

MOOLJI JAITHA COLLEGE (AUTONOMOUS), JALGAON

PROGRAM

OUTCOMES

BA (English)	
1	Students will able to use communicate in English effectively.
2	The inculcation of human values will lead to positive transformation of behavior of students.
3	Students will be able to interpret the literary works analyze them critically.
4	Students will be equipped with skills which will improve their employability.
MA (English)	
1	Students will become better communicators in English.
2	Students' critical abilities will be sharpened and they will be able to think critically.
3	Students' understanding of human nature will be strengthened.
4	Students' writing skills will be strengthened in order to enhance their employability.
5	The extended frontiers of language and literature will assist them in their future, research, Job placement and human life..
B.A. Hindi	
1	Develop Attitude of Literary Forms. (Hindi Poetry & Fiction)
2	Develop Reading, Writing & Communication Skills of Students.
3	Information about the history of ancient, medieval and modern Hindi Literature.
4	Students could enjoy the literary works on the basis of the foundation laid by the scholars.
5	Information about Literary Theory.

6	Develop Approach of Hindi Linguistics & Grammar.
M.A. Hindi	
1	Applications of Literature and Language concepts.
2	Students could enjoy the literary works on the basis of the foundation laid by the scholars.
3	Students have strengthened language capacity.
4	The extended frontiers of language and literature will assist them in their future, research, Job placement and good human life.
BA (Marathi)	
1	Develop Reading, Writing & Communication Skills of Students.
2	Develop Attitude of Literary Forms
3	Develop Attitude of Marathi Linguistics & Grammar.
MA (Marathi)	
1	To develop of critical approach about Art & literature.
2	To know the importance of language in human life.
3	To develop translation skill.
B.A. (Sanskrit):	
1	Develop Reading, Writing & Communication Skills of Students.
2	Develop Attitude of Literary Forms.

3	Develop Attitude of Sanskrit Linguistics & Grammar.
M.A. (Sanskrit):	
1	To develop of critical approach about Art & literature.
2	To know the importance of language in human life.
3	To develop translation skill.
B.A. (Defence & Strategic Studies)	
1	Students acknowledge about India's National security framework.
2	Students understand role of Security forces and Government issues.
3	Students understand traditional and non-traditional threats.
M.A. (Defence & Strategic Studies)	
1	Post Graduate Defence Studies students can analysis or mapping the security threats.
2	They can join think tank, research institute, research projects and Lecturer ship in Jr/Sr. colleges.
3	Defence graduate students are most beneficial to India's intelligence unit and security forces.
Certificate Course in Security Management	
1	Certificate course students understand fundamental security issues.
2	Students can brief about VIP security.
3	Students know about self security and security management.

B.A. (Economics)	
1	Demonstrate the ability to employ the "economic way of thinking".
2	Demonstrate an understanding of microeconomic and macroeconomic theory.
3	Apply economic theory to issues in fields of economics.
M.A. (Economics)	
1	Interpret and critically evaluate articles in the economics research literature..
2	Identify strategic issues and solutions in relation to economic problems and activity within firms, society and government.
3	Describe the core areas of economics and relate to those areas economic principles, theories and models.
B.A. (History)	
1	Understand the basic themes, concepts, chronology and the Scope of Indian History.
2	Acquaint with range of issues related to Indian History that span distinct eras.
3	Understand the history of countries other than India with comparative approach.
4	Prepare for various types of Competitive Examinations.
M.A. (History)	
1	Understand and evaluate the complexities of historical developments of various nations, societies and cultures.
2	Acquaint with research skills, methodologies, philosophy of history and historiography as being a professional historian and researcher.
3	Prepare themselves for the competitive carriers in the fields of civil services and teaching.

B.A. (Political Science)	
1	To understand national and international political activities.
2	Positive intervention in society
M. A. (Political Science)	
1	To understand national and international political activities.
2	Positive intervention in society.
3	To motivate students for research.
B.A. (Sociology)	
1	understand structure of society, social groups, social process, culture and socialization.
2	understand the concept of social structure, marriage system, family and religion.
3	understand social problems and disorganization in Indian society.
4	learn about renewed social thinkers.
5	learn about research methodology in sociology.
6	understand basic concepts in rural, urban tribal and industrial sociology.
M.A. (Sociology)	
1	understand in detail about major social institutions, new policies and trends of social change.
2	learn about advanced research methodology in sociology.

3	learn about social demography, social health, impact of globalization on media and society.
4	understand in detail about gender and society, social movement and social welfare in india.
5	Understand about western and Indian social thinkers.
Bachelor of Commerce (B.Com)	
1	To build a strong foundation of knowledge in different areas of Commerce.
2	To develop the skill of applying concepts and techniques used in Commerce.
3	To develop an attitude for working effectively and efficiently in a business environment.
4	To integrate knowledge, skill and attitude that will sustain an environment of learning and creativity among the students.
5	To expose students about entrepreneurship.
6	To enable a student to be capable of making decisions at personal and professional level.
Bachelors of Business Administration (BBA)	
1	Develop ethical thinking.
2	Develop functional and general management skills.
3	Inculcate a global mindset.
4	Evaluate different business problems using analytical and creative, and integrative abilities.
5	Build and Demonstrate leadership, teamwork, and social skills.
6	Communicate effectively in different contexts.

7	Analyze socio-political-economic environment of business organizations.
Bachelors in Computer Applications (BCA)	
1	Improve their computer literacy, their basic understanding of operative systems and a working knowledge of software commonly used in academic and professional environments.
2	Develop criteria to organize and present different type of works in academic and professional environments.
3	Learn to organize information efficiently in the forms of outlines, charts, etc. using appropriate software.
4	Develop skills to present ideas effectively and efficiently.
5	Academic and Professional Presentations - Designing and delivering an effective presentation and developing the various IT skills to electronic databases.
6	Use the Systems Analysis Design paradigm to critically analyze a problem.
7	Solve problems (programming networking database and Web design) in the Information Technology environment. Function effectively on teams to accomplish a common goal, Demonstrate professional behaviour.
8	Develop IT-oriented security issues and protocols..
9	Able to design and implement a web page.
10	Improved communication and business management skills, especially in providing technical support.
Masters in Commerce (M.Com)	
1	The students will develop an ability to apply knowledge acquired in problem solving.
2	Ability to work in teams with enhanced communication and inter-personal skills.
3	The students will be ready for employment in functional areas like Accounting, Taxation, Banking, Insurance and Corporate Law.

4	Ability to start entrepreneurial activities.
5	To inculcate ethical values, team work, leadership and managerial skills.
6	Students will exhibit inclination towards pursuing professional courses such as CA/ CS/ CMA/CFA etc.
B.Sc. (Chemistry)	
1	Developed students with the skills required to succeed in graduate school, the chemical industry or professional school.
2	To expose the students to a breadth of experimental techniques using modern instrumentation.
3	The student will understand the importance of the Periodic Table of the Elements, how it came to be, and its role in organizing chemical information.
4	The student will understand the interdisciplinary nature of chemistry and to integrate knowledge of mathematics, physics and other disciplines to a wide variety of chemical problems.
5	The student will learn the laboratory skills needed to design, safely conduct and interpret chemical research.
6	The student will acquire a foundation of chemistry of sufficient breadth and depth to enable them to understand and critically interpret the primary chemical literature.
M. Sc. (Organic Chemistry)	
1	Students were equip with the knowledge and generic skills for employment or further training in R&D, science based industry and establishments, education, and for training at management levels in other professions.
2	Study of Chemistry provides the career opportunities in the field of: Pharmaceutical /drug development, Science education, Chemical analysis/forensic science, Chemical synthesis.
3	Understand the laboratory techniques including instrumentation and in cultivate research aptitude and reasoning ability in the students.
4	Acquire the skills about modern chemical tools, Models, Chem-draw, ISI draw, charts, equipment's and develop research oriented skills.
5	They able to decide about new synthetic routes, choice of reagents and conditions taking into account cost, safety and environmental factors.

6	Student will know basic information on molecular methods (IR, Raman, UV-VIS, NMR and EPR) and Student will be able to select molecular spectroscopy methods suitable for solving given scientific problem.
M. Sc. (Analytical Chemistry)	
1	To equip students with the knowledge and generic skills for employment or further training in R&D, science based industry and establishments, education and for training at management levels in other professions.
2	To prepare students to developed interpersonal skills, relating to the ability to interact with other people and to engage in team working. To stimulate intellectual development, develop powers of critical analysis and ability to solve problems.
3	To understand the instrumental method of analysis like AAS, FES, GC, HPLC,TGA, DTA etc. To introduce students to chemical research methodology through carrying out a research project.
4	To understand the official method of standardization and quality control. To understand the data handling and knowing accuracy, precision, Standard deviation and regression etc.
BSc (Computer science)	
1	Gain the ability to analyze and solve computer science problems through application of fundamental knowledge of mathematics and algorithms.
2	To be able to adapt to the evolving technical challenges and changing career opportunities.
3	Apply computer science theory and software development fundamentals to produce computing-based solutions.
MSc (Computer science)	
1	Gain the ability to analyze and solve computer science problems through application of Fundamental and advance knowledge of mathematics and algorithms.
2	To be able to adapt to the evolving technical challenges and changing career opportunities.
3	Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
4	Communicate effectively in a variety of professional and research contexts.

5	Apply computer science theory and software development fundamentals to produce computing-based solutions.
6	Acquire and apply new knowledge as needed, using appropriate learning strategies.
B.A. / BSc (Geography)	
1	Developed Skilled Human resources in surveying cartography and GIS
2	Understand and adopt strategies for management of resources disaster and tourism.
3	Developed the ability among students to adopt environment friendly behavior
M.A./M.Sc. (Geography):	
1	Acquire knowledge and understanding geographical concept applicable in agriculture, tourism, watershed management and disaster management.
2	Developed wide perspective of the disciplines if the Geography to enable the student to identity the challenging problems of society through research and plan to professional career, as entrepreneur to develop innovative solutions for the problems.
3	Competent enough to use geographical knowledge and skill to analyses the problems and find out remedial measures.
B.Sc. (Biochemistry)	
1	T.Y. B.Sc. (Biochemistry) graduates will have basic and applied knowledge of Biochemistry.
2	They can further continue their education as PG and then Ph.D.
3	After successful completion of the program, students will acquire laboratory and transferable skills which will help them to boost their career.
4	Students can apply their knowledge in public as well as private sector and build successful career.
B.Sc. (Botany)	
1	Knowledge and understanding of the range of plant diversity in terms of structure, function and environmental relationships.

2	The evaluation of plant diversity, Plant classification and the flora of Khandesh and Maharashtra.
3	Practical skills: Students learn to carry out practical work, in the field and in the laboratory, with minimal risk.
M.Sc. (Botany)	
1	Learn about practical technique in lab for detail study of plant structure, reproduction, anatomy, breeding procedures for hybridization
2	Study of biodiversity in relation to habitat correlate with climate change, land and forest degradation.
3	Application of Botany in agriculture through study of plant pathology. Pale botany to trace the evolution of plants.
B.Sc. (Microbiology)	
1	Microbiology graduates will apply their knowledge and skills gained through the program to achieve success in their academic and/or professional development.
2	Our graduates can apply this knowledge for pursuing postgraduate education.
3	The program shall promote them to choose varied career paths in various disciplines of the subject.
4	Our candidates will develop a sense of societal and ethical responsibility pertaining to health, agriculture, dairy, genetic engineering, and fermentation industry.
5	The knowledge shall promote our graduates to stand independently amidst the growing technological innovations in the subject.
MSc (Microbiology)	
1	Acquired knowledge and understanding of the microbiology concepts as applicable to diverse areas such as industrial, agriculture, food, environment, and others.
2	Demonstrate an understanding of structure and metabolism of macromolecules, regulation of metabolic pathways and the role of microbes in industry, health and environment.
3	Demonstrate key practical skills/competencies in working with microbes for study and use in the laboratory as well as outside, including the use of good microbiological practices.

4	Competent enough to use microbiology knowledge and skills to analyze problems involving microbes, articulate these with peers/ team members/ other stake holders, and undertake remedial measures/ studies etc.
5	Developed a broader perspective of the discipline of Microbiology to enable him to identify challenging societal problems through research and plan his professional career as entrepreneur to develop innovative solutions for such problems.
MSc (Biotechnology)	
1	Become eligible to take doctoral education in various fields of life sciences inclining biotechnology, biochemistry, genetic engineering, forensic science, molecular biology and agriculture biotechnology.
2	Serve as junior research fellow in government and private institutes for government or NGO sanctioned projects.
3	Serve as administrators, researchers, investigators, assistant, and data scientist in pharmacy, qualitative manager, production manager, researcher for scientific, food, agriculture and in sterile plants of various industries.
4	Can serve as entrepreneur in industries like plant tissue culture, food, mineral water packaging, in agriculture sector by producing vermin compost, bio-fertilizer, bio-pesticides etc.
B.Sc. (Mathematics)	
1	Demonstrate an understanding of concepts involved in analysis, algebra and mathematical methods.
2	Gain proficiency in mathematical techniques of both pure and applied mathematics
3	Will be able to apply the necessary mathematical methods to any scientific problem.
4	Learn to think critically and using mathematical logic.
5	Develop the ability to understand and practice work ethics.
6	Strive to work for adoption of mathematics for social needs.

M.Sc. (Mathematics)	
1	Demonstrate an understanding of concepts involved in mathematical analysis, algebra and applied mathematics.
2	Gain proficiency in mathematical techniques of both pure and applied mathematics and be able to apply the necessary mathematical methods to any scientific problem.
3	Acquire significant knowledge on various aspects related to Linear algebra, Topology, Numerical methods and Differential equations.
4	Learn to work independently as well as a team to formulate appropriate mathematical methods.
5	Develop the ability to understand and practice the morality and ethics regarding scientific Research.
6	Realize the scope of mathematics in enlightening of the society and plan to pursue research which is beneficial to the society.
B.Sc. (Statistics)	
1	Serve as Statisticians with sound theoretical, practical and computational skills.
2	Work as researcher for formulation and solution of mathematical, scientific, societal and industrial problems.
3	Understand the role of statistics in science, society and for National Development.
4	Apply some discrete and continuous probability distributions which are highly useful in modeling real life uncertainties.
5	Investigate the relationship between a variable of interest (the response) and a set of related predictor variables and formulate and fit the appropriate regression model to the given dataset.
6	Serve as Administrators/Investigators in the private as well as government sectors and worked as Analyst in Manufacturing (SQC unit), Pharmaceutical Industries.
7	Work in service industries as consultant & analyst such as Banking and Insurance, Forest, Telecom, Transports, Hotel etc.
8	Recognize and make appropriate use of different statistical software's such as R, MINITAB, Ms-Excel, SYSTAT etc.

