory environment & Laboratory equipments& also know that how to become a true nationalist & true Indian.
		Know Historical account & Importance of Plant Physiology, Plant-Water Relations & related topics.
		Know about Plant Metabolism & Plant Growth, Plant Responses & related topics.
		Know about Ecology-Environment, Ecosystem & related topics.
		Know about Theoretical & Practical knowledge of the subject.
B. Sc. III, Sem.-VI	Molecular Biology and Biotechnology	Historical account, chemical composition, double helical model of DNA. Eukaryotic replication, DNA packaging, satellite, repetitive DNA and Transposable elements.
		Concept of gene, fine structure of gene, central dogma, types of RNA, genetic code, Structure of ribosomes, eukaryotic transcription and translation.
		Regulation of gene expression in Prokaryotes and Eukaryotes, Protein Folding Mechanism and Structure, Protein Sorting and Trafficking.
		Basics of recombinant DNA technology, Restriction Enzymes, Cloning vectors, techniques of gene transfer and PCR.
		Understand the concepts of Plant tissue culture, requirement for PTC, Growth hormones, cellular totipotency, differentiation, morphogenesis, callus culture and micropropagation
		Know the application of biotechnology in agriculture, industry, health care and conservation.
		Know the Importance of the Subject, Departmental Discipline, Laboratory environment, Laboratory equipments& also know that how to become a true nationalist & true Indian.
		Know the Historical account & Importance of Molecular Biology and Biotechnology.
		Know about the nature, ultra structure, chemical composition and functions of sole genetic material i.e. DNA

		molecule.
		Know about Genetic Engineering, Plant tissue culture and Applications of Biotechnology.
		Know about the importance of theoretical and practical aspects of the subject.
Chemistry		
B. Sc. I, Sem.-I	Paper- I: Periodic Properties and Ionic bonding, s Block element and p-Block elements, Electron displacements, Reactive intermediate and Aliphatic hydrocarbon, Aromatic hydrocarbons, Thermodynamics, Gaseous state and Phase Rule	Solve the conceptual questions using the knowledge gained by studying periodicity in atomic radii, ionic radii, ionization energy and electron affinity of elements.
		Apply concepts of acids and bases as well as non-aqueous solvents and their industrial usage.
		Compare different reaction intermediates, functional group chemistry through the study of methods of preparation, properties and chemical reactions with underlying mechanism.
		Choose correct synthetic approach to prepare derivatives of industrially important molecules.
		Solve different numerical problem of varying difficulty associated with gaseous and liquid state.
		Students will be able to Perform the process of filtration, crystallization, melting point, waste management.
		Understand the effect of orientation effect of a group.
		Perform the single stage preparation with the help of given procedure.
		Determine Melting point and percentage yield
		Write the reaction and its mechanism of given single stage preparation
		Calculate percent yield of product by using formula.
		Separate basic and acidic radicals from the given mixture.
Detect cations and anions from the mixture by using different test.		
B. Sc. I, Sem.-II	Paper- II: Polarization, Covalent bonding, Acids & Bases, P-block elements, Noble gases and Non-aqueous solvent, Alkyl halides, Aryl halides and Alcohols, Phenol, ether and epoxides, Physical properties & Molecular structure,	Apply the knowledge gained by studying types of bonding, solvation, hybridization and molecular geometries
		Draw the correct molecular structures, bond order and bond length.
		Synthesize commercially important compounds of varying carbon backbone
		Choose correct synthetic approach to prepare derivatives of industrially important molecules
		Solve numerical problems related to crystalline state.
		Acquire skills to use chemical kinetics to develop mechanism of chemical reactions.
Perform experiments carefully and safely.		

	Chemical Kinetics	<p>Analyse the given organic compound qualitatively by different tests.</p> <p>Detect elements present in the given compounds.</p> <p>Determine functional group present in a given compound.</p> <p>Prepare the derivative of the provided substance.</p> <p>Determine Melting point of a given compound & also compare reported values and obtained values of melting points.</p> <p>Skilfully determine the surface tension, viscosity of liquid.</p> <p>Calculate, communicate and analyse the result.</p> <p>Determine cleansing capacity of samples of detergent.</p> <p>Predict the endothermic or exothermic process from heat of solution of a salt.</p>
B. Sc. II, Sem.-III	<p>Paper- III: Covalent Bonding, Metallic Bonding, VSPER Theory, Volumetric Analysis, Gravimetric Analysis, Aldehydes and Ketones, Carboxylic Acids, Optical isomerism. Geometric isomerism & Conformational isomerism, Thermodynamics & Equilibrium Phase Equilibrium, Liquid state & Electrochemistry</p>	<p>To learn about the basic concepts and types of chemical bonding, laws, rules and equations for formation of chemical bonds, solubility, hybridization of molecules. To study the modern approaches of chemical bonding (Molecular Orbital Theory).</p> <p>To know the basic concepts quantitative estimation by using Volumetric and Gravimetric analysis.</p> <p>To study the properties and reactions of carbonyl compounds (aldehyde, ketone and acids) and corresponding reaction mechanisms.</p> <p>To learn the basic concepts of Optical, geometrical and conformational isomerism and stability of organic compound base on bayer's strain theory.</p> <p>Helps to understand about the applications of Thermodynamics in Colligative Properties and Phase Equilibrium.</p> <p>To know details about surface tension and Viscosity. To learn about how conductance of weak electrolyte varies with respect to dilution and temperature and determination of Dissociation constant using Kohlrausch's law.</p> <p>Understand to prepare standard solutions.</p> <p>Apply the knowledge of titration and carry out various types of titrations.</p> <p>Analyse the observations and interpret the results of experiments performed.</p> <p>Evaluate the observations.</p> <p>Compare theoretical with experimental results.</p> <p>Understand the aspects and to carry out of gravimetric analysis.</p>

B. Sc. II, Sem.-IV	Paper- IV: Chemistry of elements of Transition Series& Exaction of elements, Inner transition elements& General properties of Metallurgy, Polynuclear Hydrocarbons &Reactive Methylene Compounds, Aromatic Nitrocomounds, Amino compounds, Diazonium salts& Amino acids and Proteins, Colligative properties of dilute solutions, Crystalline state	To study the chemical and physical properties of d-Block elements and their compounds. extraction of elements using various process.
		To learn Lanthanides with respect to Electronic configuration, Atomic and ionic radii Oxidation states, Magnetic properties, Color of salts, Complex formation behavior.
		Helps to understand about the classification of structure, properties, reactions and use of Polynuclear hydrocarbon, carbohydrate molecules and reactive methylene compounds
		To learn in detail about the preparation, properties, chemical reactions and mechanisms of Amides, Amines, Diazonium salts and Amino-acids
		Helps to understand about the applications of Thermodynamics in Colligative Properties
		Helps to know the Law of rational indices, Weiss and Miller indices and Laws of Crystallography, Crystal Planes.
		Create the chromatographic chambers and analyze binary mixtures by chromatography.
		Apply the knowledge and carry out complexometric titrations.
		Analyse data obtained by colorimetric or spectrophotometric titrations.
		Understand the various isolation processes.
Analyse the observations and interpret the results of experiments performed		
B. Sc. III, Sem.-V	Paper- V: Coordination Compounds and Chelates, Crystal Field Theory (CFT) Electronic Spectra of Transition Metal Complexes, Heterocyclic compounds, Organometallic compounds, Dyes:, Drugs and Pesticides, Photochemistry, Molecular Spectroscopy	Understand key features of co-ordination compounds including variety of structures and know the concepts of oxidation number, coordination number, ligands, chelates and stability of complex.
		Knowledge of crystal field theory to understand splitting in complexes and factors affecting in crystal field splitting.
		Understand heterocyclic compounds specially about their synthesis, reactivity and application of heterocyclic compound in advanced chemical synthesis.
		Classify dyes on the basis of structure and mode of application, preparation and uses of dyes, drugs and pesticides.
		Understand photochemical and thermal reactions by interaction of radiation with matter.
		Identify the electric and magnetic properties of radiation and know the spectroscopic techniques for understanding the atomic structure and structure of molecule.
		Prepare metal complexes in laboratory and study their structure
		Prepare and Understand applications of Prussian blue.

		Study structure and get knowledge to prepare crystals of chrome alum
		Explore electroanalytical techniques based on conductance and emf measurements
		Apply the basic knowledge to determine strength of given solution conductometrically
		Analyse the observations and interpret the result of experiments performed with the help of graph.
B. Sc. III, Sem.-VI	Paper- VI: Kinetic Aspects of Metal Complexes and Analytical Chemistry, Organometallic Chemistry, Inorganic Polymers, Bioinorganic Chemistry, Electronics Spectroscopy and Infrared spectroscopy, NMR spectroscopy and Mass spectroscopy, Elementary Quantum Mechanics, Electro-chemistry and Nuclear Chemistry	Understand thermodynamic and kinetic stability of complexes and geometry of complexes. Know about spectrophotometric technique for determination of concentration of metal ion. Define and classify chromatographic techniques.
		Know basics of organometallic chemistry, inorganic polymers and bio-inorganic chemistry. Get basic knowledge of biological role of metal ions.
		Identify structure of compound by use of electronic spectroscopy and infrared spectroscopy and know how to interpret spectra.
		Understand importance of Nuclear Magnetic Resonance spectroscopy and mass spectrometry in determination of organic compounds.
		Understand limitation of classical mechanics and differences between classical and quantum mechanics. Know how to derive Schrodinger's wave equation and its applications.
		Identify interconversions of chemical energy and electrical energy by knowing electrochemistry. Understand fundamental concept of nuclear chemistry and application of radioisotopes in industry, agriculture, medicine & biosciences.
		Comprehensive understanding of the estimation of given sample Iodometrically.
		Understand and learn skills to prepare standard solutions for titrations.
		Apply the basic knowledge to determine dissociation constant of weak acid conductometrically.
		Determine pH of soil sample and perform strong acid and strong base titration by pH-Metry.
		Understand principle of colorimeter to verify Beer-Lambert's law.
Analyse the observations and interpret the result of experiments performed with the help of graph		
M.Sc. I Sem.-I	Paper- I: Inorganic Chemistry-I prediction of shapes of molecules	predict the nature of bond and its properties through various electronic structural methods; bonding models
		correlate magnetic properties of complexes with strength of ligand field
		Correlate structure and bonding with reactivity of boron clusters
		appreciate specialized and advanced topics in inorganic and coordination chemistry
		recognize and assign symmetry characteristics to molecules and objects

		Find out point group of element and construction of character table
	Paper- II: Organic chemistry-I& Lab-I	Implement rules of aromaticity to organic molecules
		Sketch organic molecules in different projection formula and assign its configuration. Apply their understanding about the organic reactions of industrial significance with respect to the chemo-selectivity, regioselectivity and enantioselectivity.
		Analyze the product distribution and the stereochemistry of various organic products.
		Evaluate the organic reactions based on the influence of the substituents on substrate molecules
		Design organic reactions in order to achieve the required product(s)
		Design the methodologies to develop ecofriendly and green technology for industry & research.
		Develop methods and remedies for reactions with environmental pollution.
		Improve scientific practical information orally and in writing.
		Get awareness about laboratory safety and handling of chemicals.
		Apply different purification techniques recrystallization, thin layer chromatography, distillation and solvent extraction.
	Paper- III: Physical chemistry-I& Lab-II	Understand basic concepts and theories for quantum mechanics, surface chemistry, thermodynamics and electrochemistry.
		Apply the concepts of quantum mechanics to solve higher order problems associated with shapes, size and energy of atomic entities.
		Develop the methodologies to identify and use colloidal substances and micelles.
		Implement and build theoretical and experimental processes using thermodynamics and electrochemical concepts
		Solve numerical problems associated with quantum mechanics, thermodynamics, and electrochemistry
		Select the proper indicator for a titration
		Improve scientific skill of data collection and analysis.
		Create methods for estimation of concentration of electrolytes in mixture using potentiometry.
		Corelate nature of graphs in conductometric titrations
Get awareness about laboratory skills of handling electroanalytical instruments.		
Apply concept of critical micellar concentration to cleaning power of detergents.		
Paper- IV: Modern methods of	Appraise specific analytical technique based on sample and target analyte	

	separation	Develop analytical ability and critical thinking in selection of statistics and their use in making interpretation meaningful and productive
		Understand the principles of chromatographic techniques
		Select proper chromatographic technique among the available techniques
		Correlate the use of indicator used in different types of titration.
		Explore electro analytical techniques based on conductance and emf measurements. Design buffer systems of the required pH
		Understand the Gas Chromatography, HPLC,GC-MC,LC-MC applications and problems
M.Sc. I Sem.-II	Paper- V: Co-ordination Chemistry & Inorganic Chemistry Lab-IV	Recollect the principles of electronic structure, bonding & reactivity of coordination complexes
		Understand the concept of synthesis and stability of transition metal organometallic complexes
		Develop the possible catalytic pathways leading to desired products
		Apply the principles of transition metal coordination complexes in understanding functions of biological systems
		Identify the medicinal applications of inorganic compounds
		Unravel and interpret the photochemical properties of coordination complexes
		Apply knowledge to develop method for qualitative identification elements from the mixture having applications in industry and research.
		Create methods for estimation of element/metal from the complexes.
		Improve skill for separation identification and removal of interfering radicals
		Get idea about development of spot test for the different elements.
	Paper- VI: Organic chemistry-II	Predict the orientation and stereochemistry of the product of addition reaction
		Predict the orientation and stereochemistry of the product of elimination reaction
		Apply enolate chemistry to achieve molecular complexity
		Design organic reactions in order to achieve the required product(s).
		Formulate green chemistry synthesis to increase atom economy.
	Paper- VII: Physical chemistry- II & Lab-III	Demonstrate the ability to use chemical dynamics to solve problems associated with enzyme kinetics, fast reactions and complex reactions.
		Students understand the Calculation of energy levels from wave functions, physical picture of bonding &

		anti-bonding wave functions.
		Learns the various types of polymers & its characterization and mechanism of polymerization and also its applications.
		Students get knowledge of Electrochemistry of solutions various types of experimental techniques, corrosion, Types of corrosion, corrosion inhibitors, Corrosion monitoring.
		Understand basic and advanced level statistical thermodynamics, reaction kinetics. Apply the concepts of statistical thermodynamics and reaction kinetics to solve complex problems.
	Paper- VIII: Optical Methods and Environmental chemistry	Understand key features of Formulate experiments based on optical and electroanalytical techniques.
		Get knowledge of Summarize principles and applications of molecular absorption and molecular emission spectroscopy.
		Understand water pollution, Classification, causes, consequences and methods to prevent water pollution.
		Understand air pollution, Classification, causes, consequences and methods to prevent water pollution.
		Understand soil pollution, Classification, causes, consequences and methods to prevent water pollution.
M.Sc. II Sem.-III	Paper- IX: Spectroscopy-I	Get advanced knowledge about the interactions of electromagnetic radiation and matter and their applications in spectroscopy.
		Apply formalisms based on molecular symmetry to predict spectroscopic properties
		Analyse and interpret spectroscopic data collected by the methods discussed in the course
		Solve problems related to the structure, purity and concentration of chemicals and to study molecular interactions by choosing suitable spectroscopic methods and interpreting corresponding data
		Interpret UV-visible spectroscopy and its basic principle and applications in terms of organic compounds
		Interpret IR spectroscopy and its basic principle and applications in terms of functional group analysis
		Understand NMR spectroscopy and its basic principle and applications in terms of structural analysis
		Interpret elemental analysis by using mass spectrometry.
		Combine information from the techniques in determination of molecular structures in organic chemistry
	Paper- X: Analytical Chemistry- I	Understand principle, instrumentation and applications of various thermal methods of analysis and thermometric titrations
		Understand theory, instrumentation, applications, advantages and disadvantages of high frequency titrations, electrogravimetry and coulometry
		Learn about principle, types and uses of chemical sensors, biochemical sensors, biosensors and ion selective electrode

		Understand different electroanalytical techniques like polarography, voltammetry, chronopotentiometry and amperometric titrations
		Understand concept of bio-analytical chemistry along with applications of spectrophotometry, spectrofluorimetry, ultracentrifugation, gel electrophoresis and toxicology.
	Paper- XI: Special Paper-I, Organic Synthesis-I	Know and recall the fundamental principles of organic chemistry that includes chemical bonding, stereochemistry, reaction mechanism and stereochemistry.
		Synthesize organic compounds itself involves large part of synthetic reagents
		Recognize the basic practical skills for the synthesis and analysis of organic compounds
		Learn about functional group addition & functional group elimination
		Predict the reactivity of an organic compound from its structure and Justify a reasonable mechanism for a chemical reaction.
		Develop basic skills for the multi-step synthesis of organic compounds.
		Illustrate chemical structures stereochemistry and mechanism of modern named reactions
		Apply synthesis methodology to perform advanced organic synthesis.
		Explain basic chemo-, regio-, and stereoselective concepts and apply these in synthesis, as well as construct reactions pathways of complex organic compounds using retro synthetic analysis
		Understand about organic-chemical reactions with a focus on principles for effective synthesis strategies, stereo selectivity, catalysis, as well as metal organic chemistry
		Understand research-based in-depth understanding in the field of design and production (synthesis) of complex molecules.
		Paper- XII: Special Paper-II (Natural Products)
	Know structures, stereochemistry, synthesis and reactions of amino acids, proteins and peptides	
	Understand mechanism of action, orientation, steric effect and reactions of enzymes	
	Study classification, nomenclature, occurrence, isolation and general methods of structure determination of alkaloids and terpenoids	
	Learn occurrence, nomenclature, structure, stereochemistry, synthesis and reactions of steroids and hormones	
	Know occurrence, classification, biogenesis, physiological effects and synthesis of prostaglandins, pyrethroids, rotenones and pheromones	
	Study structure, synthesis, and chemistry of Vitamins and Natural Pigments	

M.Sc. II Sem.-IV	Paper- XIII: Spectroscopy-II	Implement rules of Raman spectroscopy to organic molecules
		Interaction of x-ray with matter, scattering and diffraction.
		Presentation of ESR spectra, application of ESR to study the free radicals, structure determination, reaction velocities
		Elucidation of structure of inorganic molecules.
		Solve the problem of organic molecules based on UV,IR, ¹ H NMR, ¹³ C NMR
	Paper- XIV: General Analytical Chemistry	To study principle and working of proportional counters and Geiger Muller (GM) counters. principle and working of scintillation counters. Semiconductors detectors (eg.HPGe).
		To find types of reactions used in fluorimetric analysis. Also advantages and disadvantages and its applications of (RTP).
		Principles, atomization and excitation, ICP-source, Instrumentation and applications FIA techniques, pretreatment of sample in packed reactors, components of FIA apparatus, Factors affecting FIA and applications.
		Elucidate to determine minerals, vitamins, anti-oxidants, toxins and preservatives. General idea of the properties of drugs for their characterization and quantification.
		To study the classification Fuel analysis, its advantage and disadvantage, classification of poisons.
	Paper- XV: Special Paper-III Organic Chemistry-III	Familiarize the organometallic reagents and its applications in organic synthesis. Learn about the Catalysis, hydrogenation of olefins and oxoprocess, Wilkinson catalyst etc. Learn about organometallic compounds and Alkyls and Arene complexes
		explain and rationalize the synthesis, structure, bonding, properties and reactivity of both main group and transition metal organyls rationalize industrially important catalytic processes through the application of organometallic principles
		Understand the bonding in olefin, acetylene and allyl systems. Concepts of synthesis, structure and bonding in metallocenes
		Learn about transformations for C-X and C-C bond-formation, functional group reactivity, chemoselectivity, regioselectivity, and the strategy of multistep synthesis will be the core topics that are covered
		Learn about concepts include strategy/retrosynthesis, advanced aromatic chemistry, protecting groups, stereochemistry, enolates and other carbonyl chemistry, alkene synthesis, reduction/oxidation (introductory), heterocycles, cross-coupling reactions and other modern methods of synthesis
		Identify, analyse and evaluate synthetic routes to target molecules using retrosynthesis

		Describe the recent increase in the structural complexity of drug molecules.
		Describe and apply stereochemical concepts such as chirality, stereoisomerism, and stereoselectivity in relation to chemical transformations and apply organometallic reagents and reactions in organic synthesis
		Plan and design experimental setups for various types of laboratory tests, perform transformations of importance for organic synthesis.
		Understand the functional group protection and know the protection of important functional groups.
		Learn about heterocyclic compounds are very interesting due to their distinct structure and the availability of this kind of heterocyclic structures in medicinal drugs
		Learn about technique of synthesis of heterocyclic compounds is important in the synthesis of different drugs
		Gives the quantitative ideas about the synthesis, properties and uses of such heterocyclic compounds like pyrrole, pyridine quinoline, thiophene, furan etc
		Understand detailed chemistry of Pyrazole, imidazole, oxazole, thiazole, thiazine, diazines, triazines, pyrimidines, pyrazines and zepines, oxepines, Indoles, Benzofurans, Quinolines Flavones, Chromones, Coumarines, Phenothiazines, Azetidines and its importance.
		Paper- XVI: Special Paper-IV: Applied and Medicinal Chemistry
	Learn classification of different drugs on the basis of applications and also their synthesis, mode of actions, pharmacokinetics, pharmacodynamics data and secondary metabolism	
Understand classification of drugs and also procedures, types, various theories as well as concepts of drug designing		
Computer Science		
B. Sc. I, Sem.-I	Computer Fundamentals & C Programming	Learn The Concept of Computers & Characteristics, generation of computers. Memory and their types and Printers and their types.
		Learn The concept of DOS, Booting process, DOS commands such as REN, CD, MD, RD, DIR, DEL, COPY, TYPE, DATE, TIME, COPYCON, PROMPT External commands: FORMAT, XCOPY, CHKDSK, PATH, ATTRIB, AUTOEXEC.BAT, introducing windows its features and understanding number systems like, decimal, binary, octal
		Learn the concept of Internet, Types of Internet's connection: Direct dial-up, broadband, Internet protocol

		TCP/IP, FTP, HTTP, understanding Domain name e-mail address, WWW, understanding web Browser Internet Explorer, Netscape navigator, search engines
		Understand Concept of Programming, Algorithm, Flowcharting, programming process, Structured programming, Concept of C programming, its structure, history& features.
		Understand Concept of Elements of C:Introduction to C, History, features structure of C program, header file, character set, keywords, identifiers, constants, variables, basic data types, symbolic constants, type def operators &Expressions: Arithmetic, Relational, logical assignment, Increment and decrement, precedence of operators
		Understand Concept of Formatted I/O and Unformatted I/O operations, Control structures if, if...else, nested else, conditional operator, for do, do...while structures, break and continue the loop
		Design and implement the solution to the real-life problems by using word, excel, power point, will be able to use printer. Student will be able to Perform various dos operations using DOS commands, will be able to browse the web using various search engines, able to construct e-mails and sending these emails and attaching documents to emails.
		Design and implement the solution to the real life problems by using C Programming.
B. Sc. I, Sem.-II	Computer Fundamentals & C Programming	Learn The Definition of Data structure, their types, various operations, concept of stack, implementing operation on linear array and stack.
		Learn concept of Queue & linked list, their representation in memory, traversing, insertion& deletion operations, types of linked list.
		Learn definition & concept of binary tree, traversing operation. Various sorting and searching techniques.
		Understand Concept Of array, pointers and strings. Student should be able to design different programs on array, pointer, strings.
		Understand Concept of functions, its need, defining it, calling and returning functions, types of functions, function recursion, local and global variables.
		Understand Concept Of structure, declaring it, defining structure variables, accessing structure members, array of structure, nested structure, concept of union, comparing with structure, concept of file handling and related operations.
		Design and implement the solution to the real-life problems related to data structure by using c language.
		Design and implement the solution to the real-life problems by using advance C Programming
B. Sc. II,	Object Oriented programming	Learn The Concept of HTML language, Structure of HTML Document, Elements, attributes & tags of html.

Sem.-III	with C++ & Web Technology	Learn The Concept XML, its features, components of XML document, elements, Attributes, DTD, its need, declaring attributes, attribute types, Internal and External DTD
		Understand style sheet, its types & various properties such as Test, Font, Color, background, border, display, height, line-height, margin, width. CSS with HTML and XML.
		Understand Concept Of OOP, its features, advantages and applications, tokens, basic data types, constants, variables, symbolic constants, declaration And Dynamic initialization of variables
		Understand Concept of control & looping structures, functions, passing objects and returning objects from functions, inline and friend functions, concept of function overloading, scope resolution operator, member dereferencing operator, implicit & explicit type conversions.
		Understand Concept of class and objects, defining and accessing data members and member functions, passing & returning objects from functions, managing I/O operations, concept of constructor, destructor, default, parameterized, copy constructors
		Design different web pages using HTML, XML, CSS.
		Design and implement the solution to the real-life problems by using C++ Object oriented Programming.
B. Sc. II, Sem.-IV	Advanced C++ and Web Designing	Understand Concept of OOP, its features, advantages and applications, concept of class and objects, defining and accessing data members and member functions, managing I/O operations, manipulator, new, delete, operators.
		Understand Concept of functions, passing objects and returning objects from functions, concept of inheritance, their types, examples on single, multilevel, multiple, hybrid, hierarchical inheritances, concept of templates
		Understand Concept of different visibility modes, pointers to derived class, dynamic binding, virtual and pure virtual functions, rules for virtual functions and abstract base classes. Working with files, stream classes, opening and closing of file, file input/output with stream class
		Learn The Concept XML, its features, components of XML document, elements, Attributes, DTD, its need, declaring attributes, attribute types, Internal and External DTD
		understand style sheet, its types & various properties such as Test, Font, Color, background, border, display, height, line-height, margin, width. CSS with HTML and XML.
		Understand Comparison with DTD, Schema elements, element type element attributes, XML schema data type, converting DTD to schema, namespace, refit namespaces, scope of namespaces collusion & Applications

		Design different web pages using HTML, XML, CSS.
		Design and implement the solution to the real-life problems by using advance C++ Programming.
B. Sc. III, Sem.-V	RDBMS & V.B.	Understand Concept of DBMS, comparison with traditional file approach, storage structure, data representation & various data base models.
		Understand Concept of relational models, relations, domains, attributes, keys, E-R diagrams, tables and various normalization techniques.
		Understand Concept of SQL, data types, operators & various DDL & DML commands.
		Learn the Concept of Visual programming environment such as New Project window, property window, Form layout window, toolbar, menu bar, Form properties, pointer tool, label control, text box, command button.
		Learn the Concept of Creating Menu, Application wizard for menu data types & variables, Various operators & control structures.
		Understand the concept of Internal Functions such as MsgBox0, named constant, default button, VB Programming including Private and public procedure passing data by reference and value, passing control as arguments.
		Design and implement the solution to the real-life problems by using RDBMS technology.
		Design and implement the solution to the real-life problems by using V.B Programming.
B. Sc. III, Sem.-VI	PL/SQL & Advanced V.B.	Understand Concept of functions and understanding various category of functions like Number, Character & Conversion functions.
		Understand Concept of features and block structure of PL/SQL, variables, constants, data types & control structure. Concept of Cursor, types, opening, closing, using and fetching data. The concept of Trigger and its types.
		Understand Concept of Transaction. The Rollback, Commit, Save point commands. Concept of security of data base, types of privileges, Grant and Revoke commands. Concept of table and Row locking.
		Understand Concept of Need for dialog box control, adding the dialog box control, producing the various dialog boxes, Mouse response and Control, multiple list boxes.
		Understand Concept of forms, collection of forms, accessing it, uploading forms, placing text on forms, format with print, print method, multiple forms, placing tool bars on forms.
		Understand Concept of Working with Files, Open & close statements, file modes, locking the file, working with sequential access file, print# input#, write# statement, working with random access file, put,

		get statement, defining user defined data types, file control, file related commands.
		Design and implement the solution to the real-life problems by using Advance Visual Basic programming..
		Design and implement the solution to the real-life problems by using PL/SQL programming
Electronics		
B. Sc. Part-I, Sem.-I	Basic of Electronics	Apply the basic principle of Electronics to discuss and explain the measurements, meter reading,
		Solve the problems based on concept of Resistance, Network, Instrument developing stage
		Compare the different types of Sensor and actuators and their significance, explain the properties and its applications, of signal processing
		Use and explain different type's sensor, actuator and plotter.
		Analyze the different biasing circuits, discuss types of Noise and distortions in electronic circuits, and interpret low, middle and high frequency response of biomedical instrumentation.
		Analyze and explain the concept of signal condition feedback and its characteristics, principle of operation and design of various biomedical instrumentation.
		Identify and use of various types of electronic components and instrument.
		Handle the various equipment's like, Cathode Ray Oscilloscope, Function generators etc.
		The virtual practical execution with Virtual lab by IITK, IITB
		Design and study various types of oscillators, Multi-vibrators and amplifiers.
		Analyze the observations and interpret the result of experiments performed
		Compare theoretical with experimental result and determine percentage error.
Acquire skills of finding faults in experimental units and soldering the electronic component in the circuit.		
B. Sc.-Part-I, Sem.-II	Digital Electronics	Apply the basic principle of Electronics to discuss& explain the measurements, meter reading,
		Solve the problems based on concept of Digital logic, Network, sate logic developing &IC stage
		Compare the different types of Logic IC, and Function and their significance, explain the properties and its applications of decision based signal processing
		Use and explain different type's logical sate designing.
		Analyze the different biasing circuits, discuss types of Noise and distortions, logic state defining in digital electronic circuits, and interpret low, middle response of IC families.

		Analyze and explain the concept of signal condition principle of operation and design of various logical instrumentation.
		Acquire skills of finding faults in experimental units and soldering the electronic component in the circuit.
		Handle the various equipment's like, Cathode Ray Oscilloscope, Function generators, pulse analyzer, clock cycles etc.
		Identify and use of various types of digital electronic components and instrument.
		The virtual practical execution with Virtual lab by IITK, IITB
		Design and study various types of logical instrument design and simulation
		Analyze the observations and interpret the result of experiments performed.
		Compare theoretical with experimental result and determine percentage error.
B. Sc. Part-II, Sem.-III	Electronic Devices and Circuit	Apply the basic principle of Electronics to discuss and explain the measurements, meter reading,
		Solve the problems based on concept of Resistance, Network, Instrument developing stage
		Compare the different types of Sensor and actuators and their significance, explain the properties and its applications, of signal processing
		Use and explain different type's sensor, actuator and plotter.
		Analyze the different biasing circuits, discuss types of Noise and distortions in electronic circuits, and interpret low, middle and high frequency response of biomedical instrumentation.
		Analyze and explain the concept of signal condition feedback and its characteristics, principle of operation and design of various biomedical instrumentation.
		Identify and use of various types of electronic components and instrument
		Handle the various equipment's like, Cathode Ray Oscilloscope, Function generators etc.
		Design and study various types of oscillators, Multi-vibrators and amplifiers.
		Analyze the observations and interpret the result of experiments performed
		Compare theoretical with experimental result and determine percentage error.
		Acquire skills of finding faults in experimental units and soldering the electronic component in the circuit
B. Sc. Part-II, Sem.-IV	Communication Electronics and Microprocessor 8085	Apply the basic principle of Electronics to discuss and explain measurements, meter reading,
		Solve problems based on concept of Digital logic, Network, sate logic developing & IC stage
		Compare the different types of Logic IC, and Function andtheir significance, explain the properties and its applications, of decision based signal processing

		Use and explain different type's logical state designing.
		Analyze the different biasing circuits, discuss types of Noise and distortions, logic state defining in digital electronic circuits, and interpret low, middle response of IC families.
		Analyze and explain the concept of signal condition principle of operation and design of various logical instrumentation.
		Identify and use of various types of communication and microprocessor based electronic circuits and components.
		Handle the various equipment's like, Microprocessor kit, software, pulse analyzer, clock cycles, PC etc.
		The virtual practical execution with Virtual lab by IITK, IITB
		Design and study various types of logical instrument design and simulation,
		Analyze the observations and interpret the result of experiments performed
		Compare theoretical with experimental result and determine percentage error.
		Acquire skills of finding faults in experimental units and soldering the electronic component in the circuit.
B. Sc. Part-III, Sem.-V	Measuring Instruments	Apply the basic principle of Electronics to discuss and explain the measurements, meter reading,
		Solve the problems based on concept of Resistance, Network, Instrument developing stage
		Compare the different types of Sensor and actuators and their significance, explain the properties and its applications, of signal processing
		Use and explain different type's sensor, actuator and plotter.
		Analyze the different biasing circuits, discuss types of Noise and distortions in electronic circuits, interpret low, middle and high frequency response of biomedical instrumentation.
		Analyze and explain the concept of signal condition feedback and its characteristics, principle of operation and design of various biomedical instrumentation.
		Identify and use of various types of electrical and electronic components.
		Identify and handle the various equipment's like, Cathode Ray Oscilloscope, travelling microscope, digital multi-meter etc.
		Design and study various types of oscillators, Multi-vibrators and amplifiers.
		Analyze the observations and interpret the result of experiments performed.
Compare theoretical with experimental result and determine percentage error.		
Acquire skills of finding faults in experimental units and soldering the electronic component in the circuit.		

B. Sc. Part-III, Sem.-VI	Advanced Microprocessor and Micro Controller	Apply the principle of sensor and actuators and explain the interfacing based measurements.
		Solve the problems based on concept of Resistance, Network, Instrument developing stage, automation, signal processing
		Compare the different types of process, development board and their significance.
		Use and explain different type's microcontroller interfacing boards and plotter.
		Analyze the different compensating TTL-CMOS circuits, discuss types of distortions in sensing circuits, and response of automated instrumentation.
		Analyze and explain the concept of signal condition and its characteristics, principle of operation and design of various instrumentation.
		Identify and use of various types of microcontroller and electronic components. the circuit.
		Identify and handle the various equipment's like, Cathode Ray Oscilloscope, travelling microscope, digital multi-meter etc.
		Design and study various types of sensor network, Multi-vibrators and amplifiers.
		Analyze the observations and interpret the result of experiments performed.
		Compare theoretical with experimental result and determine percentage error.
Acquire skills of finding faults in experimental units and soldering the electronic component in		
Mathematics		
B. Sc. I, Sem-I	Algebra & Trigonometry, Differential and Integral Calculus	Find inverse and normal form of matrices
		Evaluate the characteristic equation, eigen value and corresponding eigen vector of a given matrix
		Evaluate relation between the roots and coefficients of equations.
		To study application of De Movivre's theorem
		Compute summation of trigonometric series.
		Find inverse and normal form of matrices.
		Evaluate the characteristic equation, eigen value and corresponding eigen vector of a given matrix
		Evaluate relation between the roots and coefficients of equations.
To study application of De Movivre's theorem		

		Compute summation of trigonometric series.
B. Sc. I, Sem-II	Differential Equations (Ordinary and Partial), Vector Analysis and Solid Geometry	Solve first order differential equations using different technique
		Solve differential equations of first order and higher degree and orthogonal trajectories.
		Calculate complementary function and particular integral second order differential equations and describe the different methods to solve second order differential equations.
		Solve first order partial differential equations using different technique.
		Solve compatible differential equations and homogeneous and non-homogeneous equations with constant coefficients
		To interpret the vectors, their product, differentiation and integration
		Determine curvature and torsion
		Solve apply the concepts of divergence, gradient and curls which are useful in physics.
		Describe the different forms of sphere and properties
		Discuss the equations and cone and cylinder.
B. Sc. II, Sem-III	Advanced Calculus and Elementary Number Theory	Describe series and different test of series.
		Interpret sequence and their types.
		Define limit and study the basic property, classify continuity and discontinuity of function of two variable, expand function of two variable by using Taylor's theorem
		Find minima and maxima by using Lagrange's method and study Jacobian
		Evaluate double and triple integration.
		Evaluate GCD of more than two interger by using Euclidean algorithm.
		Study prime number and unique factorization theorem, define Fermat number and solve linear Diophantine equation
		Discuss the congruence and their properties, solve linear congruence by using Chinese remainder theorem
		Study different types of functions
		Describe primitive roots, different types of congruences and quadratic residue
B. Sc. II, Sem-IV	Modern Algebra: groups and rings and Classical Mechanics	To introduce the concept of group with examples and recognize even & odd permutation
		Solve problems on coset.
		Understand major concepts of homomorphim & isomrorphism
		Gain good knowledge & understand regarding ring & integral domain

		Study definitions of left & right ideal principle ideal & equation rings.
		Different Concepts of Contrimits & Genralized Coordinations
		Solve problems on a real velocity & Keplers laws of motion.
		Solve Euler's differential equation.
		Solve Euler's differential equation
		Differential of the equation concept body
B. Sc. III, Sem-V	Mathematical Analysis and Mathematical Methods Mathematical Analysis and Mathematical Methods	Interpret Riemann integral and study fundamental theorem and mean value theorem of integral calculus.
		Study of improper integral and their tests, beta and gamma function.
		Analyze complex function, Analytic function, harmonic function and conjugate function and illustrate complex number by using Milne Thompson method.
		Study Mobius transformation, cross ratio find image of function by using conformal mapping.
		Study definations of metric space, limit point, interior point, open set closed set and compactness and solve examples on Chauchy sequence.
		Solve problem regarding Rodrigue's formula
		Study of Bessel's equation, solution of Bessel's equation
		Solve problem on Fourier series for odd and even function
		Solve problems on Laplace transform
Solve problems on Fourier Transform		
B. Sc. III, Sem-VI	Linear Algebra & Graph Theory	Solve theorem on Vector space
		Analyse Linear transformation and representation of matrices
		Analyse dual space and Bidual space
		Study analyse inner product space
		Describe modules and sub modules
		Study graphs and various types and uses of graph.
		Describe different types of trees and their properties.
		Analyze fundamental cutset and circuit and different representation of planer graph.
		Study how Vector space associated with a graph and Intersection and join of W_T and W_s .
Describe different types matrix related to the graph.		
M.Sc. Part-I	Paper- I: Real Analysis	Interpret Riemann Stieltjes integral & properties

Sem.-I		Describe Sequences and uniform convergence.
		Define Rearrangement of terms of a series & Power series
		Find Derivatives of higher order and study Jacobian.
		Evaluate Maxima and Minima.
	Paper- II: Advanced Abstract Algebra	Recall the concepts of coset and normal subgroups and to prove elementary propositions involving these concepts
		Recognize different types of subgroups such as normal subgroup, cyclic subgroup and understand the structure and characteristics of these subgroup.
		Demonstrate the homomorphism, sum and direct sum of ideals, maximal and prime ideals, nilpotent and nil ideals.
		Translate the transition of important concepts of homomorphism and isomorphism from discrete Mathematics to advanced abstract Mathematics
		Interpret the definition and examples of modules and sub modules.
	Paper- III: Complex Analysis	Identify Cauchy integral formula apply to find the value of function at inside point of the region.
		Express the function in series of positive and negative power of variable in a given region.
		Record the concept of singularities to find integral of complex valued function on some simple connected region and multi connected region.
		Apply the residue theorem to compute several kinds of real integrals.
		Recognize absolute everywhere differential function and they will learn how it helps them to decide analyticity of function.
	Paper- IV Topology – I	Identify the cardinal and ordinal numbers and their role in building up the topology
		Demonstrate the concepts such as topological spaces, open and closed sets, closure and boundary
		Categories some important concepts like continuity, compactness, connectness, projection mapping etc and prove related theorems.
		Relates the basic concepts of countability axiom, separation axioms and convergence in topological spaces
		Distinguish the regular, normal and completely regular spaces.
	Paper- V: Differential Geometry	Discuss the local Intrinsic properties of a surface, curves on a surface and surfaces of Revolution.
	Design arguments in the geometric description of family of curves and surfaces in order to establish basic properties of geodesic	

		Restate Gaussian Curvature, Surface of constant curvature, conformal mapping, Geodesic mapping.
		Recognize tensor calculus, Tensor product of vector spaces, Transformation formulae, contraction special tensors, Inner product.
		Apply covariant differentiation of tensors and use absolute derivation of tensorial forms and tensor connections.
M.Sc. I Sem-II	Paper- VI: Measure & Integral Theory	Analysis Lebesgue outer measure, Regularity and Lebesgue measurability.
		Explain Integration of Non-negative function, the general integral, integration of series, Riemann and Lebesgue integrals.
		Demonstrate the concepts of derivative, differentiation and integration.
		Discuss the Measures and outer measures.
		Express completion of a measure, measure spaces and Holder and Minkowski inequality.
	Paper- VII: Advanced Linear Algebra and Field Theory	Recall the concepts of Eigen values and eigenvectors and polynomial.
		Explain Quadratic forms, Linear transformation, Canonical and Normal form.
		Describe the concepts of Algebraic extension of fields.
		Discuss Normal and separable extension of group.
		Understand the concepts of Galois theory and its Applications.
	Paper- VIII: Integral Equation	Understand the type of integral equations.
		Categorize Volterra integral equations of first and second kind,.
		Determine the solution of Fredholm integral equation of the second kind.
		Define the concepts of iterated kernels and reciprocal kernels.
		Explain solution of Volterra integral equations of second kind.
	Paper- IX: Topology – II	Categorize some important concepts of metric spaces.
		Restate the ideas and concepts of complete metric spaces.
		Interpret the definition and examples of product spaces.
		Express the function and quotient spaces.
		Discuss the metrization and paracompactness.
Paper- X: Riemannian Geometry	Discuss the properties of Christoffel symbols, divergence, gradient, Laplacian.	
	Demonstrate the concepts of Parallel vector field.	
	Intercept the concepts of curavature tensor.	