9	Work as Programmer to write script using R language and develop algorithms.
10	Convert large amount of complex data into summarized form using Graphical representation tools that helps in visual interpretation.
11	Serve as Data Scientist/ Data analyst in various companies of IT sector, Health sector, Agricultural sector etc.
B.Sc. (Physics)	
1	Gain the knowledge of Physics through theory and practical's.
2	Understand good laboratory practices and safety.
3	Apply theoretical knowledge of principles and concepts of Physics to practical problems.
4	Demonstrate a rigorous understanding of the core theories and principals of physics.
5	Make aware and handle the sophisticated instruments/equipments.
M.Sc. (Physics)	
1	Introduce advanced techniques and ideas required in developing area of Physics.
2	Enhance student ability to develop mathematical models for physical systems.
3	Understand and apply principles of physics for understanding the scientific phenomenon in classical and quantum physics.
4	Analyze the application of mathematics to problem in physics and development of mathematical methods suitable for such applications and for formulation of physical theory.
5	Develop research oriented skills.
6	Make aware and handle the sophisticated instruments/equipments.
B.Sc. (Electronics)	

1	Understand basic circuit using active devices.
2	Understand basic analogue circuits and their applications using active devices.
3	Learn basic test instruments such as power supply, function generator, DFM and CRO and to study construction and working principal.
4	Understand basic differential amplifiers and their application in linear integrated circuits.
5	Design and conduct experiments as well to analyze data and its interpretations.
6	Understand the fundamental concepts of semiconductor such as crystal structure, energy band gap and charge carrier statistics.
B.A. (Dramatics)	
1	Students learn the subject and create a own play production and they create own path in professional theatre.
2	We have give them freedom for production, and called as `Departmental Production'.
3	To guide students for their best performance of the subject, competition & Programs.
4	We have Organizes and participates in different competitions, seminars, workshops in theatre.
B.A. (Music)	
1	Being able to express oneself orally in music: singing, composing by experimenting with the voice and participating in playing music together and vocal performances.
2	Being able to express oneself in writing in music: using various forms of notation. Writing is also used to experiment with language rhymes, rhythm and sound, to present musical experiences, ideas and forms of expression, and to reflect upon subject knowledge.
3	Being able to read in music: being able to interpret and understand various musical expressions, symbols, signs.
M.A. (Music)	
1	Increasing memory increases due to the music of students.

2	The examiner can easily find the presentation on the stage of the students.
3	Being able to read in music: being able to interpret and understand various musical expressions, symbols, signs.
1 Bachelor of Visual Arts	
1.1 Bachelor of Visual Arts (Painting)	
1	To encourage students to know about anatomy, light, shade, reflection, nature drawing, landscape, using different mediums like water colour, oil colour, acrylic colour, etc.
1.2. Bachelor of Visual Arts Painting (sculpture)	
1	To encourage students to learn about anatomy, creative sculpture, making 3D objects from clay, wood, copper, etc.
B.A. (Philosophy)	
1	Graduate level academics curriculum in Philosophy.
2	Developing critical analytics on the subjects of Philosophy.
3	Application of Philosophical thoughts in human civilization.
M.A. (Philosophy)	
1	Post Graduate level academics curriculum in Philosophy.
2	Developing high order of critical analytics on the subjects of Philosophy.
3	Application of Philosophical thought analysis to develop human civilization.
B.A. (Yogic Science)	
1	To obtain the knowledge of yoga and yogic kriyas

2	To obtain the basic concept of anatomy, physiology, and naturopathy
3	To obtain the basic concept of anatomy, physiology, and naturopathy .
M.A. (Yogic Science)	
1	To attain the complete knowledge of physical, mental, emotional, intellectual and spiritual path of yoga..
2	To get in depth knowledge of yogic Concept for personality development.
3	To qualifying as assistant professor, yoga teacher, yoga trainer.
4	To get the opportunities of employment and self employment in the field of yoga.
5	To obtain eligibility for NET, Ph.D, M.Phil.
B.Voc.	
1	To enable students for pursuing respectable career through Self-Employment.
2	Executive Employment, Entrepreneurship, Professional Career in the field of service sectors such as High –Tech Farming and Marketing.
3	To develop inter-twining competence in the field of Agriculture, Floriculture industries.
4	To develop abilities in farming business.
5	To develop the skilled to manage protective cultivation technology, hydroponics, construction of polyhouse.
6	To develop the foundation for higher studies in the field of Agriculture.
7	To train future industry professionals.
8	To impart comprehensive knowledge with extra emphasis on practice.

9	To keep the students up-to-speed on all the latest and cutting edge technologies.
10	Develops ability of self-employment and farming.
11	After successful completion of B.Voc. in Green House Technology, student will be able to perform the job roles like- Skilled manpower in plant protection management under greenhouse.
B.Voc.	
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10	Develops ability of self-employment and farming.
11	After successful completion of B.Voc. in Green House Technology, student will be able to perform the job roles like- Skilled manpower in plant protection management under greenhouse.

B.Voc. (Printing Technology)	
1	Operate and troubleshoot offset, screen, web offset, gravure and flexographic printing machines.
2	Perform prepress and post press operations
3	Co-ordinate and manage the overall printing process.
4	Ability perform activities with the help of soft skills, computer skills, financial skills and management skills.

MOOLJI JAITHA COLLEGE (AUTONOMOUS), JALGAON

COURSE

OUTCOMES

DEPARTMENT OF BIOCHEMISTRY

Class	Course	Outcomes (Student will be able to)
FYBSc	BC-111 Basic Biochemistry-I	<ul style="list-style-type: none"> • Learn the elements present in bimolecular • Differentiate between monomers and polymers • Explain the role of water in synthesis and breakdown of polymers • Compare and contrast the structure and function of the oligo and polysaccharides • Summarize the functions of proteins and able to recognize the importance of the three dimensional shape of a protein on its function and the role of non-covalent bonds in maintaining the shape of a protein
	BC-112: Cell Biology	<ul style="list-style-type: none"> • Compare and contrast saturated, mono-unsaturated, and poly-unsaturated fatty acids • Differentiate prokaryotic from eukaryotic cells and plant cells from animal cells • Discern structure and functions of cell organelles • Understand mitosis and meiosis processes • Explain types of tissues and types of cell junctions
	BC- 113: Basic Techniques in Biochemistry-I (Practical)	<ul style="list-style-type: none"> • Understand hazards and safety measure in laboratory • Do normality, molarity, and percent solution based calculations • Perform qualitative tests for carbohydrates, lipids and amino acids • Use, handling and care of compound microscope • Identify various phases of mitosis • Temporary mount available tissue
	BC-121: Basic Biochemistry-II (Theory)	<ul style="list-style-type: none"> • Recall DNA structure and functions • Discuss types and functions of RNA • Describe classification and properties of enzymes • Understand industrial applications of enzymes • Differentiate water soluble vitamins from fat soluble vitamins and understand clinical significance of the vitamins
	BC-122: Basic Microbiology (Theory)	<ul style="list-style-type: none"> • Explain types, characteristics and significance of microorganisms • Describe the structure and functions of major components of microbial cells • Understand microbial growth, its measurement and bacterial growth curves • Classify microorganisms based on nutrition • Apply isolation techniques to screen bacteria on solid media • Acquainted with various methods of sterilization and disinfection
	BC-123: Basic Techniques in Biochemistry-II (Practical)	<ul style="list-style-type: none"> • Working principle of spectrophotometer and able to handle spectrophotometer • Various staining techniques and Isolate bacteria by streak plate method • Viable counting technique of the micro-organisms. • Analysis quality of drinking water/potable water
SYBSc	BC-231: Food Biochemistry (Theory)	<ul style="list-style-type: none"> • Calculate energy value of food and its measurement • Explain food adulteration and its types • Understand food spoilage, food allergy and food additives

		<ul style="list-style-type: none"> • Discuss various methods of food preservation
	BC-232: Human Physiology I (Theory)	<ul style="list-style-type: none"> • Understand histology and anatomy of various organs of digestive system • Explain structure and functions of various parts of respiratory system • Learn various types of hematopoietic, mechanism of blood coagulation • Understand mechanism of urine formation
	BC-233: Practical course based on BC-231 and BC-232 (Practical)	<ul style="list-style-type: none"> • To acquaint students with various hematological techniques • To perform food biochemistry related practical • To execute microbial isolation and staining techniques
	BC-230: Microbial isolation and identification techniques - I (Theory)	<ul style="list-style-type: none"> • Understand various types of media used for microbial isolation • Measure microbial growth by various methods • Study microbial morphology by various staining techniques • Understand micrometry techniques used for microbial size measurement
	BC-241: Environmental biochemistry (Theory)	<ul style="list-style-type: none"> • Understand the concept of pollution and pollutants • Understand the concept of bioenergy • Explain biodegradation and bioremediation • Understand mode of action of pesticides and its impact on environment
	BC-242: Human physiology-II (Theory)	<ul style="list-style-type: none"> • Discuss mechanism of synaptic transmission • Learn molecular events during fertilization • Explain mechanism of hormone action • Understand mechanism of taste perception and olfaction
	BC-243: Practical course based on BC-241 and BC-242 (Practical)	<ul style="list-style-type: none"> • Determine blood pressure, bleeding time and clotting time and explain its significance • Analyze wastewater for BOD/COD • Analyze soil and water for various parameters • Screen micro-organisms for various products and biochemical parameters
	BC-240 : Microbial isolation and identification techniques-II (Theory)	<ul style="list-style-type: none"> • Understand principle and procedure of various biochemical tests used for identification of microorganisms • Use selective agar and differential media for isolation of microorganisms • Screen industrially economically important microorganisms • Understand microbial preservation techniques
TYBSC	BC-351: Genetics	<ul style="list-style-type: none"> • Understand the importance of Mendel's work. • Understand structure of chromosome and DNA organization. • Understand replication, transcription, translation processes. • Understand fine structure of gene, gene regulation and mutations.
	BC-352: Plant Biochemistry and Bio-fertilizers	<ul style="list-style-type: none"> • Learn life processes like photosynthesis, photorespiration and energy generation. • Study various phytohormones, secondary metabolites and their mechanism. • Understand importance of biofertilizers.

	BC-353: Clinical Biochemistry	<ul style="list-style-type: none"> Learn various disorders related to carbohydrate metabolism. Study different hemoglobinopathies. Understand clinical importance of various enzymes and isoenzymes. Learn concept of inborn errors of metabolism.
	BC-354: Metabolism	<ul style="list-style-type: none"> Learn various catabolic and anabolic reactions related to carbohydrate and amino acids. Study lipid and nucleotide metabolic reactions. Understand importance of metabolism in living things
	BC-355: Biophysical Chemistry	<ul style="list-style-type: none"> Understand the concept of acid-base and buffers. Study various biophysical processes like diffusion, osmosis, viscosity, etc. Learn energy rich compounds, bioenergetics and laws of thermodynamics.
	BC-356: Fermentation Technology BC-350: Introductory Biostatistics	<ul style="list-style-type: none"> Learn screening of microbes, their preservation and inoculums development. Understand instrumentation, types and working of bioreactors. Study the basics of downstream processing. Understand basic terms in biostatistics. Represent data diagrammatically and graphically. Solve problems based on mean, mode and median.
	BC-357: Practical course in Techniques in Plant Biotechnology & Molecular Biology-I	<ul style="list-style-type: none"> Isolate DNA and estimate DNA, RNA, secondary metabolite & chlorophyll pigments. Produce alcohol and amylase. Screen phosphate solubilising bacteria and nitrogen fixing bacteria
	BC-358: Practical course in Clinical Biochemistry	<ul style="list-style-type: none"> Estimate various clinically important components with their clinical significance. Estimate various clinically important enzymes and their clinical significance. Correlate results obtained clinically.
	BC-359: Practical course in Biophysical Chemistry	<ul style="list-style-type: none"> Prepare buffers of desirable pH and morality. Determine viscosity and surface tension of the sample. Practical experience of the processes like diffusion and osmosis.
	BC-361: Genetic Engineering	<ul style="list-style-type: none"> Learn role of enzymes and vectors involved in gene transfer. Study various gene transfer methods. Study gene library preparation. <p>Understand the basic principles of DNA sequencing and PCR</p>
	BC-362: Plant Biotechnology and Bio membranes	<ul style="list-style-type: none"> Learn various plant tissue culture techniques. Understand Agro bacterium mediated gene transfer. Explain mechanism of membrane transport and cell signalling
	BC-363: Immunology	<ul style="list-style-type: none"> Explore cells and organs of immune system. Learn immunity and immune response. Study concept of antigen and antibody. Understand the importance of immunochemistry in diagnosis

	BC-364: Enzymology	<ul style="list-style-type: none"> • Understand classification and specificity of enzymes. • Learn mechanism of enzyme action and enzyme kinetics. • Study activation and deactivation of regulatory enzymes. • Explore various industrial applications of enzymes
	BC-365: Analytical Techniques	<ul style="list-style-type: none"> • Study concept, principle, and applications of various spectrophotometer. • Learn principles and applications of various chromatography and electrophoresis techniques. • Understand concept of centrifugation and radioactivity and its applications
	BC-366: Toxicology	<ul style="list-style-type: none"> • Learn basic concepts of toxicants, toxicity and dose-response relationship. • Study metabolism and mode of action of toxicants. • Understand biotransformation and bioaccumulation of toxicants.
	BC-360: Introductory Bioinformatics	<ul style="list-style-type: none"> • Understand concept of bioinformatics. • Understand applications and scope of bioinformatics. • Understand various biological databases.
	BC-367: Practical course in Techniques in Plant Biotechnology & Molecular Biology-II	<ul style="list-style-type: none"> • Prepare MS media and will have knowledge about macro and micro elements. • Perform various plant tissue culture techniques. • Separate DNA fragments by agarose gel electrophoresis. • Perform restriction digestion and PCR.
	BC-368: Practical course in Immunology and Toxicology	<ul style="list-style-type: none"> • Differentially count WBCs. • Know the importance of cross matching of donor's and recipient's blood. • Perform various immunological Ag-Ab tests. • Determine LC₅₀ value, effect of temperature and pH on toxicity of pollutant.
	BC-369: Practical course in Analytical Biochemistry and Enzymology	<ul style="list-style-type: none"> • Perform enzymology related practical. • Perform separation of mixture using chromatography and electrophoresis. • Immobilize enzyme/yeast cell and can explore it.

Department of Biotechnology

Class	Course	Outcomes (Student will be able to)
MSC	BT-101	<ul style="list-style-type: none"> • To understand the basic concepts in Biomolecules and enzyme. • Learn various metabolic pathway and their energetic. • Know structural conformation of protein.
		<ul style="list-style-type: none"> • Understand enzyme regard to catalysis, inhibitor and immobilization
	BT -102	<ul style="list-style-type: none"> • Inculcate knowledge about classification and identification of microbe • Study ultrastructure of archea, eubacteria & eukaryotes • Learn about growth and nutrition of microorganism • Understand role of microbes in environment.
	BT -103	<ul style="list-style-type: none"> • Learn about safety rule used in laboratory and concept of MSDS. • Develop the skill to detect and quantify biomolecules.

		<ul style="list-style-type: none"> • Learn basic molecular biology techniques.
	BT -104	<ul style="list-style-type: none"> • Acquaint knowledge about enzyme and various factors affecting it. • Acquaint knowledge about culture transfer and maintenance. • Learn method to enrich and quantify microbes form various sample. • Develop the skill to isolate and identify bacteria.
	BT -105	<ul style="list-style-type: none"> • Learn about bacterial growth pattern. • Learn concept of public health and its scope. • Acquaint knowledge about epidemiology, disease and its control.
	BT -106	<ul style="list-style-type: none"> • Learn about vaccine and public health sanitization • Learn about cell component and their function. • Acquaint knowledge about replication, transcription and translation.
	BT -201	<ul style="list-style-type: none"> • Learn about DNA Damage and repair mechanism. • Learn about cell Immune system and Immunity. • Acquaint knowledge about antigen antibody interaction and immune response.
	BT -202	<ul style="list-style-type: none"> • Learn about Vaccine biology. • Learn about historical perspective plant cell and tissue culture. • Acquaint knowledge about protoplast culture and somatic hybridization.
	BT -203	<ul style="list-style-type: none"> • Learn about application of DNA Technology. • Acquaint knowledge about tissue culture laboratory setup • Learn about media used in tissue culture • Acquaint knowledge about micropropagation, endosperm culture root and callus induction
	BT -204	<ul style="list-style-type: none"> • Learn about extraction and qualitative detection of phytochemicals. • Acquaint knowledge about Growth kinetics. • Learn about production of citric acid, alcohol, antibiotics. • Acquaint knowledge about TDT and TDP.
	BT -205	<ul style="list-style-type: none"> • Learn about Immunological techniques. • Acquaint knowledge about Basic techniques used in laboratories. • Learn about microscope, separation techniques, spectroscopy.
	BT -206	<ul style="list-style-type: none"> • Acquaint knowledge about radioactive and immunological techniques • Acquaint knowledge about Bioprocess Engineering • Learn about Bioreactor and fermentation process
	BT -301	<ul style="list-style-type: none"> • Acquaint knowledge about Downstream process • Apply the knowledge again to treat various waste • Understand the current environment issues.
	BT -302	<ul style="list-style-type: none"> • Will acquaint knowledge about environmental law and acts. • Learn basics in recombinant DNA Technology.

		<ul style="list-style-type: none"> Learn basics about r-DNA technology from gene insertion to expression strategies of recombinant genes in various hosts.
	BT -303	<ul style="list-style-type: none"> Productively translate both basic and frontier research concepts regarding Recombinant DNA technology Apply the knowledge gain to treat various wastes.
		<ul style="list-style-type: none"> Understand the current environment issues.
	BT -304	<ul style="list-style-type: none"> Gain skill to estimate various parameters of soil and water. Gain skill required to work in food industries.
		<ul style="list-style-type: none"> Learn various microbial techniques used in food industries.
		<ul style="list-style-type: none"> Gain knowledge about upstream and downstream process used in fermentation
	BT -305	<ul style="list-style-type: none"> Perform the research with systematic and scientific approach.
		<ul style="list-style-type: none"> Understand research process, formulate research plan and analyse the data.
		<ul style="list-style-type: none"> Use the methods of report writing and checking plagiarism
	BT -306	<ul style="list-style-type: none"> Understand the role of microorganism in food spoilage.
		<ul style="list-style-type: none"> Learn about nutraceutical and nutrigenomics.
		<ul style="list-style-type: none"> Get aware of role of nutrigenomics for disease prevention
	BT -401	<ul style="list-style-type: none"> Understand the technique used for analysis of clinical product.
		<ul style="list-style-type: none"> Learn about therapeutic protein production.
		<ul style="list-style-type: none"> Get aware of different tools and technique use for drug designing.
	BT -402	<ul style="list-style-type: none"> Understand the concept and applications of genomics and proteomics.
		<ul style="list-style-type: none"> Get aware techniques and application of comparative genomics.
		<ul style="list-style-type: none"> Learn the techniques used for gene expression and function.
	BT -403	<ul style="list-style-type: none"> Gain skill required for production of various enzyme of industrial application.
		<ul style="list-style-type: none"> Learn about nucleic acid and protein databank.
		<ul style="list-style-type: none"> Gain knowledge about software used for phylogenetic analysis.
	BT -404	<ul style="list-style-type: none"> Carry out comprehensive survey of literature and comprehend a problem based on review.
		<ul style="list-style-type: none"> Plan experimental framework for research and present the work in written format.
		<ul style="list-style-type: none"> Present the research with ICT tools and face viva voce.
	BT -405	<ul style="list-style-type: none"> Practice biostatistics for interpretation of experimental data.
		<ul style="list-style-type: none"> Understand fundamentals of database bioinformatics.
		<ul style="list-style-type: none"> Access information from databases and interpret phylogenetic tree to gain insight into evolutionary path.
	BT -406	<ul style="list-style-type: none"> Understand fundamental business, management, marketing, operation and HRM.
		<ul style="list-style-type: none"> Able to develop skill set required for entrepreneurship in microbiology.
		<ul style="list-style-type: none"> Address the issues related to business ethics and understand concept of safety and IPR.

DEPARTMENT OF BOTANY

Class	Course	Outcomes (Student will be able to)
FYBSc	Bot. 111	Student will know the diversity among the microbes.
		Student will get knowledge of systematic, morphology and structure of Bacteria, Viruses, Algae and Fungi.

		The course will help the student to acquire the knowledge of life cycle pattern of Bacteria, Viruses, Algae and Fungi.
		The course will help the students to get acquainted with useful and harmful activities of Bacteria, Viruses, Algae and Fungi.
	Bot. 112	Student will know the diversity among the angiosperms.
		Comparative account among the families of angiosperms will be studied by them.
		They will acquire knowledge of the economic importance of the angiospermic plants.
		Mechanism of absorption of water, gases and solutes will be understood by them
		This course will help the students to understand the distinguishing features of angiosperm families.
	BOT-113	Student will be incorporated with the practical knowledge.
		Students will be aware of microbiological equipment.
		Student will learn the disease caused by fungi and viruses and also the life cycle of algae and fungi
		Student will get the knowledge of angiospermic families
	BOT-121	Student provide with salient features of Archegoniates.
		They will get the knowledge of the status of higher cryptogams & gymnosperms as a group in plant kingdom.
		This course helps to make them aware of the life cycles of selected genera.
		Economics and ecological importance of Archegoniates will be studied by them
	BOT-122	Student will be acquainted with scope and importance of Plant Ecology
		They will get the information of plant communities and ecological adaptations in plants.
		They will be provided with knowledge of conservation of biodiversity.
		Student will be acquire the knowledge regarding botanical regions of India and vegetation types of Maharashtra.
	BOT-123	Student will be acquire the knowledge of cycles of Bryophytes, Pteridophytes and Gymnosperms
		Students will be aware of ecological equipment.
		Student will learn the various ecological experiments like soil analysis, adaptations of plants and vegetation.
SYBSC	BOT-231	Student will know scope and Importance of plant Anatomy
		Student will get knowledge of various tissue system
		The course will help the student to acquire the knowledge of primary structure of stem and root of plant
		The course will help the students to get acquainted with secondary growth in plant and their causes
		The student will be provided with knowledge of protective tissue system in plant
	BOT-232	Student will know the scope and importance of Plant Physiology
		They will acquire knowledge of plant and plant cell in relation to water
		Different process related with structure of organism and its environment will be studied by them
		Mechanism of absorption of water, gases and solutes will be understood by them
		This course will help the students to understand growth at various level
	BOT-233	Student will be incorporated with the practical knowledge.
		Students will be aware of tissue systems in plants like Parenchyma, Collenchyma and Sclerenchyma etc.
		Student will learn the methodologies and working of experiments of plasmolysis, transpiration, assessment of minerals from plant ash and demonstration experiments.
	BOT-230	Student provide with history scope and importance of Mushroom Culture Technology
		They will get the knowledge of nutritional and medicinal values of edible mushrooms

		This course helps to make them aware the storage, marketing and various food preparations of mushrooms.
		Economics of mushrooms cultivation will be studied by them
	BOT-241	Student will be acquainted with scope and importance of Plant Embryology
		They will get the information of structure of micro and mega sporangium
		They will be provided with knowledge of pollination, fertilization, Endosperm and Embryogeny
		Exposure will be given to the students regarding techniques in embryology
	BOT-242	Student will be get to know the scope and importance of Plant metabolism
		They will be incorporated with knowledge of properties, mechanism and classification of enzymes.
		Student will get the platform to study the process of photosynthesis in higher plants, C3, C4 and CAM pathways.
		Student will be familiar with the respiration in higher plants
	BOT-243	Student will be incorporated with the practical knowledge.
		Students will be inculcated with laboratories skill of the course
		Student will learn the methodologies and working of experiments of chromatography, enzyme activity, photosynthesis and demonstration experiments.
	BOT-240	Student will be given the concept of nursery and Gardening.
		The skill of student will be improved for growing fresh and safe vegetables.
		They will be made aware with the concept of home gardening
		This course will help to develop different skills regarding the gardening operations among the students
TYBSc	BOT-351	Classify algae, fungi based on their characteristics and structures
		Develop critical understanding on morphology, anatomy and reproduction of Bryophytes
		Demonstrate proficiency in the experimental techniques and methods of appropriate analysis of algae, fungi, bryophytes.
		Increase the awareness and appreciation of human friendly algae, fungi, bryophytes and their economic importance.
		Conduct experiments using skills appropriate to divisions of cryptogams
	BOT-352	Learn distinguishing characters and economic importance of the pteridophytes, gymnosperms.
		Compare the groups angiosperms and gymnosperms.
		Learn the life cycle of Pinus, Gnetum and Marsilea, Lycopodium.
		Learn the scope of paleobotany, they will learn fossils and geological time scale.
	BOT-353	From this paper student will get the importance of herbarium, systematics and classification
		They will learn the terms and concepts related to phylogenetic studies.
		Student will get the knowledge of Rules of ICN and Botanical Nomenclature
		They will be able to generalize the characters of families as per Bentham and Hookers system of classification.
	BOT-354	The students will be able to understand the fundamental concepts of plant anatomy and Embryology
		The students will be able to analyze the different organs of plant and secondary growth.
		The students will be able to learn the structure and functions of eco-system.
		They will learn to evaluate the structural organization of flower and process of pollination and fertilization.
	BOT-355	Acquire the knowledge of Cell organelles and cell division
		Know the scope and importance of molecular biology
		Know the biochemical nature of nucleic acids, and their role in living systems.