		Categorize some concepts like Ricci tensor, curvature invariant and Einstein tensor.
		Summarize the concepts of Riemannian curvature, space of constant curvature, , intrinsic symmetries and killing vectors
M.Sc. II Sem-III	Paper- XI: Functional Analysis I	Interpret Quotient spaces of normed linear spaces and its completeness.
		Describe Dual spaces with example
		Define complex linear spaces.
		Recall solvability of linear equations in Banach spaces.
		Study Hilbert spaces and structure of Hilbert spaces.
	Paper- XII: Classical Mechanics	Interpret Variational principle and Lagranges Equations & Hamilton's principle.
		Describe Lagranges Equations of first kind and second kind.
		Study Legendre transformations and the Hamilton equations of motion.
		Study Canonical transformations
		Evaluate the Hamilton-Jacobi Equation for Hamilton's principle function.
	Paper- XIII: General Relativity	Interpret Introduction of special theory of relativity and principles of special theory of relativity.
		Study Einstein's relativity.
		Study Schwarzschild exterior solution and its isotropic form.
		Analyze Schwarzschild interior solutions and Gravitational wave equation.
		Study Eddington's form of Schwarzschild solution and Weyl's solution to the linearized field equation.
	Paper- XIV: Operational Research	Evaluate Graphical solution, Duality in LP. and Economic Interpretation.
		Study Goal programming & Advanced techniques in LP.
		Discuss the Transportation problem and assignment problems.
		Study Shortest route problem and network route problem
		Describe Characteristics of dynamic programming.
Paper- XV: Difference Equation-I	Evaluate approximate summation.	
	Study Equations with variable coefficients & Non-linear equations that can be linearized..	
	Discuss the Z-transform: Properties, initial and final value theorems.	
	Study Stability of linear systems & Stability of non-linear system.	
	Describe Asymptotic analysis of sums.	
M.Sc. II	Paper- XVI: Functional	Study Riesz Representation theorem, adjoint of an operator on a Hilbert space

Sem-IV	Analysis –II	Study use of complex analysis in spectral theory.
		Calculate Compact linear operators on normed spaces.
		Analyze Spectral properties of bounded self-adjoint linear operators
		Study Positive operator and projection operators.
	Paper- XVII: Partial Differential Equation	Solve Genesis of first order P.D.E., Classification of intergals, Linear Equations of the first order
		Recall Classification of second order P.D.E
		Calculate One dimensional Wave equation.
		Solve Laplace’s Equation, Dirichlet problem for a half plane, The Dirichlet problem for a circle.
		Solve Heat conduction problem.
	Paper- XVIII: General Relativity & Cosmology-II	Study of static cosmological models of Einstein and De-sitter their derivations.
		Describe derivation of Roberson Walker Metric, Further Properties.
		Study Motion of particles and light rays in R-W model.
		Study Friedman models: closed model, Flat model, Open model”.
		Study Relativistic steller structure.
	Paper- XIX: Operation Research	Interpret Queing system and Basic characteristic of queing system.
		Determine Games and strategies.
		Apply the concepts of General NLLP constrained optimization with equality constraints.
		Solve Solution of Non-Linear Programming method.
		Discuss the unconstrained and constrained geometric programming problems
	Paper- XX: Difference Equation-II	Interpret The Self-adjoint Second Order Linear Equations
Determine The Sturm-Liouville Problem.		
Solve apply Discrete Calculation of Variation.		
Solve the Boundary Value Problems for Non Linear Equations.		
Discuss the Solution of partial differential equations..		
Physics		
B. Sc. I, Sem-I	Mechanics, Properties of matter, Waves and Oscillation	Understand and apply the basic concepts of Newtonian Mechanics to physical systems.
		Understand the variation of ‘g’ with altitude and depth.

		Determination of gravitational potential for sphere
		Understand the basic concepts of methodology of science and the fundamentals of mechanics & properties of matter. Discuss and apply the rotational dynamics of rigid bodies.
		Examine the phenomenon of simple harmonic motion and distinction between undamped, damped and forced oscillations and the concept of resonance.
		Explain the superposition of simple harmonic motion and acquire the knowledge of Ultrasonic waves, their production, detection and applications in different fields.
		Determine the constants of elasticity and relate it with appropriate things.
		Study of surface tension, equation of continuity, Bernoulli's theorem and variation of viscosity with temperature.
		Perform different practical experiments based on mechanics individually out of self-motivation.
		List out, identify and handle various equipment like different types of pendulums
		Measure various physical quantities by using different measuring instruments such as vernier caliper, micrometer screw gauge, travelling microscope, spherometer.
		Acquire skills in observing and measuring different types of errors.
		Determine the nature of collision by performing experiment and calculate the value of coefficient of restitution.
		Determine the value of acceleration due to gravity by different oscillating objects like Bar & Kater's pendulum
		Calculate the moment of inertia of various objects and correlate it with theory.
		Determine the modulus of rigidity of wire using Torsional pendulum & Maxwell's needle.
		Calculate the Young's modulus of the material of a beam and correlate it with the theoretical values.
		Understand the effect of physical parameters on surface tension.
B. Sc. I, Sem-II	Kinetic Theory, Thermodynamics and Electric Currents	Understand the kinetic theory of gases and deduce Boyle's law;
		Determination of specific heat of monatomic gas & its extension to di & tri-atomic gases
		Differentiate between real and Vander Waals gases & understand the transport phenomenon in gases
		Formulate the relationship between thermodynamic variables
		Develop an understanding of laws of thermodynamics Simplify the Carnot's theorem and discuss various state parameters

		<p>Understand the concept of Liquefaction of gases</p> <p>Deduce the Clausius-clapeyron heat equation and determine the Maxwell's general relationship and application to Joule-Thomson cooling</p> <p>Understand the effect of electric and magnetic fields on charged particles</p> <p>Understand the construction and working of Mass spectrograph, velocity selector & Cyclotron</p> <p>Simplify electrical circuits by applying various network theorems</p> <p>Study of AC circuits, series and parallel combination of L, C, and R, their reactance; transformer</p> <p>To apply the theories learnt and the skills acquired to solve real time problems</p> <p>Distinguish between the magnetic effect of electric current, electromagnetic induction and the related laws in appropriate circumstances</p> <p>Understand the working of Ballistic Galvanometer and its applications</p> <p>Understand different types of Oscillator circuits, working and their applications in in domestic, industrial and scientific devices/equipment's</p>
B. Sc. II, Sem-III	Electrodynamics, Solid state electronics, Theory of relativity, Atmosphere and Geo-physics.	<p>Understands the concepts and theorems concern to vector calculus, electric magnetic phenomenon and its applications. Apply the fundamental knowledge to solve problems.</p> <p>Gain the understanding of fundamental concepts, principles and equations concern to Magnetostatics and their applications</p> <p>Understands the theory of semiconductor materials and devices. To get an idea about the different semiconductor diodes and its applications</p> <p>Acquire the knowledge about junction transistor, OP-AMP and its applications.</p> <p>Ability to develop the basic concepts of special theory of relativity. Derive and prove the expression for experimental based phenomenon</p> <p>Understands the knowledge about Earth's internal structure, atmosphere, and its composition. To get an idea about origin of earthquakes and the description of seismic sources.</p> <p>Demonstrate an understanding of the basic principles of operation of semiconductor diodes and transistors.</p> <p>Explain the voltage transfer characteristics of the different diode and transistor.</p> <p>Differentiate between the types of OP-AMP and its applications through experiment.</p> <p>Learn the aspects of CRO, to determine the hysteresis loss of known voltage.</p> <p>Work effectively in a small team to complete a complex set of tasks.</p>
B. Sc. II,	Optics, Laser, fibre optics and	<p>Understand the phenomenon of light like reflection, interference, transmittance etc. and</p>

Sem-IV	renewable energy sources	evaluate how to measure wavelength and refractive index using Newton's ring
		Gain the knowledge of wave nature of light and different types of diffraction. Also understand how to calculate wavelength of light by using grating
		Understands the concept of polarization, double refraction and ability to develop analyze the polarization of light by using Nicol prism
		Acquire the knowledge about LASER, MASER, pumping characteristics and different types of laser and its application.
		Gain the knowledge of fiber optics, and also know about its losses, communication and their applications in various fields.
		Understands the knowledge about renewable energy sources, methods of storage and its application
		Demonstrate an understanding of the concept of Newton's ring and able to calculate wavelength of sodium light.
		Understand how to calculate wavelength of monochromatic light and resolving power of plane diffraction grating.
		Learn about resolving power of telescope through experiment.
		Explore the concept of refractive index and how to find the refractive index of prism by spectrometer.
Understand how to determine capacitance by using Scherring bridge method and self-inductance by bridge rectifier method.		
B. Sc. III, Sem-V	Quantum Mechanics, Nuclear Physics & Solid State Electronics	Apply the basic principle of quantum mechanics to discuss and explain the dual nature of light and matter
		To solve the problems based on concept of quantum mechanics using Schrodinger time dependent and independent equations.
		Compare the different types of quantum numbers and their significance; explain the properties of X-rays and its applications, Raman Spectroscopy.
		Use and explain different types particle detectors, interpret constitution of nucleus, concept of nuclei decay, nuclear reactions.
		Analyze the different biasing circuits, discuss types of Noise & distortions in electronic circuits, interpret low, middle and high frequency response of RC coupled amplifier using h-parameters.
Analyze and explain the concept of feedback and its characteristics, principle of oscillation and design of		

		various oscillators and multivibrators
		Identify and use of various types of electrical and electronic components.
		Identify and handle the various equipment's like, Cathode Ray Oscilloscope, travelling microscope, digital multimeter etc.
		Design and study various types of oscillators, Multivibrators and amplifiers.
		Analyse the observations and interpret the result of experiments performed.
		Compare theoretical with experimental result and determine percentage error.
		Acquire skills of finding faults in experimental units and soldering the electronic component in the circuit.
B. Sc. III, Sem-VI	Statistical Mechanics and Solid- State Physics	Evaluate various basic concepts in statistical mechanic slike phase space, unit cell, micro-state, macro-state, energy states, entropy relation, probability etc. and understand Maxwell Boltzmann statistics, and its application
		Understand concept of distinguishable & indistinguishable particles like boson & fermions etc. & understand different statistics like Bose – Einstein, Fermi- Dirac distribution and its application
		Basic knowledge of a crystal structure in terms of atomic positions, unit cells, crystal symmetry & x-ray diffraction analysis to recognize common crystal structures & describe their symmetries
		Analyze the basic theory of electrical properties of materials to understand motion of electron and band structure of solids
		Analyze the basic theory of magnetic properties of materials in terms of atomic magnetic moment, magnetization vector, magnetic susceptibility, dia. para and ferromagnetic materials, Curie's law, Weiss's law, hysteresis and energy loss etc.
		Introduce the basic properties of superconductors and nanomaterials in terms of its properties and application.
		Identify and use of various types of electrical and electronic components.
		Identify and handle the various equipment's like, Cathode Ray Oscilloscope, travelling microscope, digital multimeter etc.
		Design and study various types of diodes (p-n junction diode, Zener diode and Photodiode), Solar cell etc.
		Analyse the observations and interpret the result of experiments performed
		Compare theoretical with experimental result and determine percentage error.
		Acquire skills of finding faults in experimental units.

M.Sc. Part-I Sem.-I	MATHEMATICAL PHYSICS	Understand and explain the algebra of matrices, partitioning of matrices and solve the eigen value problem; differentiate and solve matrices in classical and quantum mechanics
		Derive and analyze limits and continuity for complex functions; explain and apply the concept and consequences of analyticity and the Cauchy-Riemann equations; determine the residues of a complex function and use the residue theorem to compute certain types of integrals; Solve problems based on series expansion-Taylor and Laurent series
		Obtain the general solution of second-order differential equation; explain the functions of different types of differential equations
		Solve Legendre Polynomial by applying special functions
		Solve differential equations like Legendre, Bessel and Hermite and obtain corresponding generating functions
		Derive properties of Laplace transform and Fourier transforms and state their applications in various physical problems.
	CLASSICAL MECHANICS	understand the fundamentals of Newtonian mechanics for single particle and system of particles; state its limitations; describe conservation laws
		Classify and define different types of constraints, explain its effect, justification for realizing constraints on the system and difficulties introduced by imposing constraints on it
		determine Gauge function for Lagrangian and its gauge invariance
		Define and explain Hamilton's principle and derive characteristic functions; solve Hamilton-Jacobi equation
		understand the motion of a mechanical system using Lagrange-Hamilton formalism
		Define and derive properties of two-body central force problem
		explain the stability of circular orbits, its classification and derive differential equation; explain and derive Kepler's laws
		obtain canonical transformation, generating functions; solve Poisson's brackets-transition from discrete to continuous system
	develop the understanding of small oscillations	
	QUANTUM MECHANICS-I	be familiar with the main aspects of the historical development of quantum mechanics and be able to discuss and interpret experiments that reveal the wave properties of matter, as well as how this inspired replacing classical mechanics with a wave equation
		discuss the failures of various phenomenon of classical mechanics & origin of wave mechanics
		determine matrix representation of quantum mechanics

		describe simple harmonic oscillator using raising and lowering operators, represent angular momentum operators and hamiltonian in spherical coordinates; derive and discuss spatial nature of hydrogen electron orbital's
		solve Pauli Spin matrices; explain its application to spin-orbital of Hydrogen; obtain Clebsch-Gordan coefficients
		understand the concepts of angular momentum and spin, as well as rules for quantisation and their additions
		solve the Schrodinger equation on their own for simple systems in one to three dimensions, both analytically and by using robust numerical methods; use these solutions to calculate their time evolution, associated probabilities, expectation values, and uncertainties, as well as give concise physical interpretations and reasoning underlying the mathematical results
		distinguish between Schrodinger, Heisenberg and Interaction representations by various approximation methods; determine ground state energy of various systems by Variation method and WKB method for one dimensional problem
	COMPUTATIONAL METHODS AND PROGRAMMING	derive methods for determination of zeroes of linear and nonlinear equations and transcendental equations; obtain solution of simultaneous linear equations
		iteratively find the roots of smoothly varying functions with nonzero derivatives; carry out matrix operations, including inverses and determinants
		solve systems of linear equations with boundary value problems using multiple methods; determine eigenvalues and eigenvectors; use numerical methods for interpolation, finding roots of equations and curve fitting
		obtain eigen values and eigen vectors of matrices; apply numerical methods for interpolation; find roots of equations
		integrate a function within limits of given interval and hence to estimate the area under the curves
		use numerical differentiation and integration for problems in physics; numerically, solve ordinary differential equations with boundary value problems
		independently program computers using leading-edge tools (C-programming)
		formulate and computationally solve the selected problems in physics using C-programming
M.Sc. Part-I	ELECTRODYNAMICS-I	Evaluate and solve electrostatic potential; Poisson and Laplace equations; Electrostatic energy density; electric energy of charge distribution in free space and in different media

Sem.-II		Solve Laplace equation with boundary conditions and potentials using cartesian, cylindrical and spherical symmetries; Green's function
		Apply Biot-Savart Law and Ampere's law for straight wire, loop, solenoid, toroid, current sheet
		determine charge distribution in finite region; solve multipole expansion of potential and field
		Explain the effect of uniform field on dielectric sphere; understand the concept of susceptibility and polarizability and apply to molecular field
		Understand time varying fields, displacement current, Faraday induction
		Solve Maxwell's equations for time varying fields; state its applications to propagation of electromagnetic waves and explain the significance of Poynting theorem
		describe the nature of electromagnetic wave and its propagation through different media and interfaces
		explain charged particle dynamics and radiation from localized time varying electromagnetic sources
	QUANTUM MECHANICS-II	Understand historical aspects of development of quantum mechanics; Understand and explain the differences between classical and quantum mechanics
		derive the expression for the first and second order energy shifts due to a perturbation for the non-degenerate and degenerate states from first principles and its application for obtaining fairly accurate energies corresponding to these states of perturbed systems
		describe time independent perturbation theory; effect of magnetic and electric field on spectra- Zeeman and Stark effect
		Understand the central concepts and principles in quantum mechanics, such as the Schrodinger equation, the wave function and its statistical interpretation, the uncertainty principle, stationary and non-stationary states, time evolution of solutions, as well as the relation between quantum mechanics and linear algebra including understanding of elementary concepts in statistics, such as expectation values and variance. They will master the concepts of angular momentum and spin, as well as the rules for quantization and addition of these. Hence, they will be able to solve the complex systems by approximation method
		solve the time dependent perturbation problems for quantum systems and predict the consequences
		explain the interaction of electromagnetic radiation with the atom resulting in stimulated emission in the atomic systems
		derive and explain transition probabilities for induced emission and absorption; selection rules and state its application to atomic spectra

		understand scattering from finite range and square well potentials; in a central potential; derive Born approximation
		develop the knowledge of low and high energy physics scattering phenomenon
		generate the wave functions for the systems of identical particles; relate the symmetry property of the wave function to the spin of the particles (Bosons and Fermions) and applicability of Pauli's exclusion principle
		derive creation and annihilation operators and their algebra for fermions and bosons
		Solve the Dirac Equation and Klein-Gordon Equation and obtain its free particle solution; derive free Dirac Particles equation of continuity and Second order wave equations
	SOLID STATE PHYSICS	develop theoretical and experimental approach to give fundamental insights into solid state physics
		explain the characteristic physical properties of different categories of solid materials, with an emphasis on the crystalline state; outline a wide spectrum of theoretical approaches to model the mechanical, thermal and electrical properties of solid materials
		describe Single Crystal and Poly Crystals and related terms-Crystal Symmetry, Symmetry Elements, Crystal Types, Bravais Lattices
		understand concept of X-ray diffraction, state its principle and working; List different X-Ray diffractions Techniques for structure determination
		understand the concept of Reciprocal Lattice; its Vector Demonstration in two dimensions; explain the significance of Brillouin zone in reciprocal lattice; explain the diffraction of Electrons and Neutrons;
		understand and explain the different crystals-molecular Crystals, Ionic Crystals; determine Madelung Constant, Covalent Crystals and Metals
		discuss the inter-Atomic Forces, Cohesive Energy of a Solid; Infrared Absorption by Ionic Crystal Lattice; anharmonicity and thermal Expansion
		derive Dulong and Petit Law; understand the effect of temperature on Specific Heat
		Explain Einstein and Debye Theories in detail
	NET WORK THEOREMS AND SOLID-STATE DEVICES	analyze the circuits using Kirchhoff's law and network simplification theorems; classify different passive components
		evaluate transient response, steady state response, network functions and analyze the series resonant and parallel resonant circuits
		differentiate between semiconductors, conductors and insulators on the basis of energy band diagram
		classify different types of diodes; Determine their characteristics