		Know the process of synthesis of proteins and role of genetic code in polypeptide formation.
	BOT-356	Students will get the knowledge of growth pattern in plants
		Students will familiar with the translocation of organic solutes in plants
		Students will acquire the knowledge of fat metabolism
		Students know the mechanism of stress in plants
		Students will be acquainted with the movements in the plants
	BOT-350	Develop conceptual understanding of micrometry & micro technique.
		Classify different types of chromatography techniques.
		Explain the principles of Light microscopy, compound microscopy, Fluorescence microscopy and confocal microscopy
		Apply suitable strategies in data collections and disseminating research findings.
	BOT-357	Understand the fundamental concepts related to algae, fungi and bryophytes
		Examine morphology and range of thallus structure in algae
		Evaluate the significance of fungi and its different types
		Analyze the anatomy and reproduction of Pinus and Gnetum
		Examine various types of Paleo botanical fossils.
	BOT-358	Get the importance of herbarium, systematics and classification
		Learn the terms and concepts related to phylogenetic studies.
		Get the knowledge of Rules of ICN and Botanical Nomenclature
		Able to understand the fundamental concepts of plant anatomy and Embryology
	BOT-359	Acquire the knowledge of Cell organelles and cell division
		Know the biochemical nature of nucleic acids, and their role in living systems.
		Know the process of synthesis of proteins and role of genetic code in polypeptide formation.
		Students will get the knowledge of growth pattern in plants
		Students know the mechanism of stress in plants
		Students will be acquainted with the movements in the plants
	BOT-361	Students will elaborate about historical and classical approach of genetics
		Students will known and familiar with chromosomal aberrations, gene mutation and population genetics.
		Students will understands various concepts of plant breeding
		Students will develop understanding on Male sterility, heterosis, polyploidy and seed certification
	BOT-362	Understand core and fundamental concepts of plant and tissue culture
		Develop their competency on different types of plant tissue culture
		Explore knowledge of enzymes and vectors for genetic manipulation
		Examine gene cloning and evaluate different methods of gene transfer
		Analyze the major concerns and application of transgenic technology
	BOT-363	Understand core concepts of Economic Botany use of plants in applied way
		Develop critical understanding on the Medicinal, aromatic and drug yielding plants
		Understand the utilization of plant wealth as spices, Beverages, Oils, and Essential oils etc.
		Increase the awareness and appreciation of plants & plant products in herbal cosmetics

		Understand the role of plants in its products in forensic science
	BOT-364	Understand core concepts of biotic and abiotic factors
		Elaborate the knowledge of classification of soils on the basis of physical, Chemical and biological components
		Analysis the phytogeography or phytogeographical division of India
		Evaluate energy sources of ecological system
		Assess the adaptation of plants in relation to light, temperature, water, wind and fire.
		Conduct experiments using skills appropriate to subdivisions
	BOT-365	Understand the theoretical orientation of seed development
		Analyze the different ways of seed processing in different plants
		Examine the various methods of Seed testing
		Understand the method of seed production in different plants
	BOT-366	Understand Scope and importance of Medico Botany and Pharmacognosy.
		Analyze the different types of plant drug processing.
		Examine the chemical and analytical characterization of crud drugs.
		Understand biopiracy and legislation of medicinal plants.
	BOT-360	Understand food microbiology, nutraceuticals and functional food concepts.
		Take a knowledge of post-harvest handling methods of food and its processing
		Study post-harvest food processing and its transport
		Elaborate their knowledge on food lows and food biotechnology
	BOT-367	Known and familiar with chromosomal aberrations, gene mutation and population genetics.
		Understands various concepts of plant breeding
		Develop understanding on Male sterility, heterosis, polyploidy and seed certification
		Develop their competency on different types of plant tissue culture
		Examine gene cloning and evaluate different methods of gene transfer
		Analyze the major concerns and application of transgenic technology
	BOT-368	Develop critical understanding on the Medicinal, aromatic and drug yielding plants
		Understand the utilization of plant wealth as spices, Beverages, Oils, and Essential oils etc.
		Understand the role of plants in its products in forensic science
		Understand core concepts of biotic and abiotic factors
		Analysis the phytogeography or phytogeographical division of India
		Evaluate energy sources of ecological system
		Assess the adaptation of plants in relation to light, temperature, water, wind and fire.
	BOT-369	Analyze the different ways of seed processing in different plants
		Examine the various methods of Seed testing
		Understand the method of seed production in different plants
		Understand Scope and importance of Medico Botany and Pharmacognosy.
		Analyze the different types of plant drug processing.

		Examine the chemical and analytical characterization of crud drugs.
		Understand biopiracy and legislation of medicinal plants.
MSc. I	BOT-101	Student will be able to know the diversity of lower Cryptogams and their life cycle pattern etc.
		They will be provided with knowledge of primitive and adverse group of cryptogams
		This subject will help them to study the classification and economic importance of Algae Fungi and Lichens
	BOT-102	This course will help the students to know the basics of taxonomy, its principles and systems of classification
		Students will get to know the applied aspects and tools of taxonomic studies
		They will be aware of angiospermic phylogeny group
		The students will get the knowledge of plant anatomy, embryology and palynology
	BOT-103	Student will be incorporated with the practical knowledge.
		Student will be aware of description and classification of algae and fungi
		Student will acquire the knowledge of preparation of fungal stains
	BOT-104	Student will be incorporated with the practical knowledge.
		Students will be aware of angiospermic families
		Student will acquire the knowledge of preparation of various types of keys
		The student will be provided with knowledge of morphological and biological peculiarities of angiospermic plants
	BOT-105	Student will understand the concept and principles of plant tissue culture.
		They will be aware of various techniques of sterilization and monitoring methods of sterilization
		Student will understand the techniques like protoplast isolation fusion anther culture and techniques involved in rDNA technology.
	BOT-106	This course will help the students to acquire knowledge of common and advanced laboratory practices in cell and molecular Biology
		This will help them to get acquainted with knowledge of genes, protein and relation between them.
		Student will be provided with the knowledge of genetic structure of cell, protein synthesis and gene regulation
	BOT-201	Student will get the knowledge of higher cryptogams
		They will acquire knowledge of habit and habitat of the higher cryptogams.
		Distinguishing features, interrelationships, phylogeny and evolutionary tendencies of selected orders with their affinities will be studied by them
		This course will help the students to understand economic importance of higher cryptogams.
	BOT-202	Student will acquire knowledge of plant structures with respect to physiological functions of plants.
		They will be incorporated with knowledge of mineral nutrition, photosynthesis, respiration, growth, development and its regulation.
		This course will help the students to understand thermodynamics of the enzymes action, classification, primary and plant secondary metabolites.
	BOT-203	C86:C107 Student will get the knowledge of Morphological, Anatomical and Reproductive characters of some bryophytes genera.
		This course will help the students to understand Morphological, Anatomical and Reproductive characters of some pteridophytes genera.
	BOT-204	Students will be aware of tissue systems in plants like Parenchyma, Collenchyma and Sclerenchyma etc.
		Student will learn the extraction methodologies and determination of amino acids, ascorbic acid, secondary metabolites etc.
		This course will help students to understand enzymes action on substrate.

	BOT-205	Student will know basic techniques in life sciences
		Student will get knowledge of biophysical chemistry and thermodynamics in organisms
		The course will help the student to acquire the knowledge of microscopic, centrifugation, chromatographic, electrophoresis, spectrometric and radio labeling techniques in life sciences
	BOT-206	Student provide with history scope and importance of Environmental Botany
		They will get the knowledge of the Environmental Ethics and Ecosystem Ecology
		This course helps to make them aware the Fundamentals of Remote Sensing and GIS, Forestry, Solid Wastes, Environmental Management etc.
		Principles of Phytogeography and Plant Biodiversity and its importance will be studied by them.
MSCII	BOT-301	Student will know Gymnosperms diversity of India
		Student will get knowledge of evolutionary trends and affinities of living gymnosperms with respect to external and internal features
		The course will help the student to acquire the knowledge of important fossil types in different groups of plants and Indian fossil records.
		The student will be provided with knowledge of applied aspects of Palaeobotany
	BOT-302A	Student will know the advance knowledge of Genetics and significance of Mendel's studies and extension and modification of basic principles of genetics.
		They will acquire knowledge of agronomy of crops and breeding practices.
		Different pollination methods in cash crops breeding will be studied by them
		This course will help the students to understand wholesome review on fundamentals of plant breeding.
	BOT-302B	Student provide with importance of classification in Angiosperms.
		They will get the knowledge of primitive and advanced groups of Angiosperms.
		This course helps to make them aware of taxonomic structure of Angiosperms.
		Orders of Engler and Prantl's system of classification will be studied by them
	BOT-303	Student will be incorporated with the practical knowledge.
		Students will be aware of sections of TLS, RLS and TS. Of gymnospermic plants.
		Student will learn the double staining method of plant materials.
	BOT-304A	Students will be inculcated with laboratory skill of Genetics and Plant Breeding.
		Students will acquire the methods of preparation of different types of reagents and stains.
		The techniques of polyploidy, pedigree analysis will be provided to the students.
	BOT-304B	The students will be incorporated with the practical knowledge
		Course will help students to make aware methods and practical of Angiosperms Taxonomy
		The student will learn the techniques of plant identification up to species level
	BOT-305	Student will be get to know the philosophy of Science
		They will be incorporated with knowledge of fundamentals of research methodology
		Student will get the platform to study the process of tools and techniques used in Plant Science research
	BOT-306	Student will know the basic knowledge of Genetics
		Student will get knowledge of breeding practices.

		The course will help the student to acquire the knowledge of fertilization barriers in cash crops at different genome level.
		The course will help the students to get acquainted with the wholesome review on evolution.
	BOT-401A	Student will know modern strategies applied in Genetics and Plant Breeding to sequence and analyse genomes.
		Student will get knowledge of modern strategies applied in Plant Breeding targeted with specific character improvement.
		The course will help the student to acquire the knowledge of exploitation of Heterosis, hybrid and variety development and their release
		The course will help the students to get acquainted with molecular techniques used for molecular breeding.
		The student will be provided with knowledge of basic idea about the organic farming techniques.
	BOT-401B	Student will know the biosystematics.
		They will acquire knowledge of numerical taxonomy of Angiosperms.
		Different process related with chemotaxonomy of Angiospermic plant.
		Conquest's system of classification of Angiosperms will be understood by them
		The course will help the students to get acquainted with molecular techniques used for molecular breeding.
		This course will help the students to understand the Angiospermic Phylogeny Group system
	BOT-402A	Student will acquire knowledge of biometrical tools applied in plant breeding.
		Student will acquainted with principles, methodology and application Plant Biotechnology to improve crops.
		They will be provided with knowledge of intellectual properties and different issues, GMO, current techniques applied in Molecular Plant Breeding for future challenges in crop improvement.
		Students will be provided with knowledge of legal issues with respect to certification of seed and the organizations of crop improvement.
	BOT-402B	Student will know the wood anatomy of Angiospermic plant.
		They will acquire knowledge of ecological anatomy of Angiospermic plant.
		They will be familiar with embryology of Angiospermic plant.
		They will get an idea of palynology of Angiospermic plant.
		Student will be able to trace origin of Angiospermic plant.
	BOT-403A	The techniques of DNA isolation quantification of DNA and RNA, PCR amplification electrophoresis will be provided to the students
		Students will acquire the methods of biometry plant breeding.
		Course will help students to make aware preparation of green leaf manure, plant-based repellent etc.
	BOT-403B	Student will be incorporated with the practical knowledge.
		Students will be able to find out the different types of plant and adaptations like hdrophytic, xerophytic and parasitic.
		Student will able find out pollen structure, morphology and fertility.
	BOT-405	Student will study the statistical data through samples
		Student will study the representation of data in suitable tables
		They will get the idea of getting valid inferences from collected data, put forth definite interpretations or predict the future outcomes from the data.
		Student will be able to study the biological data organized in form of a database
		They will acquire understanding of basics of DNA, RNA and Protein sequencing

		They will be familiar with the phylogeny of species
	BOT-406	Student will study the vascular tissues, structure of woods and anomalous secondary growth.
		Student will study the historical development of embryology
		They will get the idea of structure and development of microsporangium, megasporangium, embryo and endosperm
		Student will be able to study the methods of pollination and fertilization
		They will acquire understanding of applications of embryology in plant tissue culture
		They will be familiar with the structure and development of pollen grains
		Student will know the applications of palynology in human welfare.

DEPARTMENT OF CHEMICAL SCIENCES

Class	Course	Outcomes (Student will be able to)
FYBSc	CH-111	<ul style="list-style-type: none"> • Understand structure of an atom by using nature of electron. • Apply concept of nodes in orbital's of an atom. • Apply concept of general characteristics of ionic bonding.
		<ul style="list-style-type: none"> • Understand electronic and structural effect in organic molecules.. • Apply concept IUPAC Nomenclature to give name to the compounds. • Apply concept of functional group approach.
	CH-112	<ul style="list-style-type: none"> • Understand preparation of different organic compounds. • Apply concept preparation of organic compounds containing Nitrogen and halogen. • Understand how to determine intermediates in reaction. • Preparation of solutions of different Molarity/Normality. • Determination of quality of substance.
		<ul style="list-style-type: none"> • Understand Free energy change in a chemical reaction. • Understand reactions involving ideal gases.
		<ul style="list-style-type: none"> • Understand the mechanism of various electrophilic and nucleophilic reactions. • Distinguish between elimination and substitution reactions.
		<ul style="list-style-type: none"> • Understand the mechanism of SN1, SN2 and SNi reactions.
	CH-121	<ul style="list-style-type: none"> • Understand preparation of organic compounds by greener method. • Apply concept of purification for synthesized product. • Understand how to prepare buffer solutions.
		<ul style="list-style-type: none"> • Understand the mechanism of various electrophilic and nucleophilic reactions. • Distinguish between elimination and substitution reactions.
	CH-122	<ul style="list-style-type: none"> • Understand the mechanism of SN1, SN2 and SNi reactions.
		<ul style="list-style-type: none"> • Understand preparation of organic compounds by greener method. • Apply concept of purification for synthesized product.
SYBSc	CH-231	<ul style="list-style-type: none"> • Understand how to prepare buffer solutions. • Understanding of the fundamental and advance gaseous state • Understanding of importance of van der Waals equation • Understanding of core study of Electrolytic Dissociation • Understanding of concept of solutions, applicability of Henry's law
		<ul style="list-style-type: none"> • Knowledge of different classes of organic molecules, their important reactions and some functional group interconversions. • Write stereo chemical structure.
	CH-232	<ul style="list-style-type: none"> • Knowledge of different classes of organic molecules, their important reactions and some functional group interconversions. • Write stereo chemical structure.