		obtain I/ O Characteristics of FET and MOSFET; explain its basic working principle; design and analyse these amplifier circuits
		design and analyze simple rectifiers and voltage regulators using diodes; have ability to design and analyze simple circuits using semiconductor switching devices like triac, diac and SCR
		Classify different amplifiers; describe basic working principle and input/output characteristics of Bipolar Junction Transistor; design and analyze simple BJT oscillator and multi-vibrator circuits
		construct and explain working and uses of various transducers; understand the construction and operation of basic measuring instruments.
M.Sc. Part-II Sem.-III	Electrodynamics-II	Explain charged particle dynamics and radiation from localized time varying electromagnetic sources
		Understand the basic mathematical concepts related to electromagnetic vector fields
		Understand and solve wave equation for electric field and magnetic fields in free space
		Explain the variation of electric and magnetic field with time
		be familiar with concepts of plasma physics and its relation with ordinary electromagnetic
		Understand the concept and application of wave guide, plasma and confinement
		Understand effect of magnetic field on electromagnetic wave
		Be familiar with the Magnetosonic and Alfvén Waves
	Solve the problems in electrodynamics by applying these theories and equations using advanced level mathematics	
	Statistical Mechanics	Understand the concept of microscopic and macroscopic states and relationship between thermodynamics and statistics
		Classify ensembles, relate partition function with thermodynamic quantities
		Discuss statistics of indistinguishable particles, application of Fermi-Dirac and Bose-Einstein distribution to these particles
		Interpret classical (Maxwell-Boltzmann) statistics and quantum statistics (Bose and Fermi Dirac) statistics for different systems of particles
		Derive knowledge on the concepts of phase transitions and super fluidity
		Correlate space - time dependent fluctuations
		Understand the concept of super-fluidity, Landau's theory and non-equilibrium processes
	Atomic & Molecular Physics	There are many atomic models to explain atomic structure. But none of the model explained atomic structure fully. A new model could explain all parameters of atomic structure called vector atom model. Studying this

		model students can draw vector diagrams easily
		understand spectroscopy of the hydrogen and alkali atoms
		understand of quantum behaviour of atoms in external electric and magnetic fields
		recognize the spectroscopy of many electron atomic systems and hyperfine splitting of spectral lines
		understand Resonance Spectroscopy (ESR and NMR).
		be able to apply knowledge to detailed understanding of vibrational-rotational spectroscopy of diatomic molecules, isotope shifts
		be able to describe the detailed concept of Infrared & Raman spectra of Polyatomic molecules;
		be able to understand selection rules to explain transitions
		be able to describe apply knowledge to detailed understanding of electronic states of atoms, molecules, Franck-Condon factors
		Discuss origin of sodium D1 & D2 lines and determine interaction energy from different coupling schemes
		Understand the importance of rotational and vibrational energy levels by studying molecular spectroscopy
	Digital Techniques	Explain charged particle dynamics and radiation from localized time varying electromagnetic sources
		Understand the basic mathematical concepts related to electromagnetic vector fields
		Understand and solve wave equation for electric field and magnetic fields in free space
		Explain the variation of electric and magnetic field with time
		be familiar with concepts of plasma physics and its relation with ordinary electromagnetic
		Understand the concept and application of wave guide, plasma and confinement
		Understand effect of magnetic field on electromagnetic wave.
		Be familiar with the Magnetosonic and Alfvén Waves
Solve the problems in electrodynamics by applying these theories and equations using advanced level mathematics		
M.Sc. Part-II Sem.-IV	NUCLEAR AND PARTICLE PHYSICS	Understand the structure of atomic nuclei and basic properties of a nucleus such as binding energy and nuclear forces
		Measure nuclear magnetic moment by Rabi's method and Bloch's method
		Interpret ground state properties of Deuteron Meson Theory of Nuclear forces
		Understand the process of nuclear fission and fusion and concept of particle detector and accelerators
		Identify and differentiate different nuclear detectors and particle accelerators

		Classify elementary particles and understand interaction between them
		Outline symmetry and conservation laws, understand basic design of quark model
	OPAMP THEORY AND ITS APPLICATIONS	Design differential amplifier, derive its configurations and DC/AC analysis
		Describe block diagram of typical Op Amp
		Identify basic integrated circuit components, develop its designing & packaging
		Classify various types of oscillators
		Design the signal generators and low and high order filters
		Understand and design multi-vibrator, ADC and PLL circuits
	CONDENSED MATTER PHYSICS-II	Identify different type of defects and imperfections in crystals
		Explain various dislocations and stacking faults in close packed structures by experimental methods
		Interpret the Hartree & Hartree-Fock approximation
		Understand the basics of Fermi Liquid Theory
		Describe different types of point defects within the framework of band model
		Identify different types of lattice disorders applying theoretical models, summarize impurity band semiconductor and amorphous semiconductors
	NANO SCIENCE AND NANOTECHNOLOGY	Tailor the properties of solids with proper understanding of their physical and chemical properties
		Understand the concept of free electron theory and 1D, 2D, 3D nanomaterials, band structure in three dimensions
		Understand various chemical and physical methods for the synthesis of diverse types of nanomaterials (0D, 1D and 2D)
		Derive information on the specific details of both bottom up and top-down synthesis
		Understand working principles and analysis of size, topography and morphology analysis of Nanomaterials based on SEM/TEM and scanning probe microscopies (AFM and STM)
		Describe the size dependent properties of nanostructured materials using the concept of quantum confinement and summarize their electrical and mechanical properties
Acquire the knowledge of carbon nanostructures and illustrate their potential applications		
Zoology		

B. Sc. Part-I, Sem.-I	Life and Diversity of Non-cordata	Get knowledge about Non Chordates, Phylum Protozoa and related specimens like Plasmodium Vivax. They can also get information and knowledge about Protozoa related diseases.
		Get knowledge about Phylum Porifera and Coelenterata including their specimens given in syllabus.
		Get knowledge about Phylum Platyhelminthes and Aschelminthes including their specimens given in syllabus.
		Understand the theoretical aspects of Phylum Annelida and Arthropoda their general characters with reference to their model organism.
		Know about the Phylum Mollusca and Echinodermata with reference to their model organism.
		Learn about General Characters of Hemichordata, Body Organization of Balanoglossus, and Affinities of Balanoglossus.
B. Sc. Part-I, Sem-II	Cell and Developmental Biology	Get knowledge about the structure of Eukaryotic Cell, Plasma Membrane and Endoplasmic Reticulum with their functions and role in Eukaryotic Cell.
		Get knowledge about the structure of Golgi complex, Ribosome, Mitochondria and Lysosomes with their functions and role in Eukaryotic Cell
		Get knowledge about the structure of Nucleus, Nucleolus, Chromosomes and Endoplasmic Reticulum with their functions and role in Eukaryotic Cell.
		Understand the cell cycle and various stages of cell cycle during cell division including various stages of mitosis and meiosis.
		Learn about General Characters of Hemichordata, Body Organization of Balanoglossus, and Affinities of Balanoglossus
		Know about the Placenta in mammals, Parthenogenesis, Stem cells and regeneration including its types and functions
B. Sc. Part-II, Sem-III	Life and Diversity of Cordata	Learn about the characters and different levels of organization in phylum of chordates including classification from Protochordates upto class Mammalia.
		Learn about the understand confidently explain Migration in fishes and birds, parental care in Amphibians and Poisonous and non-poisonous snakes
		Mammalian endocrine gland their structure and significance evolution of Man and convergent and divergent evolution
		Classification of human and human ancestry Homoerectus, Neanderthal man, Cro-magnon man and modern man. Evolution of heart and aortic arches

		Learn Evolution with reference to Meaning and scope, confidently explain Indirect Evidences of evolution, techniques like radioactive carbon dating.
		Evolutionary Processes like including natural selection and related theories. Students would be able to Population Genetic.
B. Sc. Part-II, Sem-IV	Advanced Genetics and Animal Ecology	Learn Concept of genes and Mendel's Genetic with reference to different laws, and process of Linkage and its significance.
		Learn Crossing Over, Darlington's theory, breakage and exchange theory, and Copy choice theory and Multiple alleles concept with reference to drosophila.
		Learn about the Sex determination: Autosome and sex chromosomes and Genic Balance theory, Sex determination.
		Learn about the various type genetic disorders, chromosomal disorders.
		Learn about Amniocentesis, Inheritance of eye colour, Skin colour and Recessive genes, consanguineous marriages, Birth control measures
		Concept of ecology with reference to Abiotic factors and Biotic factors Relationship between habitat and ecological niche, energy flow in an ecosystem, food chain, food web.
B. Sc. Part-III, Sem-V	Animal Physiology and Economic Zoology	Understand the comparative respiratory organs including blood and its constituents. Student would be able to know the structure of heart and the rhythmic cardiac cycle.
		Understand the concepts of Muscles structure, their types, functions and working. They can analyze and apply their knowledge in university exam as well as various competitive exams.
		Understand the concepts of Nervous System and they can analyze and apply their knowledge in university exam.
		Understand Oestrous and Menstrual cycle. Students would be able to know the hormonal control of spermatogenesis, Oogenesis. They can also understand the Osmoregulation and its mechanism in aquatic and terrestrial animals.
		Understand the concepts of Agriculture Zoology and they can analyze and apply their knowledge in university exam.
		Know the definition, Scope, importance and present status of Aquaculture in India.
B. Sc. Part-III, Sem-VI	Molecular Biology and Biotechnology	Know about the definition of Genetic material and its basic information including Mitochondrial DNA. Student would be able to know about the RNAs and Non-Genetic RNA.
		Understand the concepts of replication, their types, and various enzymes involved in DNA replication, along

		with their functions.
		Know the Genetic code and its various features, the process of transcription and Gene regulation in prokaryotes and Eukaryotes.
		Understand the concepts Mutations and different types, and techniques like PCR, DNA Fingerprinting and related techniques.
		Understand the concepts of Molecular Biology Techniques like Recombinant DNA Technique, Hybridoma Technology, and genetic engineering etc.
		Understand the Immune system. Students would be able to distinguish between Innate and adaptive immunity. Students would be able to know the types and production of immune cells and their related organs
English		
B.Sc. Part-I, Sem-I	Compulsory English	Understand the prose content, poetry and communication skills by studying their nuances.
		Apply four basic skills of the English language in daily routine of students.
		Formulate/ compose his/her own sentences and able to speak English Language with more competence and clarity in a confident way.
		Collaborate wherever needed and linguistically communicate with other students in English language.
		Communicate effectively, proficiently with enhanced level of English usage by using their own creative ideas, thoughts and views.
B.Sc. Part-I, Sem-II	Compulsory English	Understand the prose content, poetry and communication skills by studying their nuances.
		Apply four basic skills of the English language in daily routine of students.
		Formulate/ compose his/her own sentences and able to speak English Language with more competence and clarity in a confident way.
		Collaborate wherever needed and linguistically communicate with other students in English language.
		Communicate effectively, proficiently with enhanced level of English usage by using their own creative ideas, thoughts and views.
Marathi		

B.Sc. Part-I, Sem.-I	वैचारिक	ज्योतीबाफुलेयांच्याचरित्राचाअभ्यासकरूनविविधप्रश्नविद्यार्थ्यांनीविचारली.
		डॉ. ए.पी. जे. अब्दुलकलामयांनीकेलेलेसंशोधनवचरित्रयावरविद्यार्थ्यांनाप्रश्नविचारण्यातआले.
		विचारआणिशब्दभांडार वाढवूनविद्यार्थ्यांचेज्ञानसंवर्धनाने प्रगतीझाली.
	कविता	ज्ञानेश्वरयांचीगुरुवंदनाविद्यार्थ्यांनामार्गदर्शकतत्त्वाकडेघेऊनजाते.
		स्त्रीसंतअसूनहीजनाबाईताठमानेनेजगूनपरंपरावादीविचारालाझुगारतनाहीत. स्त्रीजाणिवेचाहुंकारप्रस्तुतअभंगातूनव्यक्तहोतो.
		कवितेतूनसामाजिकजाणीवनिर्माणझालीआहे.
	उपयोजित मराठी	पत्रांचेप्रकार, वैशिष्ट्ये, स्वरूपसविस्तरपणेविशद.
		कार्यालयीनपत्र, खाजगीपत्र, व्यावसायिकपत्रयाचीमाहितीदिली.
आजच्याव्यवहारातपत्रांचीगरजकाय? हेविशदकेले.		
पत्रलिहिण्याचासरावकेला. वहीमध्येपत्रलिहूनआणूनदाखविले.		
B.Sc. Part-I, Sem.-II	वैचारिक लेख	राजर्षी छत्रपती शाहू महाराजांच्या विविध कार्याची सखोल माहिती
		रघुनाथ माशेलकर यांचे वैज्ञानिक विचार व संशोधकीय कार्य - वैज्ञानिक दृष्टिकोनाची माहिती
		विद्यार्थ्यांनी वरील लेखातून वैज्ञानिक दृष्टिकोन आत्मसात केला
	कविता	मातीशी नाते म्हणजे काय? विद्यार्थ्यांच्या भावनेला स्पर्श
		माणसे जन्माने जगतात की कर्माने यांचा ऊहापोह.
		कवितेतील शब्द सामर्थ्याने विद्यार्थ्यांनी स्पर्धात्मक दृष्टीने पर्यायीवाचक शब्द भांडार वाढविले.
	उपयोजित मराठी	वृत्तसंस्था, वृत्तांकन, यांच्या प्रसारआणि प्रचारासाठी असलेली भूमिका.
		पत्रकारिता, पत्र लेखन, वृत्त लिखाण विद्यार्थ्यांचे भविष्य बनू शकते.
Hindi		
B.Sc. Part-I, Sem.-I	ABHINAV	Understand the basic concept and subject of Hindi and its origins
		Evaluating the concept of Hindi from past to present and making the society more closelythrough literature
		Hindi is used as an official language as well as second language so they can easily be employed easily in those countries also
		As they are practicing translation from Hindi to English and English to Hindi and some otherlanguage as well as they can become translators in many central government offices

		Having good command over particular language one can present himself in better way.
		Learning Hindi and non Hindi region definitely one can achieve anything .
		Understand “Bade Ghar Ki Beti, Budhiya and Bakul Firana Stories
		Understand the adharbhut pathygram and sandarbhas and poems by Harivanshray Bacchan.
		Practicing translation form Hindi to English and English to Hindi and same other Language as well the can become translators in many central govt. offices.
B.Sc. Part-I, Sem.- II	ABHINAV	understand the basic concept and subject of Hindi and its origins
		Evaluating the concept of Hindi from past to present and making the society more closely through literature
		Hindi is used as an official language as well as second language so they can easily be employed easily in those countries also
		Practicing translation from Hindi to English and English to Hindi and some other language as well as they can become translators in many central government offices
		Having good command over particular language one can present himself in better way.
		Learning Hindi and non Hindi region definitely one can achieve anything .
		Understand vrutantlekh, ekanki, sawndlekh and smansmarn.
		Understand the adharbhutpathygram and sandarbhas and poems by HarivanshrayBacchan.
		Practicing translation form Hindi to English and English to Hindi and same other language as well the can become translators in many central govt. offices

AMOLAKCHAND MAHAVIDYALAYA, YAVATMAL-445001

COURSE OUTCOME (CO) Subjects covered under faculty of Arts/Humanities/ Social Sciences]

Subject- Marathi		
Class	Course	Outcome (Students will be able to.....)
B.A. Part-I, Sem-I	वैचारिक लेख	विनोबा भावे, साने गुरुजी, अभय बंग यांचे विचार लेखन.
		शिक्षण, संस्कृती व शारीरिक व्यायाम इ. बाबी विद्यार्थ्यांना शिकता आल्या.
	ललित लेख	मधुकर केचे, डॉ. मधुकर वाकोडे, अरूण जाखडे यांच्या ललित साहित्याचा अभ्यास.
		परंपरा, ग्रामीण संस्कृती, सहिष्णू व्यक्तिमत्त्व यांचा अभ्यास विद्यार्थ्यांना करता आला.
	कविता	ज्ञानेश्वर, सावतामाळी, केशवसुत, तुकडोजी महाराज, नामदेव ढसाळ, शंकर बडे, अजीम नवाज राही यांच्या काव्यातील आशय.
		प्राचीन परंपरा व भाषा, आधुनिक कवितेतील बदल, व-हाडी मार्मिक वेचे व कवितेतील निवेदन शैली ओळखण्यास मदत
व्यावहारिक मराठी	लेखन विषयक नियम व मुद्रित शोधन.	
	ह्रस्व, दीर्घ शब्द, वर्णमालेची खोलवर माहिती तसेच वाक्यातील चुका व त्याचे चिन्ह कसे लिहावेत ? ही ओळख झाली.	
B.A. Part-I, Sem-II	वैचारिक लेख	स्वामी विवेकानंद, नरेंद्र दाभोळकर, चंद्रशेखर शिखरे यांचे विचारांचा अभ्यास.
		अध्यात्म आणि विज्ञान, विज्ञान व अंधश्रद्धा, सामाजिक प्रथा व परंपरा या विचार तत्त्वज्ञानाने आकलन शक्ती वाढण्यास मदत होते.
	ललित लेख	केशिराजबास, बाबाराव मुसळे, मीनल येवले यांचे ललित वाङ्मय.
		दृष्टांत, ग्रामीण व्यक्तिचित्रणे आणि महिलांच्या समस्या समजण्यास मदत होते.
	कविता	नामदेव, जनाबाई, सावित्रीमाई फुले, बी, शिवा राऊत, मल्लिका अमरशेख, स. ग. पाचपोळ यांची काव्यरचना.
		संतांचे समाज सुधारणा विचार, स्त्रियांची सामाजिक स्थिती, आई बदल कणव याची जाणीव होते.
व्यावहारिक मराठी	कार्यालयीन पत्र, स्व-परिचय पत्र, नोकरीसाठी अर्ज.	
	कार्यालयीन पत्र मायना, रेझुमे (स्व- ओळख), तसेच नौकरी अर्ज करण्याची तंत्र शुद्ध माहिती इ. मिळण्यास मदत होते.	

B.A. Part-II	वैचारिक लेख	शब्दांचे सामर्थ्य विद्यार्थ्यांना ज्ञात व्हावे. भाषण व निवेदन महापुरुषांच्या विचारांतून शिकले.	
	ललित लेख	ललित लेखनातून सत्य जगासमोर मांडल्या जाते. मराठी साहित्यातील लेखकांची स्पर्धा परीक्षेसाठी तयारी उपयुक्त.	
	कविता	कवितेमध्ये संत, पंत, तंत, आधुनिक इ. प्रवाह येतात. परंपरा व संस्कृती यामधून मानवी जीवन जगण्याचा मंत्र विद्यार्थ्यांनी घेतला.	
	पत्रलेखन	पत्र म्हणजे काय ? पत्रलेखनाचे कौशल्य, पत्रलेखनाचे तांत्रिक टप्पे, इ. बाबी स्पष्ट करणे. पत्रांच्या अनेक बाबी वहीमध्ये लिहून / सराव केला.	
	वैचारिक	भाषा विकसित करणे. विविध कार्यक्रमाकरिता लेखकांचे विचार उपयोगात आणले.	
	ललित लेख	शब्दांचे भांडार वाढून मराठी भाषेची वृद्धी वाढविली.	
B.A. Part-III	कविता	तरुणाईच्या व्यक्तित्वाला शोभेल अशी काव्यरचना. अनेक सुभाषितांमधून निवेदन करण्याची कला प्राप्त केली.	
	जाहिरात लेखन	जाहिरात लिखाणामुळे किंवा सादरीकरणामुळे विद्यार्थी भविष्य घडवू शकतात. संवादात्मक अभिनयातून जाहिरात सादरीकरण करण्याची कला शिकले.	
	मराठी वाङ्मयाची सांस्कृतिकपार्श्वभूमी (आरंभ ते १८१८)	प्राचीन व मध्ययुगीन साहित्यातून साहित्याची रूपरेषा स्पष्ट होते. साहित्याचा विकास होण्यास प्राचीन व मध्ययुगीन सामाजिक व सांस्कृतिक पार्श्वभूमीचे महत्वाचे योगदान आहे. आधुनिक काळात विकसित झालेल्या साहित्याची पाळेमुळे या सांस्कृतिक पार्श्वभूमीत पाहायला मिळते.	
	साहित्यविचार	साहित्याची निर्मिती प्रक्रिया साहित्य शास्त्रातून लक्षात येते. साहित्याच्या व्याखेचे स्वरूप कळते. साहित्याचे प्रयोजन लक्षात येते.	
MA Part-I, Sem-I	संतसाहित्य	संत साहित्याची ओळख विद्यार्थ्यांला होईल. मध्ययुगीन काळातील सामाजिक, सांस्कृतिक आणि धार्मिक परिस्थितीचे आकलन होईल.	
	विशेष वाङ्मय प्रकार – कविता	कविता वाङ्मयप्रकारची जडणघडण दिग्दर्शित करते. महत्वाचा आधुनिक साहित्यप्रकार म्हणून या विषयाचे महत्व आहे. साहित्यप्रकाराचा अभ्यास लक्षात घेताना नव कवितेचा प्रवाह लक्षात येतो	
	MA Part-I,	मराठी वाङ्मयाची सांस्कृतिक पार्श्वभूमी (१९६० ते १८१८)	मराठी वाङ्मयाच्या संस्कृतीचा अभ्यास होतो. आधुनिक काळात विकसित झालेल्या साहित्याची पाळेमुळे या सांस्कृतिक पार्श्वभूमीत पाहायला मिळते.

Sem-II	समीक्षाविचार	समीक्षेची दृष्टी या विषयाच्या अभ्यासातून प्राप्त होते.
		साहित्याचे समतोल दृष्टीने आकलन करता येते.
		तुलनात्मक अभ्यासाची दिशा प्राप्त होईल.
	महानुभाव साहित्य	महानुभाव साहित्याची ओळख होईल.
		म्हाइंभट यांच्या साहित्याचा अभ्यास करून प्राचीन काळातील मराठी भाषेची ओळख होईल.
		यासोबतच मराठी भाषेत म्हाइंभटयांचे योगदान लक्षात येईल.
	विशेष वाङ्मय प्रकार : कादंबरी	आधुनिक वाङ्मयात कादंबरी हा महात्वाचा वाङ्मयप्रकार आहे.
		वाङ्मयप्रकार हि संकल्पना समजून घेणे.
		कादंबरी या वाङ्मयप्रकाराची अन्य वाङ्मयप्रकाराशी तुलना करणे शक्य होईल.
MA Part-II	मराठी वाङ्मयाची सांस्कृतिक पार्श्वभूमी (१८१८ ते १९६०)	मराठी वाङ्मयाच्या संस्कृतीचा अभ्यास होतो.
		आधुनिक काळात विकसित झालेल्या साहित्याची पाळेमुळे या सांस्कृतिक पार्श्वभूमीत पाहायला मिळते.
	समीक्षाविचार	समीक्षेची दृष्टी या विषयाच्या अभ्यासातून प्राप्त होते.
		साहित्याचे समतोल दृष्टीने आकलन करता येते
	लोकसाहित्य	साहित्याची निर्मिती लोकसाहित्यातून झाली.
		लोकसाहित्य हा साहित्याचा महत्वाचा अविष्कार आहे.
	विशेष वाङ्मय प्रकार - कादंबरी	आधुनिक वाङ्मयात कादंबरी हामहात्वाचा वाङ्मयप्रकार आहे.
		वाङ्मयप्रकार हि संकल्पना समजून घेणे.
		कादंबरी या वाङ्मयप्रकाराची अन्य वाङ्मयप्रकाराशी तुलना करणे.
English		
B.A. Part-I, Sem-I	Compulsory English	Understand the prose content, poetry and communication skills
		Understand The Interpret The prose poem and know the meaning of literature and life
		Formulate/ compose his/her own sentences and able to speak English Language with more competence and clarity in comprehension.
		Collaborate wherever needed and communicate with other students in English language.
		Communicate effectively, proficiently with enhanced level of English usage with confidence by using their own ideas, thoughts and views.
B.A. Part-I, Sem-I	Compulsory English	Understand the prose content, poetry and communication skills
		Understand The Interpret The prose poem and know the meaning of literature and life
		Formulate/ compose his/her own sentences and able to speak English Language with more

		competence and clarity in comprehension.
		Collaborate wherever needed and communicate with other students in English language.
		Communicate effectively, proficiently with enhanced level of English usage with confidence by using their own ideas, thoughts and views.
B.A. Part-II	Compulsory English	Acquire critical attitude and approach and gain knowledge.
		Acquire enhanced sensibility and emotional depth and maturity in his/her expression.
		Learn grammar such as Formation of Sentences.
		Acquire Communication Skills.
		Understand the cultural importance of Literature.
B.A. Part-III	Compulsory English	Acquire critical attitude and approach and gain knowledge.
		Acquire enhanced sensibility and emotional depth and maturity in his/her expression.
		Understand the socio-political and cultural importance of Literature
		Communicate effectively, proficiently with enhanced level of English usage by using their own ideas, thoughts and concepts.
		Understand the cultural importance of Literature.
MA Part-I, Sem-I	Paper-I, English Poetry from Chaucer to Alexander Pope	Acquire critical attitude and approach and gain knowledge, intellectual competence and critical scholarship which would help them to improve their performance in competitive exams such as MPSC/UPSC/NET/SET in the subject.
		Understand and apply evocative power of language and would be able to apply critical insight and judgment to form an informed and objective opinion.
		Acquainted with the background and socio-political as well cultural background of the poets and understand the factors behind their making and evolution. Students will grasp distinctive writing style and technique of prescribed poets and creative writers.
		Acquire enhanced sensibility along with critical depth and maturity in his/her expression
		Understand the socio-political and cultural importance of Literature and Literary Poetic works
		Critically appreciate unseen poetic texts by applying the methods learnt.
	Paper-II, English Drama to Shakespeare	The prescribed portion is instrumental in providing insights on genres and conventions associated with English drama
		Understand and apply evocative power of language and would be able to apply critical insight and judgment to form an informed and objective opinion.
		Grasp distinctive writing style and technique of prescribed dramatist up until Shakespeare era.
		Students will be able to hone their dramatic and performing skills
Understand the socio-political and cultural importance of Literature and Literary dramatic works.		

		Able to critically appreciate unseen dramatic texts by using the methods learnt.
	Paper-III, History of English Literature	Appreciate diversity of major traditions of literature and gain knowledge of various major eras of literature.
		The Course would help emerge social thinkers and critics who can take up various social problems and issues that ail the society and impede social change and progress thereby achieving considerable social transformation and progress
		Grasp distinctive writing style and technique of prescribed writers.
		Give an account of historical events related to English Literature
		Understand the socio-political and cultural importance of Literature and Literary historical works.
		Fairly acquainted with the background and socio-political as well cultural background of the authors and analyse the zeal behind their passions and evolution.
		Paper-IV, Linguistics and Phonetics
	Enlightened to study and collect basic knowledge on the nature of language	
	Grasp distinctive writing style and technique of prescribed writers.	
	To do further research and correlate the place of language in society	
	Understand the socio-political and cultural importance of Literature and Linguistic & phonetic theories.	
	Understand the relationship of language and its meaning in accordance with vocabulary, sentence & utterance level.	
MA Part-I, Sem-II	Paper-I, English Poetry from Wordsworth to Modern Age	
		Understand and apply evocative power of language and would be able to apply critical insight and judgment to form an informed and objective opinion.
		Fairly acquainted with the background and socio-political as well cultural background of the poets and understand the factors behind their making and evolution. Students will grasp distinctive writing style and technique of prescribed poets and creative writers.
		Acquire enhanced sensibility along with critical depth and maturity in his/her expression

		Understand the socio-political and cultural importance of Literature and Literary Poetic works.
		Critically appreciate unseen poetic texts by applying the methods learnt.
	Paper-II, English Drama after Shakespeare	The prescribed portion is instrumental in providing insights on genres and conventions associated with English drama
		Understand and apply evocative power of language and would be able to apply critical insight and judgment to form an informed and objective opinion.
		Grasp distinctive writing style and technique of prescribed dramatist up until Contemporary era.
		Hone their dramatic and performing skills
		Understand the socio-political and cultural importance of Literature and Literary dramatic works.
		Critically appreciate unseen dramatic texts by using the methods learnt.
	Paper-III, History of English Literature	Appreciate diversity of major traditions of literature and gain knowledge of various major eras of literature.
		The Course would help emerge social thinkers and critics who can take up various social problems and issues that ail the society and impede social change and progress thereby achieving considerable social transformation and progress
		Grasp distinctive writing style and technique of prescribed writers.
		Give an account of historical events related to English Literature
		Understand the socio-political and cultural importance of Literature and Literary historical works.
		Fairly acquainted with the background and socio-political as well cultural background of the authors and analyse the zeal behind their passions and evolution.
	Paper-IV, Linguistics and Phonetics	Acquire critical attitude and approach and gain knowledge, intellectual competence and critical scholarship which would help them to improve their performance in competitive exams such as MPSC/UPSC/NET/SET in the subject.
		Further enlightened to study and collect basic knowledge on the nature of language
		Grasp distinctive writing style and technique of prescribed writers.
		Further research and correlate the place of language in society
		Understand the socio-political and cultural importance of Literature and Linguistic and phonetic theories.
		Understand the relationship of language and its meaning in accordance with vocabulary, sentence & utterance

		level.
MA Part-II		Acquire critical attitude and approach and gain knowledge, intellectual competence and critical scholarship which would help them to improve their performance in competitive exams like MPSC/UPSC/NET/SET in the subject.
		Understand and apply the evocative power of language and would be able to apply critical insight and judgment to form an informed and impactful opinion.
		Fairly acquainted with the background and socio-political as well cultural background of the poets and understand the factors behind their making and evolution. The student will grasp the distinctive writing style and technique of various poets & creative writers.
		Acquire enhanced sensibility and emotional depth and maturity in his/her expression
		Understand the socio-political and cultural importance of Literature and Literary Criticism.
		Help emerge social thinkers & critics who can take up various social problems and issues that ail the society and impede social change and progress and thus to achieve social transformation and social progress
Hindi		
B.A. Part-I, Sem-I	Astha	Understand the grammar and standard hindi language
		Understand the stories, poems, pad by Kabir, Surdas and Bihari
		Adopt human approach and think critically at the same time
		Understand the kavyas and importance of hindi
		Understand the rekhachitra, Nilkanth (samsmaran)
		Evaluating the concept of hindi and students can write own poems and stories
BA Part-I, Sem-II	Astha	Understand the grammar and standard hindi language
		Understand the stories, poems, pad by Kabir, Surdas and Bihari
		Adopt human approach and think critically at the same time
		Understand the kavyas and importance of hindi
		Understand the rekhachitra, Nilkanth (samsmaran)
		Evaluating the concept of hindi and students can write own poems and stories
B.A. Part-II	APURVA	Understand the Grammar and standard Hindi Laungage
		Adopt the human Approach and think critically at the same time
		Understand the story Prapt such and Apraphth Dukh, Purskar and Nilu by Mahadevi Varma, Kuber Nath Agrawal and Premchand
		Understand and apply the elements of creative writing e.g. essay, story and letter writing

		Understand the Kavya by Nagarjun and Gazal of Dushant Kumar
		Obtain advanced level of Knowledge in hindi as a specialized field
B.A. Part-III	ABHIVRUTI	Understand the Grammar and standard Hindi Launguage
		Adopt the human Approach and think critically at the same time
		Understand and apply the elements of creative writing e.g. essay, story and letter writing
		Understand the stories such as Maharaj ka Elaj by Yashpal, Chif ki Dawat by Bhism Sahani, Usne kaha tha by Guleri.
		Understand Ekankiutsarg by Rajkumar Varma
		Understand Amir Khusro ka sahitymeinyogdan and importance of Ahar, Bhojan and Swasth.
		The poetry section comprises of the total of Kavyas and Kavita (Mochi &Madhushala) by Maithini Sharan Gupta, Mahadevi Varma and Harivanshrai Bhacchan.
MA Part-1, Sem-I	प्राची एवं मध्यकालीन काव्य	हिंदी भाषाओंके गणमान्य साहित्यकारों के साहित्यिक व्यक्तित्व एवं कृतित्व से परिचय और उनके योगदानपर प्रकाश डाला। 2. सुफी साहित्य के माध्यम से जीवनमुल्य एवं जीवनदर्शन को समझाया।
		तुलसीदास के रामचरित्र मानस के माध्यम से आदर्शपुत्र और आदर्शराजा के महत्व को समझने की छत्रोंमें क्षमता विकसित की।
		प्राचीन एवं मध्य कालीन काव्य के आस्वादन और मुल्यांकनकी दृष्टीको बढ़ावा दिया। 5 द्रुतपाठको को दिये गए कवी व्यक्तित्व एवं कृतित्वपर प्रकाश डालकर छात्रोंमें साहित्य सृजन की अभिलाषा अंकुरित की।
		तत्कालीन संस्कृती जीवन दर्शन का परिचय समजा.
	हिंदी साहित्य का इतिहास	दलित साहित्य और आत्मा के विकास पर प्रकाश डालकर छात्रोंमें दलित साहित्य आत्म कथा साहित्य सृजन की अभिलाषा अंकुरित हुई।
		नाटकों में व्यक्त कियी गयी समस्याओंका हमारे वर्तमान समाजकी समस्याओ तादात्म कर उसे हल करने के लिए छात्र प्रेरित हुये। अभिनय के प्रति छात्रोंके मन मे आकर्षण निर्माण हुआ।
		द्रुतपाठको दिये गए कविओके व्यक्तित्व एवं कृतित्वपर प्रकाश डालकर छात्रोंमें साहित्य सृजन की अभिलाषा अंकुरित हुई।
	काव्यशास्त्र एवं साहित्य लोचन	सिद्धांत और वाद अभिजात्यवाद मार्क्सवाद, मनोविश्लेषण तथा अस्तित्ववाद आदि से छात्रों को अवगत हुआ।
		हिंदी आलोचना की प्रमुख प्रवृत्तीया शास्त्रीय व्यक्तिवादी, ऐतिहासिक, तुलनात्मक प्रभाववादी सौंदर्यशास्त्रीय और समाजशास्त्रीय दृष्टीकोन छात्राओंगे अवगत करके समाज के समस्याओंपर उपाय योजना की ।
		छात्रोंकी तर्कशक्तिको बढ़ावा मिला।
	विशेष अध्ययन (प्रेमचंद)	1 छात्रोंको लोकोक्तियों, सुकितियों एवं कथाओं के कोश का क्रमशः विस्तार हुआ।
ज्ञान क्षेत्र एवं विवेक के विकास द्वारा चरित्र चित्रण किया।		

		छात्रोंको कहानी, निबंध, जीवनी आदि विधाओंका परिचय देकर उन्हें बहुज्ञ बनाया।
		दूतपाठको दिये गए कवीओंके व्यक्तित्व एवं कृतित्वपर प्रकाश डालकर छात्रोंमे साहित्य सृजन की अभिलाषा अंकुरित हुई।
		उन्हें गद्य साहित्य की विभिन्न शैलीओसे परिचित हुए।
MA Part-I, Sem-II	आधुनिक काव्य	आधुनिक काव्य के पुनर्नवा के रूप में नवीन भाव में एवं वैचारिक गतिशीलता से छात्राओं को परिचित किया
		मैथिली शरण गुप्ता द्वारा साकेत जयशंकर प्रसाद द्वारा कामायनी सूर्यकांत त्रिपाठी द्वारा राम की शक्ति पूजा एवं जूही की कली आदि रावण का अध्ययन छात्राओं को हुआ छात्राओं को हुआ और उन्होंने अपने लेखन में अवगत किया
		नागार्जुन की कविताएं चंदू मैंने सपना देखा , उनको प्रणाम, बादलों को चढ़ते देखा इन कविताओं में से छात्राओं को प्राकृतिक प्रेरणा मिली और सृजनात्मक दृष्टिकोण निर्माण हुआ
		आधुनिक कविता के प्रति छात्राओं में रुचि उत्पन्न हुई
		छात्रों को काव्य निर्मिति कीप्रेरणा मिली
	आधुनिक गद्य साहित्य	आधुनिक काल में गद्य साहित्य से छात्राओं को परिचित कराया गया
		चंद्रगुप्त जयशंकर प्रसाद, आधे अधूरे मोहन राकेश, महाभोज मनु भंडारी आदि गद्य साहित्य का अध्ययन छात्राओं ने किया और उन्हें पाचन कौशल्या निर्माण हुआ
		हिंदी गद्य किंग उद्भव और विकास से छात्रों को अवगत किया और उन्हें जानकारी प्राप्त हुई
		गद्य साहित्य के माध्यम से छात्रों को शब्द भंडार में वृद्धि हुई
		छात्राओं को गद्य साहित्य के विभिन्न शैली का परिचय हुआ
	भाषा विज्ञान एवं हिंदी भाषा	भाषा के उद्भव और विकास को छात्र समझ पाए
		छात्र भाषा का स्वरूप समझे
		भाषा में सामाजिक भौगोलिक रूप से जो परिवर्तन हुए उन्हें छात्रों ने अवगत किया
		विज्ञान प्रति रुचि निर्माण हुई
		छात्रों को अर्थ परिवर्तन की दिशा से अवगत करा कर शास्त्रीय दृष्टि से वाक्य निर्माण करने के लिए उपर्युक्त कराया गया
	निबंध एवं परियोजना	छात्रों को हिंदी की बोली भाषाएं और वहां के क्षेत्र का परिचय हुआ
		हिंदी साहित्य के विविध विधाओं का छात्रों को परिचय हुआ
		छात्र काल विभाजन और साहित्य के उद्देश्य और विकास को समझ पाए
		हिंदी साहित्य में आदिकाल भक्ति काल रीतिकाल इनकी संपूर्ण पार्श्वभूमी का छात्रों को परिचय प्राप्त हुआ और वह इन तीनों

		काल से अवगत हुए
		छात्रों में हाशिए के समाज के प्रति अपनत्व का भाव उत्पन्न हुआ
		नवविमर्शा साहित्य की उपयुक्तता के बारे में छात्राओं में रुचि उत्पन्न हुई
MA Part-II	आधुनिक काव्य	आधुनिक काव्य के पुनर्नवा के रूप में नवीन भाव में एवं वैचारिक गतिशीलता से छात्राओं को परिचित किया
		मैथिली शरण गुप्ता द्वारा साकेत जयशंकर प्रसाद द्वारा कामायनी सूर्यकांत त्रिपाठी द्वारा राम की शक्ति पूजा एवं जूही की कली आदि रावण का अध्ययन छात्राओं को हुआ छात्राओं को हुआ और उन्होंने अपने लेखन में अवगत किया
		नागार्जुन की कविताएं चंद्र मैन सपना देखा , उनको प्रणाम , बादलों को चढ़ते देखा इन कविताओं में से छात्राओं को प्राकृतिकप्रेरणा मिली और सृजनात्मक दृष्टिकोण निर्माण हुआ
		आधुनिक कविता के प्रति छात्राओं में रुचि उत्पन्न हुई
		छात्रों को काव्य निर्मिति कीप्रेरणा मिली
	आधुनिक गद्य साहित्य	आधुनिक काल में गद्य साहित्य से छात्राओं को परिचित कराया गया
		चंद्रगुप्त जयशंकर प्रसाद, आधे अधूरे मोहन राकेश, महाभोज मनु भंडारी आदि गद्य साहित्य का अध्ययन छात्राओं ने किया और उन्हें पाचन कौशल्या निर्माण हुआ
		हिंदी गद्य किंग उद्भव और विकास से छात्रों को अवगत किया और उन्हें जानकारी प्राप्त हुई
		गद्य साहित्य के माध्यम से छात्रों को शब्द भंडार में वृद्धि हुई
		छात्राओं को गद्य साहित्य के विभिन्न शैली का परिचय हुआ
	भाषा विज्ञान एवं हिंदी भाषा	भाषा विज्ञान एवं हिंदी भाषा के उद्भव और विकास के बारेमें जानकारी मिली
		भाषा में सामाजिक और भौगोलिक रूप से जो परिवर्तन होते हैं उसे छात्रोंको अध्ययन हो गया
		छात्रों को व्याकरण दृष्टि से सक्षम बनाया और छात्रों के वर्ण शब्द तथा वाक्यों के उच्चारण में शुद्धता उत्पन्न उपन्न हुई
		देवनागरी लिपि की विशेषताएं एवं मानकीकरण के संदर्भमें भेद स्पष्ट हुआ
		छात्रों को अर्थ परिवर्तन की दिशा उनसे अवगत कराकर शास्त्रीय दृष्टि से वाक्य निर्माण करने के लिए उपयुक्त किया
भाषा विज्ञान समझने साथ हिंदी भाषा के संदर्भ में मशीनी अनुवाद , आंकड़ा संसाधन, मेल आईडी, पंजीकरण, सर्च करना, आदि को समझने तथा सीखने का कौशल छात्रोंमें प्राप्त हुआ		
निबंध / परियोजना	हिंदी साहित्य के विविध विमर्श की जानकारी छात्राओं को मिली	
	दलित, आदिवासी, बाल विमर्श, स्त्री विमर्श ,किसान विमर्श आदि की जानकारी छात्राओं को मिली और उन्हें इनके प्रति संवेदना प्राप्त हुई	
	हिंदी विमर्श में आए विविध विधाओं से छात्राओं को परिचय हुआ और उन्हें विधान की जानकारी मिली.	
	छात्रों में हाशिए के समाज के प्रति अपनत्व का भाव उत्पन्न हुआ	
	नवविमर्शा साहित्य की उपयुक्तता के बारे में छात्राओं में रुचि उत्पन्न हुई	