		<ul style="list-style-type: none"> Students get the knowledge of some organic reactions that helpful to design the desired product and factors to take care of it.
	CH-233	<ul style="list-style-type: none"> Preparation for each experiment by studying lab handouts and links therein
		<ul style="list-style-type: none"> Safety requirements and lab skills to perform physico-chemical experiments how to keep records of instruments, parameters, and experimental observations reporting of experimental result.
		<ul style="list-style-type: none"> Appreciation for modern problems and scientific controversies in physical chemistry
		<ul style="list-style-type: none"> Develop practical hand.
		<ul style="list-style-type: none"> Know the methods related to organic qualitative analysis.
		<ul style="list-style-type: none"> Draw the chemical structure by using software
	CH-230	<ul style="list-style-type: none"> Know educational software like Chem Draw to draw chemical structures.
		<ul style="list-style-type: none"> Skill of numerical data handling to plot the various graphs.
		<ul style="list-style-type: none"> Skill of statistical analysis of obtained experimental analysis.
	CH-241	<ul style="list-style-type: none"> Understanding of importance of colligative properties
		<ul style="list-style-type: none"> Understanding of core study of electrochemistry
		<ul style="list-style-type: none"> Understanding of application of Nernst equation
		<ul style="list-style-type: none"> Understanding of the fundamental and advance concepts of thermodynamics
	CH-242	<ul style="list-style-type: none"> Learns about the importance of Coordination compound.
		<ul style="list-style-type: none"> Understand coordinate bonding between metal and ligands.
		<ul style="list-style-type: none"> Knowledge of biological importance of many chelate compounds.
		<ul style="list-style-type: none"> Knowledge of catalytic activities of d-block elements and their variable oxidation state.
		<ul style="list-style-type: none"> Differentiate between Acids-Bases with respective to solvents.
	CH-243	<ul style="list-style-type: none"> Preparation for each experiment by studying lab handouts and links therein
		<ul style="list-style-type: none"> Safety requirements and lab skills to perform physico-chemical experiments how to keep records of instruments, parameters, and experimental observations reporting of experimental result
		<ul style="list-style-type: none"> An appreciation for modern problems and scientific controversies in physical chemistry.
		<ul style="list-style-type: none"> Know about formation of coordination compounds and metal complexes.
		<ul style="list-style-type: none"> Know certain methods of quantitative estimation of components.
		<ul style="list-style-type: none"> Find out purity of synthesized compound.
		<ul style="list-style-type: none"> Know skill of inorganic preparation.
	CH-240	<ul style="list-style-type: none"> Learn basic concept of analytical Chemistry.
		<ul style="list-style-type: none"> Learn method involving analysis of soil.
		<ul style="list-style-type: none"> Learn knowledge of water analysis.
		<ul style="list-style-type: none"> Learn methods involving food processing, food preservations and adulteration.
TYBSC	CH-351: Physical Chemistry-IV	<ul style="list-style-type: none"> Understand the black body radiation and quantum theory, photoelectric effect: Wave Particle duality of radiation, Quantum theory and atomic spectra Understand core study of chemical kinetics

		<ul style="list-style-type: none"> ● Understand the importance of phase rule and its applications ● different types of reversible electrodes, determination of ΔH^0, ΔG^0 and ΔS^0 of a cell reaction, electromotive force and equilibrium constant of cell reaction
	CH-352: Inorganic Chemistry-III	<p>Know structure and reactivity of molecules.</p> <ul style="list-style-type: none"> ● Understand bonding in simple molecules by Valence Shell Electron Pair Repulsion theory (VSEPR). ● Understand modern theories of coordination chemistry and its applications. ● Understand reaction mechanism of coordination compounds.
	CH-353: Organic Reaction Mechanism	<ul style="list-style-type: none"> ● understand the reaction pathway in organic transformation ● Improve the skill of proposing mechanism for particular reaction ● propose the expected product based on the mechanism ● explain the selectivity in the organic reactions
	CH-354: Analytical Chemistry- I	<p>Understand basic concept of analytical Chemistry.</p> <ul style="list-style-type: none"> ● Understand method involving Electrophoresis and electro chromatography. ● Gain knowledge of solvent extraction. ● Know various methods involved in analysis of water pollution.
	CH-355: Green Methods in Chemistry	<p>Learn Principles of Green chemistry, basic understanding of toxicity, hazards and risk of chemical substances and reactions, stoichiometric calculations, and atom economy.</p> <ul style="list-style-type: none"> ● Understand Design and use of less toxic and safer chemicals, products, processes. Students will learn to develop innovative solutions to environmental problems. ● Know use of modern and efficient green techniques such as use of microwave and ultrasound irradiation in chemical reactions.
	CH-356 (A): Polymer Chemistry	<ul style="list-style-type: none"> ● Define terms like monomer, polymer, polymerization, polydispersity index, etc., classify polymers based on their origin, native backbone chain, and thermal response. ● Know glass transition temperature and its determination, various ways to express molecular weights of polymers and polydispersity index. ● Identify different mechanisms of polymerizations viz. free radical, ionic, and condensation polymerizations. ● Distinguish techniques of polymerization based on physical conditions required for the preparation of polymers in laboratory or industry. ● Familiar with preparation, properties, and applications of industrially important selected polymers.
	CH-356 (B): Biochemistry	<p>Learn biomolecules like carbohydrates, amino acids, proteins, enzymes, lipids and nucleic acids.</p> <ul style="list-style-type: none"> ● Understand definitions, classifications and examples of these biomolecules. ● Learn the detailed structure of these biomolecules along with types of bonds or linkages present in their molecules. ● Learn the chemical properties of these biomolecules and the action of some reagents on the min the form of reactions or graphical presentation.
	CH-350: Instrumental methods of Analysis-I	<p>Understand the fundamentals of analytical methods and instruments for qualitative and quantitative Analysis.</p> <ul style="list-style-type: none"> ● Learn the role of analytical chemistry in science. ● Know their role as a member of an interdisciplinary problem-solving team member. <p>Physical Chemistry Practical-I Perform preparation for each experiment by studying lab handouts and links therein</p>

		<ul style="list-style-type: none"> • Understand safety requirements and lab skills to perform physico-chemical experiments • Know how to keep records of instruments, parameters, and experimental observations reporting of experimental result • Understand an appreciation for modern problems and scientific controversies in physical chemistry
	CH-358: Inorganic Chemistry Practical-I	<p>Understand determination cation and anion from inorganic mixtures by using inorganic qualitative analysis.</p> <ul style="list-style-type: none"> • Determine metal from ore and analyse the alloy • Carry determination by colorimetric analysis.
	CH-359: Organic Chemistry Practical-I	<ul style="list-style-type: none"> • Carry out Qualitative analysis of Organic Compound • Identify Organic Compound • Separate and analyze binary water insoluble mixture • Understand the purification technique used in organic chemistry • To carry out estimations of organic compounds
	CH-361: Physical Chemistry-V	<p>Understand the concept of radioactivity and radioactive decay, calculation of half-life of a radioactive isotope, nuclear reactions</p> <ul style="list-style-type: none"> • Learn Bragg's equation, classification of crystals and crystal defects • Learn photochemical processes, laws of photochemistry and significance of quantum yield
	CH-362: Inorganic Chemistry-IV	<p>Draw structure and reactions of organometallic compounds.</p> <ul style="list-style-type: none"> • Understand elements involved in the biological system through bioinorganic chemistry. • Understand different types of useful inorganic polymers • Understand elements from environmental chemistry and in medicine
	CH- 363 Organic Spectroscopy	<p>Understand the principle and applications of UV-Visible and IR spectroscopy • Elucidate the structure of the unknown compounds using the provided UV Visible and IR spectroscopic data.</p> <ul style="list-style-type: none"> • Know the principle and applications of NMR spectroscopy • Derive the structure of the unknown organic molecule using the provided spectroscopic data
	CH-364: Analytical Chemistry-II	<p>Understand the basic concept of analytical Chemistry.</p> <ul style="list-style-type: none"> • Understand method involving Gas chromatography. • Understand knowledge of Ion exchange chromatography • Understand methods involving analysis of clinical chemistry.
	CH-365: Industrial Chemistry	<p>Understand importance of patent, trade-marks, copyright act in various industries.</p> <ul style="list-style-type: none"> • Know the manufacturing processes involved in Industrial Organic Synthesis such as Methanol, Isopropanol, Glycerol, with their uses. <p>Understand basic requirements of chemical industries, chemical production, Quality control, research and development.</p> <ul style="list-style-type: none"> • Know importance of essential oils in cosmetic industries & perfumery with reference to Geraniol, Sandalwood oil, Eucalyptus, Rose oil, 2-phenyl ethyl alcohol, Jasmone, Civetone, Muscone etc. • Know importance, definition and meaning of the different terms involved in the Drugs and Pharmaceuticals Industry. • Understand Synthesis, uses, properties and industrial manufacture of Paracetamol, Aspirin, Chloroquine. • Know preparation of dyes, its structure and its application. • Know preparation of Hair dye, shampoo, talcum powder, nails enamel, shaving creams etc.
	CH-366 (A): Pharmaceutical Chemistry	<p>Acquire the knowledge of some important natural compounds used in Pharmaceutical Chemistry.</p> <ul style="list-style-type: none"> • Understand the mechanism of drug synthesis.

		<ul style="list-style-type: none"> • Understand the role of each constituent used in tooth powder/ toothpaste. • Check the quality of pharmaceutical products and supervises the processes for quality assurance. • Conduct qualitative and quantitative research of medicines and the substances used in pharmacy.
	CH-366 (B): Research Methodology	<p>Learn about what is research, research methods and impact of chemical research on society through pure and applied research.</p> <ul style="list-style-type: none"> • Learn how to analyze research in chemistry drawn from contemporary primary chemical literature. • Develop problem solving, critical thinking and analytical reasoning as applied to scientific problems. • Communicate the results of scientific work in oral, written and electronic formats.
	CH-360: Instrumental methods of Analysis-II	<p>The fundamentals of analytical methods and instruments for qualitative and quantitative Analysis.</p> <ul style="list-style-type: none"> • The role of analytical chemistry in science. • Their role as a member of an interdisciplinary problem-solving team member.
	CH-367: Physical Chemistry Practical– II	<p>Perform preparation for each experiment by studying lab handouts and links therein</p> <ul style="list-style-type: none"> • Understand safety requirements and lab skills to perform physico-chemical experiments • Know how to keep records of instruments, parameters, and experimental observations reporting of experimental result • Understand an appreciation for modern problems and scientific controversies in physical chemistry
	CH-368: Inorganic Chemistry Practical-II	<p>Determine cation and anion from inorganic mixtures by using inorganic qualitative analysis.</p> <ul style="list-style-type: none"> • Determine metal from ore and alloy analysis. • Carry out colorimetric analysis
	CH-369: Organic Chemistry Practical-II	<p>Develop skill to carry out chemical reaction on laboratory scale</p> <ul style="list-style-type: none"> • Understand mechanism involved in Chemical Reaction. • Understand various purification techniques. • Carry out synthesis of various organic compounds through greener alternatives.

DEPARTMENT OF COMMERCE & MANAGEMENT

Class	Course	Outcomes (Student will be able to)
F.Y.B.COM	BCOM 113	Understand and apply supply and demand analysis to relevant economic issues.
		To understand the causes and consequences of different market structures.
		To apply economic models to examine current economic issues and evaluate policy options for addressing these issues;
		To analyze the causes and effects of changes in real GDP
	BCOM 114	to get the insight of the Accounting Standards issued by the ICAI.
		to learn the skill of making settlement of obligations on dissolution of partnership firm
		to learn the skill of recording the transactions of business combinations of partnership firms
		to learn the concepts used in Cost Accounting, and skill of preparing a cost sheet
	BCOM 115A	to understand the basic framework of functioning of partnerships firms and co-operative societies
		to understand the legal provisions relating to the relationship, rights and obligations among the partners of a partnership firm and an LLP
		to understand the legal provisions relating to the functioning of the co-operative societies
	BCOM 115B	Enter basic online transaction.

		Use simple digital payments.
		Obtain basic knowledge of cashless transaction
	BCOM 116B	Understand the commercial banking systems, structure, nationalization and banking sector reforms.
		Develop better understanding on different types of deposits, their benefits as well as on advances
		Develop a perfect theoretical knowledge on modes of creation of charges and documentation.
	BCOM 117	Enter basic computer learning.
		Use simple computer operations.
		Obtain basic knowledge of computer hardware and software
	BCOM 123	Understand and apply supply and demand analysis to relevant economic issues.
		To understand the causes and consequences of different market structures.
		To apply economic models to examine current economic issues and evaluate policy options for addressing these issues;
		To analyze the causes and effects of changes in real GDP
	BCOM 124	to get the insight of the accounting for transactions relating to branches, departments, consignment, and investments
		to learn the skill of finding out profit or loss on the transactions relating purchases and sales of investment
		to learn the skill of finding out profits/loss of business from incomplete records of transactions.
		to acquire the skill of recording the transactions of materials in the cost accounting records
	BCOM 126A	Appreciate the challenges facing the services marketing in traditional commercial marketing, e-marketing and non-commercial environments.
		Define and illustrate the main components of marketing mix.
		Acquaint the students with the appropriate concepts and stages of product life cycle.
		Apply adaptations to the marketing mix to meet the needs of consumers.
		Illustrate the concept of buyer behavior & know the decision making process.
		Define the term service marketing.
		Identify the term, definition & types of advertising copy & Layout.
	BCOM 126B	Understand the commercial banking systems, structure, nationalization and banking sector reforms.
		Develop better understanding on different types of deposits, their benefits as well as on advances
		Develop a perfect theoretical knowledge on modes of creation of charges and documentation.
S. Y. B. COM	BCOM 213	The course will help the students to learn about the concept of macroeconomics National income and various concepts. It may also provide the information to the students Theories of Output and Employment and consumption function theory, investment function and rate of interest.
	BCOM214	understand nature of a company and the process of formation of a company and the documents pertaining to its constitution get an opportunity to serve a corporate organisation
	BCOM 215	account for the issue and redemption of Shares of a company
		know understand the accounting of profits earned by company before its incorporation
		acquire the skill of maintaining the records of labour's attendance and time spent on the jobs, and
		acquire the skill of computing remuneration payable to labour using different methods of wage payments.
	BCOM216	Understand the concept of business.
		Understand the managerial role in business.

		Students will familiarize the process and come to know the practicality of the concept
	BCOM217 a	Understand the concept of ED.
		Understand the role of SSI and government interventions.
		Understand different methods to assess the attractiveness of business opportunities
	BCOM217 b	Explain the various functions of money, and how money has evolved over time.
		Show that modern banking systems include both privately owned commercial banks and government-owned central banks.
		Explain how commercial banks create money through the process of taking deposits and making loans.
		List what is included in the various measures of the money supply
	BCOM217 c	Get the insight of the framework of retail marketing
		Identify the challenges to Retailing
		Understand the retail consumer behavior
		Know the retail marketing strategies.
		Make them able to start retail business.
	BCOM 223	The course will help the students to learn about the concept of macroeconomics value of money various approach. It may also provide the information to the students to concepts of supply and demand for money.
		Types of money classical and theory of interest, trade cycle theory .
	BCOM224	get the insight of nature of the duties of the Managerial Personnel and especially the directors
		arrange for various meetings of a corporate organisation, and acquire the knowledge of conducting the meetings
		serve a corporate organisation in the area of maintaining the statutory books and the books of accounts
	BCOM 225	acquire the skill of preparing the final accounts of a company as per Schedule III the Companies Act, 2013
		acquire the skill of preparing the final accounts of a Co-operative credit society,
		pass entries relating to issue and redemption of debentures
		skills of identifying the overheads and distributing them and ultimately recovering them in the job.
	BCOM 226	Understand the various concept of business.
		To understand the current trends in business.
		To familiarize the theories of motivation and leadership
	BCOM227 a	Understand the various schemes avail to an Entrepreneur
		Understand the role of Financial Institutes and Functions.
		Understand different methods to assess the attractiveness of business opportunities.
	BCOM227 b	Show that modern banking systems include both privately owned commercial banks and government-owned central banks.
		Explain the various functions of money, and how money has evolved over time.
		Explain how commercial banks create money through the process of taking deposits and making loans.
		what is included in the various measures of the money supply
	BCOM227 c	Get the insight of the framework of retail marketing
		Identify the challenges to Retailing
		Understand the retail consumer behaviour
		Know the retail marketing strategies.