Marathi Literature		
B.A. Part-I, Sem-I	तहान (कादंबरी)- सदानंद देशमुख	सामान्य समाजातील अन्न, वस्त्र, निवारा याची वाताहत व समस्या समजण्यास मदत होते.
	अर्वाचीन मराठी कविता - संपादित	कविता ह्या मानवी जाणिवेचे मूल्ये जोपासतात हे कळते.
B.A. Part-I, Sem-II	आई रिटायर होतेय (नाटक)- अशोक पाटोळे	आईच्या सेवा निवृत्तीला वय नसते ती आजन्म सेवाधर्म पाळणारी एक अबला असते, याचा बोध होतो.
	अर्वाचीन मराठी कविता - संपादित	समाजातील विषमतेचे दुर्भिक्ष व आत्मनिवेदनाचे शब्दजंजाळ समजण्यास सोपे जाते.
B.A. Part-II	लीळाचरित्र (एकांक)- म्हाईभट	प्राचीन साहित्याची ओळख, सामाजिक स्थिती, भाषा व संस्कृती याची जाणीव होते.
	ग्रामगीता (अध्याय ११-१५)- राष्ट्रसंत तुकडोजी महाराज	ग्रामीण जीवन ,वास्तवता व मानवी मूल्यांची ओळख होते.
	साहित्य विचार - डॉ. दत्तात्रय पुंडे	कथा, कादंबरी, नाटक, कविता व ललित साहित्य निर्मितीची शास्त्रीय प्रक्रियेचे आकलन होते.
B.A. Part-III	बि-हाड (आत्मचरित्र)- अशोक पवार	मागासवर्गीय जातीची बोली, राहणीमान, सामाजिक स्थिती उपरोक्त आत्मचरित्रातून समजते.
	जावे त्यांच्या देशा (प्रवास वर्णन)- पु. ल.देशपांडे	विविध संस्कृतीची जाणीव, जीवन जगण्याच्या पद्धती, मानवी मूल्ये प्रस्तुत साहित्यकृतीतून प्राप्त होते.
	भाषाविज्ञान – संपादन	ऐतिहासिक व वर्णनात्मक भाषेची ओळख होते.भाषा उत्पत्ती , सिद्धांत , व्याकरणाची व भाषेच्या शास्त्रीय माहितीचे आकलन होते.
English Literature		
B.A. Part-I, Sem-I	English Literature	Summarize the content and different elements of literature and analyze various forms of literature.
		Course provides articles on current research theories and drawing of framework to analyze theories
		Identify various elements of poetry such as figures of speech, symbolism, theme etc.
		Collaborate and linguistically communicate with other students in English. Kindle their critical skills
		Gain insights in genres and conventions associated with English drama
B.A. Part-I, Sem-II	English Literature	Comprehend the English literature structure and background
		Understand the terminology and depth of poetry
		Competence and clarity about the development of English literature through various theories
		Linguistic analysis about the structure and style of short stories

		Effectively compose and narrate their own ideas and concepts through creative writing
B.A. Part-II	English Literature	Comprehension of the English literature structure and background
		Understand the terminology and depth of poetry
		Competence and clarity about the development of English literature through various theories
		Linguistic analysis about the structure and style of short stories
		To be able to effectively compose and narrate their own ideas and concepts through creative writing
B.A. Part-III	English Literature	Acquire a critical attitude, approach and gain literary knowledge. The students will understand the cultural importance of Literature.
		Acquire enhanced sensibility and emotional depth and maturity in his/her expression.
		Competence and clarity about the development of English literature through various theories
		Enhance their poetic skills, appreciate poetry as literary art, recognize rhythms and metrical aspects of poetry and identify various elements of poetry, figures of speech, symbolism, themes etc
		Learn and understand literary terms.
Hindi Literature		
B.A. Part-I, Sem-I	Hindi Literature	हिंदी साहित्य के प्रति छात्र की रुची बढाना तथा साहित्यिक विविध विधाओ से परिचित हुए
		कहानी कविता एकांकी साक्षात्कार रेखाचित्र काव्य उपन्यास आधी विधाओके माध्यम से भवात्मक कराया गया
		छात्र को मानक लिपी एवं भाषा का महत्व स्पष्ट हुआ
		कथा साहित्य के माध्यम से छात्र को विविध समस्यासे अवगत कराना और उन समस्या के समाधान के लिए प्रेरित हुए.
		छात्र को चिंतन तथा लेखन कौशल्य विकसित हुआ
B.A. Part-I, Sem-II	Hindi Literature	नाटक के प्रती छात्र मे रुची बडी, रंगमंच से संबंधित जानकारी छात्र को प्राप्त हुई
		अभिनय के प्रति आकर्षण निर्माण हुआ
		हमारे संस्कृती का परिचय छात्र को मिला
		उपन्यास के संबंधित पढणेका कौशल्य निर्माण हुआ
		नटरंग नाटक, अंधाधुंद उपन्यास हे अवगत हुए.
B.A. Part-II	Hindi Literature	साहित्य के माध्यम से जीवन मूल्य एवं जीवन दर्शन का परिचय होता है
		चिंतामणी पाठ्यपुस्तक के निर्धारित निबंधोसे अवगत होता है
		अलंकार, रसनिष्पत्ती, रसभेद आदि से परिचित होता है

		हमारे संस्कृती का परिचय होता है
		महान संतोको पढना और उनके व्यक्तित्व से प्रेरणा लेना तथा नाटक विद्या का परिचय होता है
B.A. Part-III	Hindi Literature	कथा साहित्य के माध्यम से छात्रो को समस्याओसे अवगत होता है और उन समस्याओके समाधान के लिये प्रेरित होता है
		कविता विद्या का परिचय छात्रोको देना और कविताओसेछात्रो मे प्रकृती प्रेम, देशप्रेम जागृत होता है
		साहित्य का शास्त्रीय पद्धतीसे अध्ययन करके, साहित्य के प्रती शास्त्रीय दृष्टीकोन विकसित होता है
		कौशल्य विकास के माध्यम से राष्ट्रनिर्माण मे योगदान होता है
		बदलते भाषा परिवेश मे परंपरागत भाषाई मौलिकता और लोकभावनाओ को समझता है
Economics		
B.A. Part-I, Sem-I	Micro Economics	Apply knowledge and skill in the field of Economics& will be able to have the employability in these areas.
		Describe and apply the methods for analysing consumer behaviour through demand and supply, elasticity
		Perform analysis to analyze the impact of economic events on Markets,
		To create a new approach towards the study of Economics.
		The course will illustrate how microeconomic concepts can be applied to analyze real-life situations
		Analyze the performance of firms under different market structures,
		Evaluate the factors affecting firm behavior, such as production and costs
To have better awareness regarding different Factors Pricing Rent, Wages, Interest, and Profit.		
B.A. Part-I, Sem-II	Economy of Maharashtra	Understand the geographical and economic features of Maharashtra's economy.
		To analyse the demographic features of Maharashtra and to explain the causes and impact of population growth and its distribution, translate and relate them with economic development.
		Understand the role of Agriculture in Economy of Maharashtra as well as to analyse the effects of Green revolution
		To explain the role of Industry and Infrastructure in Maharashtra
		To analyse various Issues in Vidarbha Region - Farmers' Suicides, Irrigation Backlog etc and to explain available natural recourses of vidarbha.
B.A. Part-II	Macro Economics	Understand macro economic variables like money and inflation
		Understand classical & Keynesian theories of output and employment.
		Understand the functions of banks and Recent services provided by Banks
		Understand various concepts regarding Public Finance
		Understand international and inter regional trade, identify and understand the theory of international trade, analyze advantages and disadvantages of international trade.

B.A. Part-III	Development and Environmental Economics	Develop ideas of the basic characteristics of Indian economy, its potential on natural resources.
		Understand the role of agriculture in Indian economy.
		Understand the role of industry in Indian economy.
		Create awareness among the students about internal and external issues of Indian economy
		Understand the causes of various types of environmental pollution and suggest appropriate measures to correct environmental degradation.
MA Part-I, Sem.-I	Paper-I, Micro Economics-I	Cite the basic principles of microeconomics.
		Interpret the concepts of utility, demand-supply mechanism, and elasticity.
		Apply these concepts to solve and analyse various problems of economic policy.
		Analyse the perfectly competitive market framework.
		Assess the framework and analyse microeconomic relationships.
		Devise pricing strategies for firms and calculate productivity and costs for the firm
	Paper-II, Macro Economics-I	Explain the evolution of money and know the concept of money and its functions.
		Understand the national income concept. .
		Know about the supply of money and high-powered money.
		Gives the idea of Keynesian theory of employment.
		Understand the theories of the consumption function. Gives an idea about how to make a saving and investment.
		Evaluate the working and effects of monetary and fiscal policy
	Paper-III, Statistics for Economics	Describe the basic concept of statistics.
		Understand the significance of statistics in Economics .
		Understand the issues regarding the survey, data collection, classification, tabulation & presentation of data.
		Understand the role of CSO & NSSO
		Calculate & apply the measures of central tendency, dispersion, skewness, correlation & regression
	Paper-IV, Agriculture Economics	Scope and subject matter of agricultural economics.
		Understand the rural infrastructure and agricultural production.
		Analyze the issues related to agricultural and economic development.
		Deals with the farm management and types of agricultural risk.
Understand the Labour Supply, Mobility of Labour and Segmentation in Labour Markets.		
Evaluate the problem of agricultural finance and suggestion to improve agricultural finance.		

		Know about agricultural growth in India and the effects of globalization.
	Paper-V, History of Economic Thought	Got idea about mercantilism and physiocracy.
		Introduced to the economic thoughts of classical economists.
		Got to know the critics of classicism.
		Noticed the modern economic thoughts.
		Understood the economic thoughts of Indian economists.
MA Part-I, Sem.-II	Paper-I, Micro Economics-II	Report a thorough understanding of the basic principles of microeconomics.
		Interpret the Monopolistic market framework, and apply it to microeconomic situations.
		Illustrate the features of the Oligopolistic market.
		Break down the nuances of welfare economics.
		Review the above concepts to solve and analyse various problems of economic policy.
	Devise and apply game-theoretic solutions for economic decision-making.	
	Paper-II, Macro Economics-II	Course is useful for understanding various real economic issues and evaluating
		Policy outcomes
		Gained knowledge of theory of interest rates.
		Introduced to the theory of inflation.
		Realised the inflation in developing economies.
		Gained knowledge of demand for money.
	Learned what is business cycle?	
	Paper-III, Statistics for Economics-II	Understand the concept of Sampling & Estimation.
		Use of sample survey on various issues
		Test of Hypothesis by using various statistical Test
		Understand time-series trends & calculate it for forecasting
		Understand & Uses of Probability
	Calculate Index Number	
	Paper-IV Rural Development	Aware about Definition, Concepts, Nature Scope of Rural development..
Explain the types of agriculture to include, horticulture, dairying and allied rural activities		
Aware about the Panchyat Raj, Introduction to Cooperative Movement In Rural Economy		
Understand the students about the various issues of rural labour.		

	Paper-V Co-operation	Know the various rural development programmes run by government of India.
		Know the ongoing programmes under different ministries of Govt. of India.
		Understand the principle of cooperation and the values of cooperative institutions.
		Understand the origin and development of the Cooperative movement.
		Know the role of NAFED & Co-operative agro-based industries.
		Examine the various types of co-operative society.
		Create awareness about the working of cooperative organizations in rural and urban areas.
		To know the role of the financial institute framework.
MA Part-II	Paper-I, Economic of Growth and Development	Will be developing the accounting, audit & role of the cooperative auditor.
		Learned about the Economic Growth & Development and understood its various models
		Realised concept of Development, poverty & institutions market.
		Understand Classical theory of development & structural view of development
		Get idea of GATT, WTO, and international trade as engine of growth.
	Paper-II, Economics of International Trade & Finance	Know the Role of Monetary and Fiscal Policy, IMF, Review of Indian plan mode
		Get an idea of the reason for international trade.
		Understand the gains of international trade.
		Gained knowledge on how imbalances in balance of payment are redressed.
		Know about international organizations.
	Paper-III, Labour Economics	Get an idea of India's international trade.
		Realised what is called labour market
		Get an idea of employment in various sectors of Indian economy
		Gained knowledge of various theories of labour.
		Get to know about labour organisation in India.
	Paper-IV, Business Cycle	Learned about state and social security of labour.
Get to know about the various fluctuations that occur in the economy.		
Noticed the causes of business cycle.		
Understand the modern theory of business cycles		
Get to know the history of business cycles		
		Introduced to the various policies that govern the business cycle.
Political Science		

BA Part-I, Sem.-I	Indian Constitutional Provisions and Local Self Government	Understand and explain the significance of Indian constitution as the fundamental law of the land.
		Exercise the fundamental duties in proper sense at the same time identifies his responsibilities in national building.
		Analyze the Indian Political System, the powers and functions of the Union, State Government in detail.
		Critically analyzing the important institutions of Indian Union: The Executive: President, Vice-President, Prime Minister, Council of Ministers, State Executive: Governor, Chief Minister, Council of Ministers, The Legislature: Rajya Sabha, Lok Sabha, State Legislature.
		India's Judiciary is the best and a system that protects human rights, understand its function
BA Part-I, Sem.-II	Indian Constitutional Provisions and Local Self Government	Understand and explain the significance of Election Commission of India
		know the powers and role of Governor, Chief Minister & Council of Minister\
		Understand structure & powers of Legislative Assembly and Legislative Council
		Understand the importance of Local Self-Government in Maharashtra
		Know the Composition Function and Powers of Grampanchayat & Gram Sabha
B.A. Part-II	Comparative Govt. and Politics	Identify the difference between constitution and constitutionalism by studying comparative politics and explaining its approach and political process
		Know features of the constitution of England and importance of legislature, executive, judiciary, political parties and pressure groups
		Understand the background of the US Constitution and its executive branch, legislature, judiciary, political parties and pressure groups
		Know the constitution of Switzerland and explain its pluralism, federal assembly, judiciary, direct democracy, pressure groups and political parties
		Understand the governance and politics of China and features of its democratic republican constitution, the role of the executive, legislature, judiciary and the Communist Party.
B.A. Part-III	Political Science	Understand the concept of power and authority by analyzing the nature and development of political theory in line with the subject of political science
		Comparatively discuss the divine development theory, social contract theory, historical idealist theory and jurisprudential approach to the origin of the state.
		Explain the characteristics of Austin's universalism and evaluate citizenship liberties, rights.
		Distinguish between theory of natural right, legal theory of social right.
		Describe the characteristics of a successful democracy with the concept of equality and justice.
State the theories of social change and the factors affecting social change by evaluating the concept of		

		development and the concept of the welfare state.
MA Part-I, Sem.-I	Paper-1 (Political Thought in Modern India)	Understand the contribution and thoughts of the makers of modern India.
		Analyse the knowledge of various ideological stream in Indian Political Thought.
		Analyse and compare the ideas and theories of Indian Political Thinkers.
		Develop understanding amongst students on the ideological foundations of nation building in India.
		Acquainted with the evolution of Indian Political Thought from Ram Mohan Roy to Dr. Punjabrao Deshmukh
	Paper-2 (Indian Government And Politics)	Understand constitutional development in India and Philosophy of Indian constitution.
		Understand about various fundamental rights and constitutional amendment.
		Understand about supreme court and its working in India.
		Understand about electoral process in India.
		Understand issues in Indian politics like caste, religion, regionalism and language.
	Paper-III (Public Administration)	Discuss the meaning, nature and evolution of public administration.
		Know about various approaches and methods of public administration.
		Understanding the basic concepts and types of organization.
		Become familiar with the details of administrative organization.
		Get acquainted with concept of bureaucracy and its features.
	Paper-IV (Theories of International Relations)	Understand the scope and subject matter of international relations, also various theories of international relations.
Comprehend the concept of power in international relations and concept of national power.		
Get acquainted with management of national power and the concept of diplomacy.		
Understand about the issue of disarmament and arms control at international level		
Understand concept of non-alignment and the idea of New International Economic Order.		
MA Part-I, Sem.-II	Paper-I Political Thought in Modern India	Understand the contribution and thoughts of the makers of modern India.
		Analyse the knowledge of various ideological stream in Indian Political Thought.
		Analyse and compare the ideas and theories of Indian Political Thinkers.
		Develop understanding amongst students on the ideological foundations of nation building in India.