		Make them able to start retail business.
T.Y.B.COM	BCOM 351	understand the concept of Audit, its principles, and its various types, prepare and implement an audit programme, maintain the necessary documentation in relation to the audit, vouch the transactions recorded in the books of accounts of an organisation, and verify the assets and liabilities.
	BCOM 352 B	Gain and understand the role and function of the financial services in reference to the macro economy. Increase an awareness of the current structure and regulation of the Indian financial services sector. Evaluate and create strategies to promote financial products and services
	BCOM 353A	prepare the Financial Statements of farm activities. prepare Royalty Accounts; Insolvency Accounts, and Underwriter's Accounts
	BCOM 353B	understand and apply the procedure of accounting of Hire Purchase business and of Insurance claims. Demonstrate a general understanding of business administration and business environment. Ability to understand corporate governance and business unit. know about Business organization
	BCOM 353 C	to the idea about discipline of cost accounting to find out the cost of production of a product, classified under various elements of costs to exclude non-cost items from the cost of production of a product
	BCOM 354A	apply the knowledge of accounting for corporate restructuring in practical life, in the matter of amalgamation, absorption, and external reconstruction of companies. account for the internal reconstruction and liquidation of a company.
	BCOM 354B	find out the values of Goodwill and Shares of a company under different requirements. Demonstrate a general understanding of business administration and business environment. Ability to understand corporate governance and business unit. know about Business organisation
	BCOM 354C	to determine the costs of different types of goods produced and services rendered by different organizations. to prepare the costs accounts of various goods and services having regard to the nature their manufacturing processes. to compare the performance of different firms using different methods of costing
	BCOM 355	Student will be able to understand Present Economic Scenario of Indian Economy. Student will be able to understand Population & Economic Development. Student will be able to understand New Economic Reforms in India.
	BCOM 356	Have a basic knowledge about terms and definitions of Income Tax Compute Income of assessee from various sources. Compute deductions of an assessee from total income Compute total taxable income of an Individual assessee only.
	BCOM 350A	Calculate the Tax payable by assessee. understand the concepts of legally enforceable contracts. know the repercussions of failure to perform the contractual obligations in the field of commercial transactions. enter into and perform the commercial transactions in more effective manner with legal understanding.
	BCOM 350B	Student will be able To Understand International Trade & Economic Development.

	Student will be able To Understand Terms of Trade, BOT and BOP.
	Student will be able To Understand Foreign Exchange Rate.
	Student will be able To Understand Exchange Control.
BCOM 361	understand the concept of Investigation, internal check and internal control, get the insight of the provisions of the Companies Act, 2013, and undertake the audit work in the office of auditing firms of chartered accountants understand the contents of an audit report, and, accordingly, prepare documentation required by the audit firm for giving audit report.
BCOM 362 A	Understand the impact of Industrial disputes. Understand the causes, effects and measures to mitigate the industrial disputes
BCOM 362 B	Understand the functions and roles played by trade unions Know the financing pattern of the capital market in India gain understanding of the stock market functioning in India.
BCOM 363A	know the regulatory agencies involved in the Capital market mechanism in India prepare the financial statements of Banking companies, Educational institutions in accordance with the statutory requirements. prepare financial statements of holding companies and independent branches. prepare financial statements of professional firms.
BCOM 363B	Demonstrate a general understanding of employee morale and business and Government. Ability to understand Job Analysis working conditions and employee relationship know about Management Information system and new trends in HR
BCOM 363C	get the insight of how costs can be controlled by using standards set for the elements of costs. to decide on the short-term pricing decisions and the related decisions using the principle of marginal costing decide on committing the funds to the capital investment proposal applying different criteria of evaluation to the proposal.
BCOM 364A	understand the various concept used in Management Accounting apply the elementary knowledge of Financial Statement Analysis and Interpretation in practical life compute Ratios, and prepare Fund Flow Statements and Cash Flow Statements.
BCOM 364C	understand and implement the concept of Budget and Budgetary Control. maintain the Cost accounts and will get an idea about their audit requirements interpret the causes of difference between the profits as shown by financial records and that shown by the cost records make proper reporting of cost data to the higher levels
BCOM 365	Student will be able to understand India's Foreign Trade, Capital & Exchange Reserves. Student will be able know the Price & Inflation Trends. Student will be able to understand the Concept of Public Finance, Federal Finance & Fiscal development. Student will be able to understand Economics Planning Commission & NITI Aayog.
BCOM 366	Understand the basic definitions and concepts of GST Understand the process of ascertaining Time and Value of Supply under GST. Obtain the knowledge about Registration procedure under GST Obtain knowledge on how to generate E-way Bill

		Understand various types of returns under GST
		Understand the penal provisions under GST.
	BCOM 360A	transact the business using banking facilities with confidence and legal understanding give due attention to their legal obligations as a businessman towards the consumers they deal with.
		Protect the interest of their business units within the framework of the provisions of the laws governing the aspects of Trademarks, Copyright, Patents, Information Technology used in business
	BCOM 360B	Student will be able To Understand Indian's Foreign Trade Policy. Student will be able To Understand International Movement of Capital. Student will be able To Understand Concept of India's foreign trade policy. Student will be able To Understand Globalization & Indian Economy
M.Com.I	MCOM 101	Students will be able to industrial organization & it provides a foundation for the study of many other fields related to industry. Students will be able to understanding an interactions among firms in the economy, including business strategy, corporate finance, marketing, international trade, banking, and the economics of organizations. It provide an overview of the historic evolution of industrial economies while focusing on recent developments in the study of firms' behavior.
	MCOM 102	To know and understand main concepts & level of Strategic Management To understand the strategic planning, business policy and implementation in the organization To understand co-operate level strategies in the competitive situation. To know the modern techniques concepts of strategic control and evaluation. To develop recommendation that address the unique strategic issue of organization
	MCOM103	Develop conceptual understanding about latest developments in the field of Information Technology and the impact of I.T. in Managing a Business. Learn to use Information Technology to gain competitive advantage in business Develop students as Cyber Security experts, Information System Auditors.
	MCOM104A	understand the concept of IFRS and convergence of Indian AS to IFRS understand the advanced aspects of accounting relating to company liquidation, Hire-purchase, and value addition understand the method of presenting financial statements by Insurance companies, and holding companies understand the accounting procedure for goods of small value under hire- purchases transactions
	MCOM104B	to facilitate understanding of the conceptual framework of marketing to lay a foundation for understanding the significance of rural marketing in this era. to help the students to understand different approaches to marketing. to introduce the students pricing methods in international marketing.
	MCOM104C	know the various provisions relating to Income and Incomes tax computation understand the basic concepts of the Income Tax Act 1961 and get the working knowledge of scheme of taxation in India compute Income and Tax of an Individual and Partnership assessee under the Act
	MCOM105	to understand the various methods of determining costs of goods produced and services rendered by different organizations. to prepare the costs accounts of various goods and services having regard to the nature their manufacturing processes.
	MCOM201	Students will be able to industrial organization & it provides a foundation for the study of many other fields related to industry.

		Students will be able to understanding an interactions among firms in the economy, including business strategy, corporate finance, marketing, international trade, banking, and the economics of organizations.
		It provide an overview of the historic evolution of industrial economies while focusing on recent developments in the study of firms' behavior.
	MCOM202	To understand the different environment of business organisation through practical cases
		To solve the situational problem and understand the importance
		To observe real life situation through cases
		to compare the performance of different firms using different methods of costing
	MCOM203	To study the research methodology for decision making in business.
		Conduct the survey, filling up questionnaire and prepare research reports.
	MCOM204A	understand the advanced aspects of accounting relating to foreign branch
		understand the method of presenting financial statements under Double Accounts System
		understand the manner of recognizing profit on construction contract
		know the developments in accounting
	MCOM204B	to facilitate understanding of the conceptual framework of consumer behavior
		to develop understanding about the consumer decision making
		process & its application in marketing function of firms.
		to sensitize the students to the dynamic trends in consumer behavior.
	MCOM204C	to make the students aware of the provisions of the GST Act
		to familiarize the students with the procedural requirements under the GST Act
		to familiarize them with the documents and records required under the GST Act
		to enable them to acquire the necessary skills to handle the GST requirements and thereby provide service to the business-houses
	MCOM205	understand the process of managerial decision making and use of OR techniques in decision Making environment
		formulate LPP, and obtain Graphical Solutions
		understand and solve transportation and assignment models.
		understand project management techniques
		decide on the optimal ordering quantity and levels of inventory
M.Com.II	MCOM301	Understand the nature, mechanics and tools of management accounting and their managerial implications.
		Understand the philosophy and rationale of the financial analysis
		Understand the techniques of analysis and interpretation of financial statements
		Develop an appreciation about the utility of techniques of financial analysis for management information and decision-making process.
		Evaluate the implications of cash flow and fund flow on financial position of an industrial organisation.
	MCOM302	elucidate the nature and characteristics of entrepreneurship
		highlight the support system for Entrepreneurship Development
		explicate the phases of project management
		provide theoretical foundation for executing various projects

MCOM303A	Acquire fundamental knowledge about financial management
	Understand the capital structure of a corporate organisation
	Get idea about the short term as well as long term application of the funds of a company
	Develop the ability as regards the short term and long term financial decision making in rapidly changing economic environment.
	Create foundation for further studies in the field of finance
MCOM304B	To understand the value and importance of human resources in an organization.
	To get the basic knowledge about the role of HR department.
	Impart the students with the knowledge of International HR.
MCOM304A	Understand the advanced aspect of auditing
	Understand the functional aspects of auditing
	Understand the standards on auditing on related topics
	Get conversant with the audit of computerised information system Prepare and draft the audit report
MCOM304B	Get strategic understanding of Digital Marketing
	Understand its pros & cons
	Elucidate the concept of digital and traditional marketing
	Come to know about digital consumer decision making process
MCOM304C	Know the various provisions relating to Income and Incomes tax computation of various categories of Persons defined in the Act
	Understand the compliances required under the Income-tax Act 1961 and get the working knowledge of thereof
	Understand the consequences of non-compliances by an Individual assessee under the Act
MOCM305	Know the manner in which the Cost accounts books are maintained
	Know the legal framework governing the auditing requirements of the Cost accounts
	Understand the causes of difference between the profits as shown by financial records and that shown by the cost records
	Understand the manner in which reporting of cost data is made to the higher levels
	Understand the role of the cost which is quite relevant in a given case
MCOM401	Understand the concept and techniques of financial control used in management accounting
	Imbibe knowledge about the control techniques namely budgetary control and standard costing.
	Develop the skill to analyse the cost-variance for effective cost control.
	Familiarise with the concept, role, and utility of marginal costing, and its implications and utility for managerial decision-making process.
	Acquaint themselves with the concept and significance of working capital and its implications in managing the funds.
	Familiarise with the concept, role, and utility of marginal costing, and its implications in decision making
	Provide necessary inputs in form of concepts, theories and appraisal techniques related to capital expenditure decisions, and develop an integrated approach to capital-expenditure decision-making process.
MCOM402	Familiarize the students with various concepts and
	Theoretical aspects of retail management
	Provide understanding of retail management and types of retail locations
	Develop an understanding of retail management terminology including merchandise management, store management and retail

		strategy
		Acquaint the students with the various concepts and theoretical aspect of retail management
	MCOM403A	Acquire knowledge and skill of analysing the financial issues or problems that arose in a business entity, Get idea about decision making in the situations of financial difficulties, Develop the ability of making short term and long term financial decision in rapidly changing economic environment.
	MCOM404B	To understand the application and practical aspects of HR To understand the approach of industry with respect to HR To get the idea about the intensity at the actual workplace To Develop Analytical approach among the students
	MCOM404A B C	Project report writing trains a student to communicate information in an effective and convincing way, thus, contributing to the organizational planning and decision making.
	MCOM405	Understand the process of statistical data collection for decision making Understand the measures of central tendency and dispersion of statistical data Understand bivariate data, relationship between variables, the correlation measure and linear regression Understand sample, population, simple random sampling and stratified sampling Understand the process of decision making by applying the tests of significance
FYBBA	BBA 111	Students enables to use English language in various contexts. Imparted the contextual vocabulary to students. Imparted human values among students.
	BBA 112	Imparted entrepreneurship values among students Exposed the learners to human role models and success stories. Acquaint students with a few business wizards, who built the industrial world. Created interest in language and inculcate reading habit among students.
	BBA 113	Obtain basic knowledge of financial and cost accounting Studed the fundamental Accounting concepts, terms, jargonsI Learned know the process of recording of financial transactions in the books of Accounts. Imparting the practical knowledge of accounting to the students.
	BBA 114	Understand basic terms of economics Understand different types of market structures and pricing strategies used by firms in those markets. Understand the Theory of Demand and Supply. Understand the concepts of production function and cost and revenue analysis.
	BBA 115	Understand various principles of management Understand meaning nature and scope of management Obtain knowledge about different steps involved in management process
	BBA 116	Obtained basic knowledge of computer hardware and software Entered basic computer learning Used computer for simple operations

	BBA 121	To enable students to use English language in various contexts.
		To introduce the contextual vocabulary to students.
	BBA 122	To enable students to use English in various situations.
		To create interest in language and inculcate reading habit among students.
		To expose the learners to human role models and success stories.
	BBA 123	Prepare Final Accounts from Trial Balance.
		Rectify Journal Entries.
		Carry on inventory pricing and prepare material stock reports
		Calculate labor rates using various methods.
	BBA 124	Understand different types of business organisations and their merits and limitations.
		Have a basic knowledge on how companies are formed.
		Understand corporate concepts like share capital, meetings, board of directors etc.
	BBA 125	Understand the Basic Concepts of Organizational Behaviour
		Understand how an individual's personality, attitude, perception affects his behavior.
		Understand the role of groups in shaping employee behavior and motivation.
		Understand change management in an organisation
	BBA 126	Understand the basic concepts of Marketing.
		Identify target marketing and product positioning based on market segmentation.
		Understand Product pricing and product life cycle.
		Understand different types of marketing channels and promotion strategies.
SYBBA	BBA 231	inculcated human values among students.
		To enable students to use English language in various contexts.
		To introduce the contextual vocabulary to students
	BBA 232	Students used the Corporate Communication efficiently
	BBA 233	Prepare company final accounts as per Schedule VI
		Pass entries relating to issue of shares and debentures
		Pass accounting entries relating to amalgamation & Absorption.
		Obtain knowledge of accounting for internal as well as external reconstruction.
	BBA 234	Gain basic knowledge of Human resource management
		To understand meaning & importance of human resource concepts
		To analyze the role of HR manager in changing business environment
	BBA 235	Developed students towards Research oriented
		To enable students to develop a research plan including a problem statement, hypotheses, related literature and methodology.
		To teach the students scientific method of research and enable them to differentiate between research methods
		To learn to use appropriate primary and secondary data to solve business problems.
	BBA 236	Imparting business related maths and stats skills among the students
		Obtain Basic understanding of Statistics
		Perform analysis of data using various statistical tools.

		Carry out statistical operation using MSExcel
	BBA 230	Obtain basic knowledge of data entry
		Enter basic office tools.
		Use simple operations.
	BBA 241	To enable students to use English language in various contexts.
		To introduce the contextual vocabulary to students.
		To inculcate human values among students
	BBA 242	To train students to use the Corporate Communication efficiently
	BBA 243	Analyze the Financial Statements to identify trends in business
		Prepare Fund Flow Statements
		Prepare Cash Flow Statements
		Prepare various types of budgets
	BBA 244	Understand basic financial terminology
		Calculate cost of capital and optimal capital structure
		Carry out basic investment and dividend decisions.
		Obtain an understanding of working capital requirements of a firm
	BBA 245	Understand concept, importance and functions of production.
		Understand the importance of ideal plant location & Layout.
		Obtain Knowledge about various quality control measures.
		Obtain an understanding of various stock levels in inventory management.
	BBA 246	To introduce students to legal framework
		To familiarize students with important regulations of business
	BBA 240	Aware our basic online transaction.
		Use simple digital payments systems.
		Obtain basic knowledge of cashless transaction
TYBBA	BBA 351(A)	Gain and Understand the role and function of the financial system in reference to the macro economy.
		Increase an awareness of the current structure and regulation of the Indian financial services sector.
		Evaluat and create strategies to promote financial products and services
	BBA 351(B)	To understand the importanceof manpower planning and forecasting
		To undersnd importane of talent management and talent engagement
		To Understand the policies and process of career management
	BBA 351(C)	To Impart conceptual knowledge to the students regarding the various aspects of Advertising
		To understand the significance of marketing practices in to the business
		To understand the significant role of advertisement
		To understand the emerging trends in sales management
	BBA 352(A)	Gain in-depth Knowledge and view of the financial Instruments
		Develop knowledge on the allocation, management and funding of financial resources.
		Increasing capabilities of students in the concept and the role of a financial instruments in the current competitive business

		scenario.
	BBA 352(B)	understanding Industrial Relations and prerequisites for successful industrial programmes
		studying industrial relations of developing economy
		pinpoint the importance of discipline in industry
		studying the industrial conflicts and grievance in industry
	BBA 352(C)	To Impart conceptual knowledge to the students regarding the various aspects of marketing management
		To understand the significance of marketing practices in to the business
		To understand the significant role of various various marketing strategies for the business
		To make familiare about maeketing trends and practices in India
	BBA 353	To undertand the problems faced by society and to find out the solutions to the problems
		Prepare project filed work report by applin the knoledge of resarch methodology
	BBA 354	Create an idea genration, creative and innovative skills among the students.
		To learn the porecess of start an entrprise and design business plans those are sutiable for funding by consdering all dimensions of business
		To understand entrepreneurial process byway of studing different case studies and find exceptions to the process model of entrepreneurship
		To run a small entripise with small capital for a short period and expeience the science and art of doing business
	BBA 355	Have a basic knolwdge about terms and definitions of Income Tax
		Compute Inocme of assessee for from various sources
		Compute dedcutons of an assessee from tatl inocme.
		Compute total taxable inocme of an Individual assessee only
		Calcuare the tax payable by assessee
	BBA 356	Developed a basic undertanding about the international business management
		Understand the global scenario of buisness
		Stdudents familiare with the various fuctionaries of buisness houses
		students aware about the role of social responsibility and ethics into the buisness houses
	BBA 350	To enhance analystical skills of students and to depict thorough knowledge of the subject and delop decision making abilities.
		To increase the understaning of what mangers should and should not do in gudiing a buisness to success.
	BBA 361(A)	Describe the financial environment within which organisations must operate
		Discuss the function of Primary and Secondary Markets
		Explain alternative sources of finance and investment opportunities and their suitability in particular circumstances
		Assess the factors affecting investment decisions and opportunities presented to an organisation
	BBA 361(B)	The structure and functions of HRD
		Various labour welfare practicews followed in India
		Improtance of workers participation in mangment
		Provisions relating to helath and safety of workers at workpolace
	BBA 361(C)	To understand the students regarding vaious dimensions of retial marketing and career opportunities avialable in these fileds
		To imparted and developed pratcial understaing among the students associated with retailing through classroom

		discussion/participation and projects.
		To imparted and developed transferrable skills among the students for managing retail operation efficiently so that they could be ready to join the retail industry.
	BBA 362(A)	Demonstrate an understanding of the overall role and importance of the Financial Intermediaries.
		Demonstrate basic finance management knowledge.
		Communicate effectively using of Financial Intermediaries in Business Development.
	BBA 362(B)	Understand the need of labour legislations and principle of labour legislations
		know the objective and scope of wages and working conditions related laws.
		know the provisions of wages and working conditions related acts
	BBA 362(C)	Identify factors at both micro and macro levels that impact e-marketing and its objectives
		Describe the influential marketing decision making processes for the adoption of online technologies for consumers and organisations
		Integrate marketing knowledge into online experiences for business and consumers.
		Critically evaluate opportunities and challenges faced by internet mediated business practices in uncertain market conditions.
	BBA 363	Project report writing trains a student to communicate information in an effective and convincing way, thus, contribution to the organizational planning and decision making.
		Equipped with practical business concepts and theories
		Able to acquire real world business communication, technological, quantitative and interpersonal skills
	BBA 364	Gain knowledge of partnership and LLP Act
		Obtained knowledge of various provisions of Factory Act
		Use of provisions of Information Technology Act in Business
		To get details of Company Law with reference to Directors of Company and Meetings of Company.
	BBA 365	Understand the basic definitions and concepts of GST
		Obtain the knowledge about Registration procedure and generation of E-way bill under GST
		Understand process of ascertaining Time and Value of Supply under GST
		Understand various types of returns and penal provisions under GST
	BBA 360	Evaluate and communicate and human role in security systems with an emphasis on ethics, social engineering vulnerabilities and training
		obtain basic knowledge of how threats materialize into attacks.
FYBCA	BCA 111	Enter basic computer learning
		Obtain basic knowledge of computer hardware and software
	BCA 112	Use simple computer operations.
		Obtain basic knowledge of computer hardware and software
	BCA 113	Use simple computer operations.
		Obtain basic knowledge of computer hardware and software
		Prepare different tags and control
	BCA 115	Enter basic web pages.
	BCA 116	Enter basic web pages.

		Design WebPages and designing Website
	BCA 117	Enter basic logic development
		Prepare simple program
	BCA 118	Prepare basic programming logic and entries
		Obtain basic knowledge of program
	BCA 119	Prepare simple program
		Obtain basic knowledge of program
	AECC 1111	To enable students to use English language for professional and personal purposes
	BCA 121	Use simple digital payments.
		Enter basic online transaction.
	BCA 122	Use simple digital payments.
		Obtain basic knowledge of cashless transaction
	BCA 123	Use simple digital payments.
		Obtain basic knowledge of cashless transaction
	BCA 124	Enter basic database.
		Use simple operation on database.
	BCA 125	Use simple operation on database.
		Create database software
	BCA 126	Use simple operation on database.
		Create database software
	BCA 127	Enter basic logic development.
		Prepare simple program
	BCA 128	Prepare simple program
		Prepare basic programming logic and entries
	BCA 129	Prepare simple program
		Obtain basic knowledge of program
	ENVI 55555	Use of Natural resources
SYBCA	BCA 231	Enter basic business system
		Use simple organization operations.
	BCA 232	Use simple ERP operations.
		Obtain basic knowledge of ERP with organization behavior.
	BCA 233	Use Computerized accounting.
		Obtain basic knowledge of MIS & ERP with organization behavior.
	BCA 234	Use the Java programming language for various programming technologies
		Knowledge of the structure and model of the Java programming language.
	BCA 235	Create Graphical User Interface (GUI) based Java applications using Swing
		Develop software in the Java programming language, (application)
	BCA 236	Create Graphical User Interface (GUI) based Java applications using Swing

		Develop software in the Java programming language, (application)
	BCA 237	Prepare simple program
		Prepare basic programming logic and entries
	BCA 238	Prepare basic programming logic and entries
		Obtain basic knowledge of program
	BCA 239	Prepare basic file management and permission advance commands
		Obtain basic knowledge of program
	BCA 230	Enter basic logic software development.
		Prepare simple project
	BCA 241	Use simple animations operations.
		Obtain design new vision
	BCA 242	Enter basic Basics of Animation
		Use simple animations operations.
	BCA 243	Use simple animations operations.
		Obtain design new vision
	BCA 244	Knowledge of the structure and model of the C# programming language.
		Create Graphical User Interface (GUI) based C# applications
	BCA 245	Develop software in the C# programming language, (application)
		Propose the use of certain technologies by implementing them in the C# programming language to solve the given problem.
	BCA 246	Develop software in the C# programming language, (application)
		Propose the use of certain technologies by implementing them in the C# programming language to solve the given problem.
	BCA 247	Students will learn injecting data
		Data processing and data quality
	BCA 248	They will able to learn distributed systems
		Data processing and data quality
	BCA 249	Enter basic logic development of SAS.
		Data processing and data quality
	BCA 240	Enter basic logic development.
		Prepare simple computational mathematics
TYBCA	BCA 351	Basic principles of Python programming language
		Implement object oriented concepts
	BCA 352	Implement database and GUI applications
		Implement object oriented concepts
	BCA 353	Implement database and GUI applications
		Implement object oriented concepts
	BCA 354	Acquire knowledge of .NET technologies framework
		Implement various controls for creating a web Application
	BCA 355	Develop Website in .NET Technology

		Understand the security aspects of web Application
	BCA 356	Develop Website in .NET Technology
		Understand the security aspects of web Application
	BCA 357	Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities and training
		Obtain basic knowledge of Ethical Hacking and its Benefits
	BCA 358	Interpret and forensically investigate security incidents.
		Implement cyber security solutions.
	BCA 359	Aware about Cyber Terrorism.
		Design & Implement Risk Analysis ,Security policies and damage Assessment
	BCA 350	Prepare simple computational mathematics
	BCA 361	To understand the need of Cloud based solutions.
		To understand Security Mechanisms and issues in various Cloud Applications
	BCA 362	To explore effective techniques to program Cloud Systems.
		To understand current challenges and trade-offs in Cloud Computing.
	BCA 363	Apply fundamental concepts in cloud infrastructures to understand the tradeoffs in power, efficiency and cost, and then study how to leverage and manage single and multiple datacenters to build and deploy cloud applications that are resilient, elastic and cost-efficient.
		Analyze various cloud programming models and apply them to solve problems on the cloud.
	BCA 364	Create an error-free simple PHP program
		Demonstrates a working knowledge of Dynamic WebSite Design and Publishing
	BCA 365	Offers a career differentiator, with enhanced credibility and marketability
		Takes you beyond basic user's knowledge to the IT Pros who know how to create web sites
	BCA 366	Offers a career differentiator, with enhanced credibility and marketability
		Takes you beyond basic user's knowledge to the IT Pros who know how to create web sites
	BCA 367	Develop multi-skilled Computer Science professional with good technical knowledge, management, leadership and entrepreneurship skills.
		Identify, formulate and model problems and find engineering solution based on a systems approach.

DEPARTMENT OF COMPUTER SCIENCE

Class	Course	Outcomes (Student will be able to)
FYBSc	CS111	Understand the fundamental components of computer.
		Formulate solution to a query problem using SQL Commands.
	CS112	Given a computational problem, identify and abstract the programming task involved.
		Write program on a computer, edit, compile, debug, correct, recompile and run it.
	CS113	Develop confidence for self education and ability for life-long learning needed for Computer language
		develop the syntax and building blocks of the program.
		solve a problem using the C Program.
		improve logical thinking which will help them to create programs and applications.

		design the queries for manipulating data.
	CS121	describe basic concepts of database system.
		explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.
		design ER-models to represent simple database application scenarios, be competent in use of SQL
	CS122	Able to make use of objects and classes for developing programs.
		Able to use various object oriented concepts to solve different problems.
		Analyze, write, debug, and test basic C++ codes.
	CS123	Demonstrate the use of various OOPs concepts.
		Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.
SYBSc	CS231	Apply and implement learned algorithms ,data structures to solve problems.
		Meet the desired programming needs.
		Understand and develop logic
	CS232	Identify classes, objects, members of a class and relationships among them needed for a specific problem
		Write Java application programs using OOP principles and proper program structuring
		Demonstrate the concepts of polymorphism and inheritance
		Write Java programs to implement error handling techniques using exception handling
	CS233	Apply and implement learned algorithms, data structures to solve problems.
		Meet the desired programming needs.
		Understand and develop logic
		Use Java SDK environment .
		Demonstrate the concepts of polymorphism and inheritance
		Write Java programs to implement error handling techniques using exception handling
	CS230	Learn the basic concepts of HTML5
		Learn to read, write and identify HTML5 tags in a page
		Understand the basic structure of a web page
		Understand directory structures and how they impact html code
		Learn about CSS usage.
	CS241	Apply and implement learned algorithms data structures to solve problems.
		Meet the desired programming needs.
	CS242	Write Java programs to implement GUI programming.
		Deal with event handling.
		Deal with web pages using applets.
	CS243	Apply and implement learned algorithms data structures to solve problems.
		Meet the desired programming needs.
		Write Java programs to implement GUI programming.
		Deal with event handling.