		Get acquainted with the evolution of Indian Political Thought from Mahatma Phule to Rashtrasant Tukdoji Maharaj.
	Paper-II, Indian Government and Politics	Get familiar with The Directive Principles of State Policy
		Assess the nature of Indian Federalism
		Understand the centre-state relationship in its various aspects
		Comprehend the issues of religion, language, region and Naxalism in Indian politics
		Analyse issues state politics in India
	Paper – III (Public Administration)	Understand the mechanism and importance of budget in administration
		Acquainted with idea Administrative Accountability
		Understanding the basics of Personnel Administration
		Analyse the importance of globalisation and liberalisation in discipline of public administration
		Understand the concept of Governance and good governance
	Paper – IV (Theories of International Relation)	Understand the impact of end of Cold War on International Relations
		Understand North-South Dialogue and South-South dialogue and gender issues in International Relations
		Comprehend the import of Globalisation in International Relation
		Analyse the Environmental issue at international level
		Understand the significance of Global issues of Terrorism and Human Rights
MA Part-II	Paper-I, (Western Political Theory and Thought)	Know importance of political theory in political science and the end of political theory and ideology.
		Understand nature of political theory of Greek political thinker Plato Aristotle.
		Compare the study of Bodine and Machiavelli on the nature of political theory of St. Augustine and St. Thomas Aquinas,.
		Acquire knowledge about the rise of secularism, theory of sovereignty and nationalism with reference to Marsiglio of Padua
		Know the significances of T. H. Green's idealist and liberal theory
		Understand and analytically know the ideas of Karl Marx, Lenin, Lawsky in Marxist, Socialist context.
	Paper-II, (Research Methodology)	Know the difference between natural science research and social science research.
		Understand the different methods of social research in terms of political science and difference between behaviourist revolution research and post-behavioural research in politics

		Understand the role of hypothesis in scientific research Hypothesis is essential for ideal research.
		Analyze the different techniques for measuring the problem in social research for considering different methods of data collection.
		Know the difference between report writing and thesis writing by mentioning various techniques of research prospective.
	Paper-III, (Theory And Practical of Diplomacy)	Know the nature and role of diplomacy in foreign policy and the difference between secret and open diplomacy
		Analyze the special powers and immunities of an ideal state.
		Understand the types of diplomacy and its role in the United Nations summit, the contribution of diplomacy to international negotiations and treaties.
		Gain the knowledge of relationship between national affairs and embassies by stating the strategy of diplomacy to achieve foreign policy objectives.
		Understand influences of diplomacy on the foreign policy of India, USA, Russia, China after World War second.
	Paper-IV, (International Law and International Organization.)	Understand the scope of International Law Development.
		Know the importance of law to international peace Evaluate state intervention, state jurisdiction and treaty termination in relation to international law.
		Understand the nature of war, types and instruments of war and the end of war at the international level
		Compare the relationship between neutral chinitnaka types of mercenaries, neutral kings state powers and duties state rules of neutrality.
		Know the differences between embargo and countermeasures and promote biligates rights area.
		Gain the functioning of the United Nations as an international organization and its failure
History		
B.A. Part-I, Sem-I	History of India (From Earliest Times to 1205 A.D.)	Understand about the Survey of sources of Ancient India. They can learn that Socio-economic, Political and Cultural Background of the Ancient Indian History.
		Achieve knowledge rise of the territorial status, Mouryan and post Mouryan period.
		Acquire knowledge toward show to Rise and Growth of GuptasEmpire in Ancient India.
		Gather knowledge about the Vardhan Empire, Major Dynasties of Deccan of South India. Students can learn about Arab and Turks Invasion and its impact.
		Know about the Education, Position of Women, Judicial Administration, Art and Architecture in Ancient India.
		Understand the various concepts in social studies through the Ancient Indian History. Students can prepare for complete examination like UPSC, MPSC, and SET, NET etc.
B.A.	History of India	Understand how the Foundation, Expansion and Consolidation of Delhi Sultanate. They will gather knowledge

Part-I, Sem-II	(From 1206 A.D.to 1525 A.D.)	about Qutbuddin Aibak, Illutmish, Razia and Balban.
		Acquire the knowledge about Allauddin Khilaji's Political, Administrative and Economical Policy. Students will aware about Mohammad Tughluq and Firoz Shah Tughlaq Reforms.
		Achieve knowledge about the Rise and Expansion of Bahamani Kingdom and Vijaynagar Empire.
		Know about the Political Structure During Sultanate Period, State & Society, Social Status of Women.
		Learn about this paper about Economical and Technological Developments, Arts & Education, Religios Movements in Sultanate Period.
B.A. Part-II	History of India (From 1526 to 1947 A.D.)	Understand about the Mughal rule & empire in India and emergence of Maratha power.
		Acquire knowledge of Mughal ascendancy, economy, society and religion under the Mughals.
		Know about the consolidation of British rule as well as they will know about economic, socio and religious changes.
		Know about the nationalism and acquire knowledge on constitutional developments
		Gather the knowledge of ideas and movements
B.A. Part-III	History	Aware towards Gandhian ideology and movements.
		Understand about the French Revolution. They will know about emergence of Napoleon Bona Porte, congress of Vienna, making of the nation's states of Italy and Germany.
		Acquire knowledge towards the foreign policy of Germany under Bismarck.
		Acquire knowledge on Germany under Kaiser William II, the first world war cause and effects.
		Know about the Russian revolution, Paris Peace conference. As well as they will know Hitler and his policies.
MA Part-I, Sem-I	Paper-I, Historiography	Know about the second world war, entry of the U.S.A. into the second world war and acquire knowledge on world power.
		Gather knowledge of post war world the cold war, military alliances, the Suez crisis, They will aware non-aligned movement and the third world, origin and progress.
		Understand about the Meaning of Historiography, Nature and Scope, Auxiliary Sciences and Kinds of History.
		Helps of study about History as an Art and Science. Students will know about the Sources of History, Collection and Selection of Data.
		Gather knowledge about the Internal and External Criticism, Causation in History and Rewriting of History.
	Paper-II Ancient India (From Earliest Time	Know about Ancient Indian Tradition and Greco-Roman, Chinese Tradition.
		Study the Classical Marxism, Annals- Marc Bloch, Fernand Braudel, Positivism-August Comte and Ranke.
		Learn about the Sources of Ancient India, Pre History, Proto History and Early Historic India.
		Understand the Later Vedic Age, Janapadas and Mahajan padas, Religious Movements, Iranian & Macedonian Invasions and it's effects.
		Gather knowledge about the Nandas and Mouryas Polity, Trade and Trade routes. Students will learn about

	to 606 A.D.)	Ashoka's Dhamma, Post Mouryan developments and Satavahanas Dynasty.	
		Achieve knowledge about the Kushanas society, Religion, Art & Architecture. They will learn about Sangam Age.	
		Aware about Guptas Polity, Economy and Society. They can understand the Vakatakas, land grants; art and architecture.	
	Paper-III India Under the Sultanate Period (1206 to 1526 A.D.)	Know about Sources, Foundation and Consolidation of the Sultanate. As well as they can understand about Aibak, Iltutmish, Razia Sultan, Balban and Rise of Khilji's.	
		Acquire vast knowledge about Mohammad-bin-Tughlaq & Feroz Shah Tughlaq's Administrative and Economic Reforms. They will know about the Bahamani and Vijaynagar Kingdom.	
		Understand about the Agrarian economy and the state, Trade commerce and Monetary System.	
		Achieve knowledge about the Social condition, Status of Women, Education, Socio-religious reform movements During the Sultanate Period.	
		Know about the Architectural tradition in India. They will learn about Regional architecture and sculptures.	
	Paper-IV Modern World (form 1871 to 1945 A.D.)	Know about the Growth of Capitalism and Imperialism, Origin of First World War, Bismarckian diplomacy and Americas entry in the World War I.	
		Get the knowledge about Peace settlement and its long term consequence, Russian Revolution and League of Nation.	
		Highlights the Rise of Fascism in Italy, the Rise of Hitler and Nazism. Students will know about the Foreign Policy of England.	
		Understand about the Militarism in Japan. They will achieve knowledge about the Foreign Policy of Japan, France and U.S.S.R. (1939 to 1945 A.D.)	
		Make the students of History aware about the Origin, Nature and Results of the World War II.	
	MA Part-I, Sem-II	Paper-I Trends and Theories of History	Know about the Imperialist History Writing and Nationalist History Writing. They will understand about the James Mill, Grant Duff, R. C. Majumdar and K. P. Jaiswal.
			Acquire knowledge about the Orientalist History Writing and Marxist History Writing. They can aware about the William Jones, Alexander Cunningham, R. S. Sharma and D. D. Kosambi.
Understand about the Theological History Writing and Subaltern History Writing. They will get the knowledge about the Saint Augustine, Antonio Gramsci, Mahatma Phule and Ranjit Guha.			
Gather knowledge about the Cyclical Theory of History, Comparative Approach of History and Ecological Approach of History.			
Learn from this paper about the Themes of History. They will know about the Religion and Culture, Varna, Caste and Gender.			

	Paper-II Ancient India (606 to 1206 A.D.)	Understand about the Sources of ancient India. This syllabus will help to know about the Vardhan Empire and Peninsular India.
		Acquire knowledge about the Post Vardhan India, Dynasties of Central, Western & Deccan India and Invasions of the Arabs & Turks and it's impact.
		Know about the Post Vardhan Polity, Political Structure and forms Legitimation. They can understand about the Nature of Regional Policies.
		Achieve knowledge about the Post Vardhan economy, Agrarian economy, Urban economy , Trade and Craft guilds. As well as they will know about the Coinage and Currency, Traders, Marchants and Craftmen.
		Aware about the Society, Status of Women, Religions, Bhakti Movements, Literature , Art & Architecture.
	Paper-III India Under the Mughals (1526 to 1707 A.D.)	Aware about the Sources of Mughal period. They can achieve knowledge about the Babur, Humayun, Shershah Suri and Akbar.
		Acquire vast knowledge about the Jahangir, Nurjahan, Shah Jahan and Aurangzeb. They will know about the Golden Age of Mughal period.
		Understand about the Mughal Administration and Theory of Kingship and Mansabdari system. They acquire knowledge about the revenue system and management of water resources.
		Achieve knowledge about the Trade, Commerce and Monetary system, Growth of Cities and Towns, Industries and production technology.
		Know about the Social condition, Status of Women, Religious movements, Education, Art and architecture during the Mughal period.
	Paper-IV Contemporary World: (1945 to 2000 A. D.)	Know about the Ideological and political basis of Cold War. They can learn about the UNO and Non-Alignment Movements.
		Acquire vast knowledge about the Post War problems of Germany, Communist Revolution in China. They will achieve the knowledge about the Genesis and process of disintegration of USSR.
		Understand about the Fall of communist regimes in East European countries, Social in decline and Organization of African Unity.
		Learn this paper about the Civil Rights Movements, Apartheid and Fenimism, Progress of Science and Technology.
		Know about the Rise of Unipolar world, Reunification of Germany, Kuwait Crisis and Globalization.
MA	Paper-I,	Understand the politics during colonial India (1757-1857) and imperial India (1858-1947)
		Analyse the rural and urban economics, trade, banking and fiscal policies during colonial India(1757-1857) and

Part-II	History of India (1757-1964)	imperial India (1858-1947)
		Understand the social reforms and emerging social classes, education during colonial India(1757-1857) and imperial India (1858-1947)
		Understand the nationalism and national movement pre 1857 tillindependence.
		Know the making of constitution, integration of states, beginning of planned economy, land and industrial policy, education, foreign policy and Hindu code bill of Independent India.
		Understand the politics during colonial India (1757-1857) and imperial India (1858-1947)
	Paper-II HISTORY of MARATHAS (1600 to 1818)	Learn about the rise of marathas and Maratha Kingdom under Shahaji Maharaj and Shivaji Maharaj, relations with AdilshahiMugals and Foreigners under Chhatrapatis.
		Acquire knowledge about descendency of Peshwa's, third battle of Panipat, post Peshwa consequences and downfall of Maratha power.
		Understand the concept of Hindaviswarajya, administration, military organisation, judicial system under Chhatrapati Shivaji Maharaj and peshwas.
		Know the land rules, sources of revenue and fiscal policies, agriculture economy, urban trade, currency and development of textile and agro industry under Chhatrapati and peshwash.
		Acquire knowledge about rural and urban society, development of education and literature, status of women, religious traditions, regional cults, art and literature during this era
	Paper - III Women in Indian History	Acquire knowledge about the contributions of women to philosophy and religion.
		Learn about Customary, Legal and Educational status of women during ancient, Medieval, Colonial and Post-Independence period.
		Acquire knowledge about the economical status of women and women's participations in reform movements.
		Know about women's organisation and participation in the Colonial and Post-Independence period.
		Acquire knowledge about the women's representation and participation in financial activities.
	Paper – IV History of Social Movement and Social Reformers in Maharashtra (From 1848 to 1980 A.D.)	Know about the Geographical and Political condition in 19 th century and effects of British rule on society in Maharashtra.
		Acquire knowledge about background of Social Movements and work of great socialist Mahatma Fule and organisation Satyashodhak Samaj.
		Learn the rise and growth of Dalit Movement and the work of Depressed Classes Mission before Dr. B. R. Ambedkar.
		Acquire knowledge about reforms for welfare of OBC and work of Kakasaheb Kalelkar and Mandal Commission.
		Understand the social reforms of Sant Gadge Maharaj.
Philosophy		

B.A. Part-I, Sem.-I	Moral Philosophy	Understand the definition, branches of moral philosophy.
		Know the nature of ethics and comparison with science.
		Acquire the knowledge about psychological analysis of conduct with special reference to want, appetite, desire, wish, motive and intention.
		Understand Greek hedonism like Cyrenaicism and Epicureanism and concept of goodwill, categorical imperatives and duty for its own sake.
B.A. Part-I, Sem.-II	INDIAN AND WESTERN ETHICS	Understand the concept of Purushartha such as dharma, artha, kama and moksha, and Gadge Baba's concept of humanism.
		Acquire knowledge about ethics of Geeta (Varna and ashram) and Veda (Ruta and Runa).
		Understand the Buddhist ethics,(ashtang Marg and Nirvana) and Jaina's ethics about mahavrat and triratna.
		Know the different types of hendonism like charvaka psychological and egoistic and paradox of hendonism.
		Understand the objects of moral judgement and acquire the knowledge about different theories of punishment and its justification.
B.A. Part-II	History Indian Philosophy	Understand the nature of Indian philosophy, Vedic and upanishadic.
		Acquire the knowledge of materialism, naturalism and hendonism and Jainas theory of philosophy.
		Understand the Buddhist philosophy and moral values.
		Understand the philosophy of Nyaya and Vaiishesika..
		Acquire the knowledge of satkaryvada, prakriti and purusha and theory of evolution.
		Understand the concept of Brahman, atma, theory of causation and concepts of Maya and moksha
B.A. Part-III	History Indian Philosophy	Understand the sources of theory of knowledge for Indian philosophy.
		Understand theory of relativity with reference to Indian philosophers Charvaka, Jain, Vaisheshika, Samkhya and Advait Vedanta.
		Acquire knowledge regarding logic and inferences
		Understand the theories of truth and important concept such as A-priori and A-post priori and analytic and synthetic.
		Understand the Metaphysical concept such as substance, causality, space and time, universal materialism and idealism.
		Understand the concepts of Epistemology and Metaphysics.
Music		

B.A. Part-I, Sem-I	Indian Vocal Music	Do revision and practice of raag based Alankar is done to make Students good at sur.
		Develop and apply foundational knowledge and skills in music theory, basic music history
		Develop basic Harmonium and Tanpura skills in regular classroom.
		Gets knowledge about the Music Veteran and their contribution to Indian Music
		Develop ability to recognize ragas and talas in the songs they listen to.
		Musical related charts and patterns as assignment students gets benefited.
B.A. Part-I, Sem-II	Indian Vocal Music	Do session revision and practice of raag based Alankar is done to make Students good at sur.
		Develop ability to recognize ragas and talas in the songs they listen to.
		Gets knowledge about the Music Veteran and their contribution to Indian Music
		Musical related charts and patterns as assignment students gets benefited.
		Develop basic Harmonium and Tanpura skills in regular classroom.
B.A. Part-II	Indian Vocal Music	Do practical session revision and practice of raag based Alankar is done to make Students good at sur.
		Learn and practice about different prevalent ragas.
		Develop ability to recognize ragas and talas in the songs they listen to.
		Develop vision and mission of making career in music related field.
B.A. Part-III	Indian Vocal Music	Do Practical session revision and practice of raag based alankar is done to make Students good at sur.
		Learn and practice about different prevalent ragas.
		Develop ability to recognize ragas and talas in the songs they listen to.
		Develop in-depth knowledge and performance skill.
		Become Music Educator if they peruse B.Ed after Graduation in Music.

AMOLAKCHAND MAHAVIDYALAYA, YAVATMAL-445001

COURSE OUTCOME (CO)[Subjects covered under Faculty of Commerce and Management]

Marathi		
Class	Course	Outcome (Students will be able to.....)
B.Com Part-I, Sem-I	वैचारिक	म्हाइंभट यांच्या साहित्याचा अभ्यास करून प्राचीन काळातील मराठी भाषेची ओळख होईल.
		मराठी भाषेत म्हाइंभट यांचे योगदान लक्षात येईल.
		भाषा व संस्कृती आणि साहित्य व संस्कृती यांचा अनुबंध समजून घेता येतो.
		नवनिर्मितीक्षमता व अभिव्यक्तिक्षमता विकसित होते.
	ललित	ललित साहित्याची ओळख होते.
		आज्ञापात्रातून- छत्रपती शिवाजी महाराजांच्या विचाराची ओळख होईल.
		त्यांनी पर्यावरनाविषयीची घेतलेली दखल आजच्या काळात लक्षात येईल.
		गद्य हा प्राचीन काळातील महत्वाचा लेखनप्रकार आहे.
	कविता	कविताया साहित्य प्रकारची ओळख विद्यार्थ्यांला होईल.
		संत ज्ञानेश्वर यांच्या या कवितेतून मानवी जीवनाची उंची लक्षात येईल.
		संत ज्ञानेश्वर यांच्या लेखनाची ओळख विद्यार्थ्यांला होईल.
		साहित्यप्रकाराचा अभ्यास लक्षात घेताना नव कवितेचा प्रवाह लक्षात येतो.
उपयोजित मराठी	पत्रव्यवहार लेखनकौशल्य विकसित होते.	
	पत्रव्यवहार क्षेत्रात नोकरीच्या संधी शोधता येतात.	
	लेखनकौशल्य विकसित होऊन अर्ज लेखनकौशल्य निर्माण होते.	
	सारांशलेखनाचे तंत्र अवगत होते.	
B.Com Part-I, Sem-II	वैचारिक	राजश्री शाहू महाराज यांचे धर्मनिरपेक्षता विषयक विचार विद्यार्थ्यांना नैतिक बळ देईल
		महात्मा गांधी यांचा आधुनिक दृष्टीकोन विद्यार्थ्यांच्या लक्षात येईल.
		राजश्री शाहू महाराज यांच्या चौकस बुद्धीची जाणीव होईल.
		वैचारिक दृष्टीकोन निर्माण होतो.
	ललित	केशव मेश्राम यांच्या साहित्याची माहिती विद्यार्थ्यांला होईल.

B.Com Part-II		ललित लेखनातून पुढे आलेले जीवनदर्शन मानवतेची शिकवण देईल.	
		स्वातंत्र्योत्तर काळातील ललित लेखनाचे योगदान विद्यार्थ्यांला लक्षात येईल.	
		मराठी साहित्यात अर्वाचीन मराठी गद्याची भूमिका महत्वाची आहे	
	कविता	बहिणाबाई चौधरीयांच्या कवितेतून कवितेची रुपरेषा लक्षात येते. त्यांच्या लेखनाची ओळख होते.	
		वामनदादा कर्डक यांच्या कवितेतून मानवी जीवनातील उत्कटता लक्षात येते.	
		संत नामदेव यांच्या कवितेतून मध्ययुगीन समाजाचे चित्र लक्ष्यात येते.	
	उपयोजित मराठी	लेखनकौशल्य निर्माण होऊन रोजगाराच्या संधी निर्माण होते.	
		निविदासूचनाचे तंत्र अवगत होते.	
		भाषेवर प्रभुत्व निर्माण करता येते.	
	B.Com Part-II	वैचारिक	पत्रव्यवहार क्षेत्रात नोकरीच्या संधी शोधता येतात
			छत्रपती शिवाजी महाराज यांचे धर्मनिरपेक्षता विषयक विचार विद्यार्थ्यांना नैतिक बळ देईल
			डॉ.बाबासाहेब यांचा पाणीप्रश्नाचा दृष्टीकोन विद्यार्थ्यांच्या लक्षात येईल.
बाबासाहेबांच्या चौकस बुद्धीची जाणीव होईल.			
ललित		वैचारिक दृष्टीकोन निर्माण होतो.	
		अण्णा भाऊ यांच्या चरित्राची माहिती विद्यार्थ्यांला होईल.	
		ललित लेखनातून पुढे आलेले जीवनदर्शन मानवतेची शिकवण देईल .	
		स्वातंत्र्योत्तर काळातील साहित्यातील अण्णा भाऊ यांचे योगदान विद्यार्थ्यांला लक्षात येईल.	
कविता		मराठी साहित्यात अर्वाचीन मराठी गद्याची भूमिका महत्वाची आहे	
		केशवसुत यांच्या कवितेतून कवितेची रुपरेषा लक्षात येते. त्यांच्या लेखनाची ओळख होते.	
उपयोजित मराठी		सुरेश भट यांच्या कवितेतून मानवी जीवनातील उत्कटता लक्षात येते.	
		लेखनकौशल्य निर्माण होऊन रोजगाराच्या संधी निर्माण होते.	
	भाषेवर प्रभुत्व निर्माण करता येते.		
वैचारिक	पत्रव्यवहार क्षेत्रात नोकरीच्या संधी शोधता येतात.		
	आजच्या काळात बाबासाहेबांचे पाणीप्रश्नाचे विचार किती महत्वाचे आहे याची जाणीव होईल.		
	लक्ष्मणराव किलोस्कर यांच्या जीवनाची ओळख विद्यार्थ्यांना होऊन त्यांच्या आर्थिक विचाराची गरज लक्षात येईल.		
ललित	वैचारिक दृष्टीकोन निर्माण होतो.		
	स्वातंत्र्योत्तर काळातील बाबाराव मुसळे यांच्या आधार या ललित लेखनातून माणसाच्या जीवनातील गुंतागुंत लक्षात येईल.		

B.Com Part-III	कविता	आधार या ललित लेखातील जीवनदर्शन जीवनातील तानेवाने अधोरेखित करून तात्विक बाजूने जगण्याची दिशा देईल ललित साहित्याची ओळख होते.
		साहेबराव पाटील ह्या कवितेतून ग्रामीण भागातील जीवनदर्शन अधोरेखित होते.
		अविष्कार आणि देवभाताची थोंब या दोन्ही कवितेतून मानवी मनाचा अविष्कार दर्शित होतो.
		कविताया साहित्य प्रकारची ओळख विद्यार्थ्यांला होईल .
	उपयोजित मराठी	लेखनकौशल्य विकसित होऊन अर्ज लेखनकौशल्य निर्माण होते.
		निविदासूचनाचे तंत्र अवगत होते. लेखनकौशल्य विकसित होऊन अर्ज लेखनकौशल्य निर्माण होते.
English		
B.Com Part-I, Sem-I	Compulsory English	Understand the prose content, poetry and communication skills.
		Apply four skills of the English language in his/her daily routine.
		Enhance the drafting skills of learners through grammar and become proficient in the flawless usage of language.
		Become efficient in reading and writing skills and to be able to make business correspondence effectively.
		Communicate effectively, proficiently with enhanced level of English language usage. To get acquainted with the volatile nature of market and corporate world.
B.Com Part-I, Sem-II	Compulsory English	Understand the prose content, poetry and communication skills.
		Apply four skills of the English language in his/her daily routine.
		Enhance the drafting skills of learners through grammar and become proficient in the flawless usage of language.
		Become efficient in reading and writing skills and to be able to make business correspondence effectively.
		Communicate effectively, proficiently with enhanced level of English language usage. To get acquainted with the volatile nature of market and corporate world.
B.Com Part-II		Understand native cultural experiences & situation; develop human values & social awareness.
		Understand dignity of labour, work ethics and selflessness.
		Acquire ability to read, appreciate and critically evaluate the poetry independently.
		Acquire life lessons through the poetry.

		Comprehension of Linguistic Skills and Techniques among students.
		Get overall communicative skills, necessary for business communication.
B.Com Part-III		Comprehension of the English literature structure and background
		Understand the terminology and depth of poetry
		Competence and clarity about the development digital technology and their uses
		Linguistic analysis about the structure and style of Oratory skills
		Effectively compose and narrate their own ideas and concepts through creative writing and speaking
Hindi		
B.Com Part-I, Sem-I	GUNJAN	Understand the prose content , poetry and communication skillsown ideas, thoughts and concepts
		Apply four skills of the Hindi language in our daily routine.
		Communicate effectively, proficiently with enhanced level of Hindi usage by using their
		Poetry the section comprises of a total of kavya, pad and poems by Mahadevi Warma,Nirala and Kabir, Surdas and Mirabai.
		Understand the vyavharik bhasha and Vyakaran, sawadlekhan, letter writing and manakwartani
B.Com Part-I, Sem-II	GUNJAN	Understand the prose content, poetry and communication skills.
		Apply four skills of the Hindi language as in composition of poetry and prose.
		Formulate/ compose his/her own sentences and able to speak Hindi Language with a bitmore competence and clarity.
		Collaborate wherever needed and linguistically communicate with other students in Hindi.
		Communicate effectively, proficiently with enhanced level of Hindi usage by using their own ideas, thoughts and concepts.
		Understand devnagari lipi and paribhashik prashasanik shabdawali.
B.Com Part-II	VANIJY SANKAY	Understand the basic concept and subject of Hindi and its origins
		Evaluate the concept of Hindi from past to present & making the society more closely through literature.
		Hindi is used as an official language as well as second language so they can easily be employed easily in those countries also.
		As they are practicing translation from Hindi to English and English to Hindi and some other language as well as they can become translators in many central government offices.
		Having good command over particular language one can present himself in better way.
		Learning Hindi and non Hindi region definitely one can achieve anything
		Understand the stories, poems, sanvadlekhan, essay writing and letter writing.
		Understand the adharbhut pathykrum and sandarbhas.

B.Com Part-III	HINDI GADHYA	Understand the basic concept and subject of Hindi and its origins.
		Evaluating the concept of Hindi from past to present and making the society more closely through literature
		Hindi is used as an official language as well as second language so they can easily be employed easily in those countries also.
		As they are practicing translation from Hindi to English and English to Hindi and some other language as well as they can become translators in many central government offices.
		Having good command over particular language one can present himself in better way.
		Learning Hindi and non-Hindi region definitely one can achieve anything .
		To be able to understand the stories, poems, sanvadlekhan, eassy writing and letter writing.
		Able to understand the adharbhut pathykram and sandarbhas.
B.Com. Part-I, Sem-I	Advanced Accountancy	Able to understand the story of Ashok ke full, Ghisa and Khokababu and understand the sansmaran
		Gets important basic accounting knowledge at applicable to business i.e. meaning of accountancy and will be able to handling account transaction.
		Maintain all types of Subsidiary Books i.e. Purchase Book, Purchase Return Book, Sales Book, Sales Return Book, Cash Book.
		Prepare final accounts of individual i.e. preparation of trading account, profit and loss account and balance sheet.
		Record and prepare depreciation accounting transactions by applying different methods of depreciation i.e. Straight line Method, Reducing Balance Method.
		Rectify the accounting errors occurred while recording transaction.
		Differentiate between bank pass book and cash book and learn to prepare bank reconciliation statement.
	Principles of Business Organization	Understand commerce and industries meaning scope evolution and effect, student understand MNC emergency of Indian and MNC Indian business and new millennium
		Understand business sector and its form organization how to business form in mom and pop. Stores students able to understand on line trading marketing and commerce cashless transaction.
		Understand merger and acquisition of meaning franchising, dealership and business outlet student able to understand trade work copyrights.
		Understand class work and opportunity and idea generation, Role of creative innovation with business plan and decision.
		Understand transport, insurance policy communication development and other services import and export

		of trade project and explain discuss the topic
	Principles of Economics	Apply knowledge and skill in the field of Economics and will be able to have the employability in these areas.
		Illustrate how microeconomic concepts can be applied to analyze real-life Situations
		Analyze about Traditional and Modern Definitions of economics..
		Application of Micro & amp; Macroeconomic Concepts.
		Perform supply and demand analysis to analyze the impact of economic events on markets.
		Application of Supply and Production Pattern
		Application of Cost & amp; Revenue Pattern
		Computer Fundamentals & Operating System - I
	Know about different elements of computer & system.	
	Aware about different types of memory.	
	Get to know about different input devices and output devices.	
	Learn to prepare a text document with complete formatting and page setting.	
B.Com. Part-I, Sem-II	Financial Accounting	Prepare final accounts of non-trading institutions.
		Prepare final accounts of Co-operative societies.
		Prepare final accounts of Agriculture business farm.
		Record hire purchase transactions and preparation of hire purchase accounts.
		Learn various provisions of Insolvency act, process of Insolvency and will be able to open statement of affairs and insolvency account.
	Principles of Business	Understand management, concept, meaning, Definition and importance. Student able to Management and Thought and Schools. Contribution of Henry Fayol, Contribution of Elton Mayo.
		Understand Planning Concept meaning and definition. Nature and importance of Planning Objective of planning, Forecasting and Planning, and planning process
		Understand organization concept nature meaning and importance and principles of Organization staff organization and Departmentalization.
		Understand Directing concept, meaning Definition and importance and Nature of Direction, Advantages and Disadvantages Motivation concept meaning and importance, Coordination meaning and principle.

		Understand Controlling concept meaning Definition and importance and advantages and disadvantages and Technique of controlling and tool of Controlling and Process of Controlling.
	Computer Fundamentals & Operating System-II	Get basic introduction of computer and mobile operating systems & Know concept of windows versions.
		Create and delete file in file Explorer.
		Know the concept of modern communication and network topologies.
		Create e-mail account and compose e-mail message. Create table, utilizing existing template provided by Microsoft and add customization on template according to user needs. Identify steps in the process and complete an activity to create a mail merge.
		Develop the skill of power point programs. Insert various graphical object on slide.
		Add different transition, animation, sound and timing effect to slide. Run a presentation on computer screen.
	Business Economics	Examine the difference between business and managerial economics.
		Application of Discriminative nature of monopolist.
		Application of monopolistic competition, oligopoly, and perfect competition.
		Application of demand and supply pattern of rent and wage.
		Application of the theories of interest and profit.
B.Com Part-II	Business Mathematics & Statistics	Calculate Integers H.C.F. & L.C.M
		Calculate Percentage, Discount, Commission and Brokerage.
		Calculate Average and Profit and Loss.
		Calculate Simple Interest and Compound Interest.
		Calculate Simple and Compound proportion.
	Information Technology & Business Data Processing	Understand Data processing data concept and use of data in computing, Data processing concept and advantages of Data processing and Application of data processing in Business.
		Understand Data base concept objectives and need of Database, database users. Data warehousing and concept Need and advantages of Data warehousing. Data mining Concept and advantages of data Application of Data Mining.
		Understand Database management system and DBMS concept Characteristics objectives advantages limitations components of DBMS.DBMS model hierarchical Network and Relational, Architecture of DBMS, internal level conceptual level and External level.
		Understand spreadsheet package, MS-Excel 2007/Higher and introduction to spreadsheet package and components of spreadsheet Windows, spreadsheet Basic and concept columns and Rows cell, cell address, Cell range, cell pointer, sheet tabs, working in worksheet Editing and formatting worksheet

		Alignment of data in cell, inserting and deleting cell Rows and columns changing the column width and row height page setup saving and printing of worksheet.
		Understand Formulas, functions and Chart in excel introduction to formulas functions and categories of functions, working with common excel functions TODAY DATADIF, NOW, UPPER, LOWER, PROOPER CONCATENATE, AVERAGE, MAX MIN, COUNT, COUNTBLOANK, COUNTIF, SUM, SUMIF, AUTOSUM, IF. And chart in excel introduction, types, creating and formatting and chart displaying saving and formatting a chart displaying saving and printing.
	Monetary & Financial System	Get basic knowledge about money, i.e. Barter System, Functions Brief History, Meaning, Definition and Nature of Money, Kinds of Money, Demonetisation
		Learn value of money, Demand and supply of Money in economics system. Their Meaning and Determinants.
		Learn price fluctuations like Inflation and deflation -Meaning, Definition and Causes. Their effects and measures and students also learn Trade Cycle their Concept and Meaning
		Learn about money market their Meaning, Definition, Nature, Features and Objectives. Impact of Demonetisation on Indian Money Market
		Learn about capital market like their Concept, Meaning, Definition, Features, Nature and Objectives of Capital Market. SEBI: Organisational Structure, Functions, Powers and Responsibilities.
	Corporate Account	Explain the various methods of issue of shares and debentures. Understand the provisions relating to issue of shares at a discount, utilization of securities premium account, right issue of shares, sweat equity shares.
		Reconstruct the capital structure in the financial statement of joint stock company ltd.
		To understand the Profit prior to Incorporations.
		Develop the procedure involved in Amalgamation of companies.
		Develop the procedure involved in Absorption of companies.
	Income Tax and Auditing	Understand basic concepts of auditing and types of audit.
		Learn audit programme, voucher checking and verification of assets and liabilities.
		Learn power, duties and liabilities of auditor.
		Prepare audit report.
		Learn auditing of banks, insurance and educational institutions.
B.Com. Part-III	Essentials of E- Commerce	Understand the basic concepts of E-commerce.
		Describe Internet trading relationships including Business to Consumer, Business to Business, Intra organization.
		Describe about consumer search and resource Discovery.
		Describe about Business-to-Business Relationships including e-commerce, Key technologies for B2B

		ecommerce, E- Marketplace models of B2B- Supplier oriented marketplace, Buyer oriented marketplace and Intermediary oriented marketplace
		Learn the basics of e- Payment and e- Banking & its Components Like Electronic fund transfer (EFT), Credit cards and debit cards-based payment, Use of mobile applications (apps) for e-payment, Meaning of electronic banking, online banking services, benefits of online banking, Future of online financial services in India
	Business Regulatory Framework and Company Law	Learn the basics laws governing commercial contracts and nuances of competency to contract, rules of consideration and objects of contracts with case laws and illustrations.
		Learn the rules regarding the contract of sale, Distinction between sale and agreement to sell, condition and warranty, right of unpaid seller and remedies for breach of contract sale.
		Acquire problem solving techniques and to be able to present coherent, concise legal argument.
		Learn various provisions related to the Negotiable Instrument Act, 1881 with Amendment Act 2015. Rules related to Bills of Exchange, Promissory Note and Cheque. Legal process on Dishonour Cheque and penalties.
		It will help students to understand the legal structure of GST, and its implementation in India.
	Cost and Management Accounting	Learn the basic concepts and tools used in Cost Accounting and applications of Cost Accounting techniques for determination of cost of production.
		Prepare Cost Sheet of Production.
		Calculate labour cost by using different labour costing methods.
		Learn reconciliation of cost accounting and financial statement.
		Open cost sheet of different process of production.
	Internet and WWW	Understand the basic concepts of Networking including its types, structures, models, etc.
		Learn fundamentals of computer system.
		Open Mail account, sending E-mail, attaching files to E-mail, reading captcha etc.
		Understand functioning of web sites, browser and searching in web sites etc.
		Learn basic structure of HTML and designing web site.
	Business Environment	Understand the internal and external components of business environment.
		Learn Indian agricultural environment.
		Learn Indian industrial environment.
		Learn Indian service environment.
		Know India and Foreign Trade Environment.
M.Com. Part-I,	Managerial Economics	To help the students form a clear idea of Managerial Economics.
		Ability to forecast demand in light of changing circumstances and to formulate business plans.
		Understand the situation of market supply and demand.

Sem.-I		Understand determination of price under different market forms.
		To describe the concept of Inflation and Deflation and its consequence in an economy.
	Services Marketing and Customer Relationship Managements	Learn about service marketing basics nature and types and their environment.
		Learn to service marketing process like service market segmentations, needs, pricing determination of service.
		Aware about service marketing sectors and areas for applicable services like financial service, hospital, tourism, education etc.
		Learn about customer relationship i.e. meanings, needs, scope, how to work rational exchange in business etc.
		Knowledge about the consumer decision making process.
	Advanced Financial and Cost Accounting	Able to know the accounting standards. Journal entries, valuation of Goodwill etc.
		Analyse and interpret the financial statement and take different business decisions.
		Know the financial and cost accounting principles and procedure for analysing the different cost of the organizations.
		Learn about on Cost Ascertainment and classification of cost, calculation of Machine-Hour-Rate, Operating costing.
		Get knowledge about cost audit in organization
	Banking and Insurance Services	Provide to Students fundamental understanding of the structure of commercial banking in India and its management
		Understand the functions and significance of RBI in India. To understanding about SBI bank's function and working methods.
		Understand the basic information about insurance companies' formation, meaning, needs, nature and scope.
		Get knowledge about kinds of insurance in India i.e., Life Insurance, Fire Insurance, Marine Insurance, Crop Insurance, Livestock Insurance, Motor, Personal, Accident, Sickness and other liability cover
		Understand the operations and working of insurance companies in India. i.e., IRDA, IDBI, IFCI, ICICI, IBRD.
M.Com. Part-I, Sem.-II	Accounting for Managerial Decisions	Absorb about basic accounting fundamentals and to prepare Vertical financial statements as per Indian Companies Act 2013.
		Mature in financial analysis skills and learn to prepare Fund Flow and Cash Flow Statement, Estimated Working Capital and Receivables management.
		Understand, develop and apply the techniques of management accounting in the financial decision making in the business corporate.
		Analyse ratios and core concepts of business finance and its importance in managing a business.

	Strategic Management	Prepare budgeting and get basic knowledge about budget.
		To make the students develop competence with their usage in managerial decision making and control.
		Familiarization with the strategic management process.
		Aware about the techniques to scan an environment and the role of environment scanning in hurdle less strategic management of an organization.
		Understand about the equal importance of strategy formulation and strategy implementation.
		Clarity about the strategies policies, and functional strategy. i.e. Marketing policies, Production policies, Personal policies, financial policies.
	Management Concept and Organizational Behaviour	Learn about the implementation, evaluation of strategies.
		To develop students an understanding regarding the role of leaders in decision making process in an organization.
		Ability to execute managerial tasks of planning, organizing, staffing, controlling, directing.
		Understand management and organization behaviour, concept associated with continuous improvement in individual and group processes.
		Understand themselves and other people at work and will be able to learn how to create effective work groups at workplaces.
		Translate management and organizational behaviour theories into practice that will result in organization effectiveness, efficiency, and human resource development.
	Computer Applications in Business	Understand the application of business Knowledge in both theoretical and practical aspects.
		Understand the operating systems and MS Office for preparing documents and mathematical work.
		Determine the procedures and schedules to be followed on preparing financial statements of companies.
		Understand the basic concepts and functions of accounting, trade and computer software.
Analysing the scope of business by adopting modern technology in the business practice.		
M.Com. Part-II Sem.-III	Research Methodology	Understand some basic concept of research and its methodologies.
		Understand the data collection and its process to select & define appropriate research problem parameters.
		Learn to Analysis & Interpretation of Data like Classification, Coding-Tabulation of Data- Statistical analysis of data- Interpretation & Generalisation, Graphic Presentation etc.
		Conversant with the basic principles and theoretic concepts of the research and guide them in their applications, so the students will be able to write project report and thesis.
	Statistical Analysis	Enable the students in-depth understanding of the concept of probability, sampling, correlation and their applicability.
		Knowledge about the applicability of various parametric and non-parametric tests.
		Ability to use formulae to solve statistical problem.
		Gain a comprehensive view of the usage and importance of statistics formulae in solving different

	Corporate Tax Planning and Management	statistical problems.	
		Ability to make decisions under uncertain business situations.	
		Development of logical reasoning ability in students.	
		Ability to identify the difference between Tax Evasion, Tax Planning and Tax Avoidance.	
		Understanding of various deductions, rebates and reliefs to reduce the taxable income and tax liability,	
		Skill to take managerial decisions keeping in view the Income Tax Rules.	
		Get knowledge about the Double Taxation Avoidance Agreement.	
	E-Commerce and Legal Security	Familiarize with the relevant provisions and procedure to compute total income of a company.	
		Ability to start and operate e-commerce website.	
		To help the students learn to evaluation e-commerce website using major e-commerce revenue models.	
		To enable the students how to use various tools to build a dynamic website.	
	M.Com. Part-II Sem.-IV	International Financing	Go through familiarization with online payment services and different cyber laws
			Knowledge of cyber world and scope of cyber laws in E-commerce.
			To introduce about the foreign exchange system prevalent in international trade and business.
Clarity about the role of central bank in international financial management.			
Get knowledge about international monetary system			
Sales and Distribution Management		Get Knowledge about Global financial market and their work like how to exchange money, their interest rate, global market instrument.	
		Get Knowledge about IMF, World Bank, international monetary system and their role and importance in international financing.	
		Comprehend the information related to understanding of the sales & distribution processes in organizations.	
		Comprehend concepts, approaches and the practical aspects of the key decision-making variables in sales management and distribution channel management.	
		Analyse various market analysis methods and selling concepts.	
Co- Operative Management		Explore evaluation techniques in sales performance and trends in sales & distribution management.	
		Link distribution with other marketing variables.	
		Understand basic principles and characteristics of Co-operation.	
	Understand functioning of various co-operative societies.		
	Understand functioning of various co-operative financial societies and banks.		
Understand government policies for co-operative sector.			
Understand history of co-operative legislation in India			