		Deal with web pages using applets.
	CS240	Learn the basic concepts of HTML5
		Learn to read, write and identify HTML5 tags in a page
		Understand the basic structure of a web page
		Understand directory structures and how they impact html code
		Learn about CSS usage.
TYBSc	CS351	Understand details about system software
		Develop basic system program like editors, lexical analyzers etc.
		Understand language processing activities- functions of translators, loader and linkers
	CS352	Differentiate between interactive and non-interactive graphics.
		Study line Drawing and Circle Drawing techniques and algorithms.
		Perform 2D and 3D transformation on different images.
		Understand working of 2D and 3D clipping and windowing.
		Understand raster graphics and hidden surface elimination.
	CS353	Perform the E-R Diagram, DFD, Data dictionary, Decision tree about software
		Design the software in learned language using the course content
		Get the knowledge of types of testing & procedure to conduct testing of software in industry
	CS354	Understand about the collection of the data, condensation and summarization into a compact form.
		Understand about the representation of data in a neat, compact and clear form.
		Understand the concepts of Sample space and events, theory of Permutation and Combinations.
		Understand the concept of Probability, Conditional probability of an event, Independence of events.
	CS355	Explain basic principles of Python programming language
		Construct and apply various filters for a specific task.
		Apply the best features of mathematics, engineering and natural sciences to program real life problems.
	CS356	Understand how to download and install R software.
		Know various R packages with their utility.
		Understand data structures in R.
		Use R software for statistical computations.
		Use R software for exploratory data analysis.
	CS357	Design and code the different system software like line editor, small computer simulators and many more.
		Understand Graphics Concept Practically
		Get hands on using standard graphics library
		Implement DDA, Bresenham's Line, Circle Drawing Algorithm
		Implement 2D Transformation: Translation, Scaling and Rotation
	CS358	Develop the programs using Python.
		Develop their own module according to requirement and reuse it wherever necessary.
		Solve real life problems using Python.
	CS359	Understand how to download and install R software.

		Know practically R packages with their utility.
		Use R software for statistical computations.
		Use R software for exploratory data analysis
	CS350	Learn cloud computing types and models
		Get knowledge of cloud os and architectures.
		Understand virtualization and security concept
	CS361	Familiar with Operating System Services.
		Understand CPU scheduling algorithms, memory Management Techniques, Disk Drum Scheduling algorithms, Deadlock preventions and avoidance.
		Aware about android operating systems – its architecture, applications and uses.
	CS362	Understand the information exchange done across the network with the help of OSI & TCP/IP models.
		Learn how errors are captured & handled in network.
		Familiar with logical addressing and routing algorithms.
	CS363	Understand the use of Sets, Relations and Graphs.
		Understand Various Languages in TCS.
		Learn Regular Languages and Expressions.
		Familiar with Pumping Lemma and its applications.
		Explore the knowledge of Pushdown Automata.
		Solve examples based on Normal forms used in TCS.
		Realize Turing Machine.
	CS364	Understand & comprehend the problem;
		Define suitable statistical method to be adopted
	CS365	Implement object oriented concepts, database applications.
		Implement GUI applications using Python.
		Apply the best features of mathematics, engineering and natural sciences to program real life problems.
	CS366	To Design dynamic and interactive Web pages.
		To use PHP framework for effective design of web applications.
	CS367	Describe the important computer system resources and the role of operating system in their management policies and algorithms.
		Aware concepts of multiprogramming, multithreading and multitasking.
		Demonstrate memory management algorithms
		Illustrate file-handling concepts by implementing suitable algorithms
		Develop simple web application using server side PHP programing and Database Connectivity using MySQL.
	CS368	Develop Python Programs using object oriented concepts.
		Connect Database with Python applications.
		Implement GUI applications using Python.
	CS369	Improve communication skills.
		Update the latest changes in technological world.
		Develop multi-skilled Computer Science professional with good technical knowledge, management, leadership and entrepreneurship skills.

		Identify, formulate and model problems .
		Aware about handling real time problems and finding their solution.
	CS360	Articulate the main concepts, key technologies, strengths, and limitations of cloud computing.
		Identify the architecture and infrastructure of cloud computing, including SaaS, PaaS,
M.Sc	CS101	Understand analysis of images in frequency domain.
		Get the knowledge about enhancement and image restoration techniques.
		Apply knowledge of image processing to solve real life problems related to images.
	CS102	Understand architecture of UNIX operating system
		Get the knowledge about working of file subsystem of operating system.
		Be aware about memory management techniques.
	CS103	Develop application with shell programming.
		Process all types of images.
		Develop operating systems related functionality.
	CS104	Develop efficient object oriented programs.
		Handle runtime exceptions.
	CS105	Develop programs with advanced concepts.
		Develop efficient programs with the help of container classes and generic algorithms.
	CS106	Understand the basic concepts and application of Theory of Computation.
		Apply basic knowledge of automata theory in the field of computer and solve computational problems.
	CS201	Define various software application domains and remember different process model used in software development .
		Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques.
		Convert the requirements model into the design model and demonstrate use of software and user interface design principles.
		Distinguish among SCM and SQA and can classify different testing strategies and tactics and compare them.
	CS202	Analyze the performance of algorithms.
		Choose appropriate algorithm design techniques for solving problems.
		Understand how the choice of data structures and the algorithm design
		Methods impact the performance of programs.
	CS203	Construct logic for the algorithms designed using designing techniques.
		Debug the algorithms.
		Modify to improve performance of the algorithms.
	CS204	Apply Artificial Intelligence techniques for problem solving.
		Use classical Artificial Intelligence techniques, such as search algorithms.
		Demonstrate awareness and a fundamental understanding of various applications of AI techniques
	CS205	Write about OR and decision making.
		Differentiate between feasible and optimal solution .
		Apply solving techniques to all types of LPP.
		Apply solving techniques to network problems and game theory problems as well.

	CS206	Identify appropriate AI methods to solve a given problem.
		Design smart system using different search or heuristic approaches.
		Apply the suitable algorithms to solve AI problems.
	CS301	Understand advanced knowledge of programming for network communications
		Learn detailed knowledge of the TCP/UDP Sockets
		Learn use of various solutions to perform inter-process communications
		Apply knowledge of Unix/Linux operating systems to build robust client and server software for this environment
	CS302	Preprocess the data for mining applications
		Apply the association rules for mining data
		Design and deploy appropriate classification techniques
		Cluster high dimensional data for better organization of data
	CS303	Understand advanced knowledge of programming for network communications
		Learn detailed knowledge of the TCP/UDP Sockets and their programming
		Apply knowledge of Unix/Linux operating systems to build robust client and server software for this environment
		Preprocess the data for mining applications
		Apply the association rules for mining data
		Design and deploy appropriate classification techniques
		Cluster high dimensional data for better organization of data
	CS304	Acquire practical knowledge of .NET technologies framework
		Implement various controls for creating a web Application
		Understand the security aspects of web Application.
	CS305	Understand the structure of compilers
		Design compiler for small application
		Learn compiler construction theory
	CS 306	Acquire knowledge of .NET technologies framework
		Implement various controls for creating a web Application
		Understand the security aspects of web Application.
	CS401	Explain basic principles of Python programming language
		Implement object oriented concepts,
		Implement database and GUI applications.
	CS402	Improve communication skills.
		Become updated with all the latest changes in technological world.
		Develop multi-skilled Computer Science professional with good technical knowledge, management, leadership and entrepreneurship skills.
		Identify, formulate and model problems and find engineering solution based on a systems approach.
		Improve capability and enthusiasm for self-improvement through continuous professional development and life-long learning
		Aware about handling real time problems and finding their solution.

	CS403	Explain basic principles of Python programming language
		Implement object oriented concepts using Python
		Implement database and GUI applications using Python
	CS404	Learn various Information security threat and controls for it.
		Explain information security incident response.
		Understand the usage of Common Key cryptography and Public Key Cryptography.
		Learn and understand the mechanism to protect confidentiality and completeness of data.
	CS405	Describe key technologies in Internet of Things.
		Understand wireless sensor network architecture and its framework.
		Explore resource management in the Internet of Things.

DEPARTMENT OF DRAMASTICS

Class	Course	Outcomes (Student will be able to)
FYBA	DRA 111	<ul style="list-style-type: none"> • After successfully completing the course students: • Will get thorough knowledge about the fundamental aspects of drama and types of drama. • Will be able to perform various forms of theatrical techniques • Will be well trained in technical aspects such as set designing, lighting, background music, costume and makeup. • Will be well flimilior with writing techniques and important elements of writing in drama.
SYBA	DRA 231	<ul style="list-style-type: none"> • After successfully completing the course students: • Will be well familiar with all the primary tools of acting and will be able to develop characters in various styles. • Will be able to execute excellent oral and physical acting skills. • Will have thorough knowledge about all types of theaters in the world. • Will get the idea about basic directional skills, management of a production and criticism.
TYBA	DRA-351 DSE-1A Theatre Technique (Theory)	Demonstrate understanding of the social & artistic movements that have shaped theatre as we know it today.
	DRA-352 DSE-1A Theatre Technique (Practical)	Be able to make practical presentation.
	DRA -353 DSE-2A Actor & Casting (Theory)	Analyze & interpret texts & performances both in writing & orally.
	DRA -354 DSE-2A Actor & Casting (Practical)	Apply discipline-specific skills to the creation of performance. Practice collaborative skills in various theatrical contexts
	DRA -350 SEC -3 History Of Marathi Theatre (Theory)	Demonstrate thorough knowledge of theatre history and literature from the Greeks to the present by analyzing, interpreting, and writing about plays, performances and primary texts from the major periods of the theatre.
	DRA 001 GE-1 Acting Technique (Theory)	Analyze a script for given circumstances, objectives, actions, obstacles, and character relationships; apply that analysis to the creation of performance. Play physical actions in performance.
	DRA 002 GE-1 Acting Technique (Practical)	Develop and apply process skills in rehearsal, production and classroom settings. Demonstrate problem-solving skills in the creation of artistic work.
	DRA -361 DSE-1B Theatrical Styles & Set Figure (Theory)	Demonstrate an understanding of style through performance of classical and contemporary texts as well as devised work.
	DRA -362 DSE-1B Theatrical Styles & Set Figure (Practical)	Be able to make practical presentation & Practicing students to make sets according to different sets.
	DRA -363 DSE-2B Basics	Demonstrate principles of stage directing (including an understanding of staging, imagery, pace, concept, and acting) by directing

	of DIRECTING (Theory)	short scenes and plays. Demonstrate principles of the playwright's craft in constructing short scenes and plays.
	DRA-364 DSE-2B Basics of DIRECTING (Practical)	Be able to make practical presentation.
	DRA-360 SEC – 4 Management of Drama (Theory)	To impart marketing lessons to students through management process. To teach how to bring drama to the audience through marketing
	DRA-003 GE-2 Drama Marketing & Management (Theory)	Promotion of the play through managements & marketing as well as conveying the play to every audience through different mediums at present
	DRA-004 GE-2 Drama Marketing & Management (Practical)	Learning to manage through hands-on management's process. Be able to make practical presentation.

DEPARTMENT OF ECONOMICS

Class	Course	Outcomes (Student will be able to)
FYBA	ECO. 111	• To understand and apply supply and demand analysis to relevant economic issues.
		• To understand the causes and consequences of different market structures.
		• To apply economic models to examine current economic issues and evaluate policy options for addressing these issues.
	ECO. 112	• Students will understand the various challenges of Economy in Maharashtra.
		• Students will study the Problems of economy in Maharashtra.
		• To understand and apply supply and demand analysis to relevant economic issues.
ECO. 121	• To understand the causes and consequences of different market structures.	
	• To apply economic models to examine current economic issues and evaluate policy options for addressing these issues.	
	• Demonstrate knowledge of how price equilibrium is determined by market forces using supply and demand diagrams	
	• Identify appropriate pricing and output decisions by firms in different market structures.	
SYBA	ECO. 231	• Learners will understand the various concept and Principles of Micro Economics
		• Learners studied the concepts of Demand, Supply and Market
		• Learners studied the concepts of Cost, Revenue and Production
ECO. 232	• The course will help the students to learn about the concept of macroeconomics along with. It may also provide the information to the students Theories of Output and Employment and consumption function, investment and rate of interest.	
	ECO. 230	• Students will understand the concepts of Indian Economy.
• Students will study the problems of Indian economy.		
• Students will study the basic issues in Agriculture and industries.		
ECO. 241	• Learners will learn how determine price, output and equilibrium under perfect competition.	
	• Learners will learn price discrimination and Monopoly	
	• Learners will learn price leadership models and equilibrium under oligopoly	
ECO. 242	• The course will help the students to learn about the concept of Macro Economic various approach. It may also provide the	

		information to the student's concepts of supply of and demand for money and trade cycle theories.
	ECO. 240	<ul style="list-style-type: none"> • Students will understand the concepts of Indian Economy. • Students will understand recent changes in Indian economy. • Students will study the Problems of Indian economy. • Students will study the issues in industries sector.
TYBA	DSC -1 C ECO - 351	<ol style="list-style-type: none"> 1. Students will understand the basic economic concepts by studying the course. 2. Students will be able to tackle the various economic problems by studying this course. 3. Students will acquire the knowledge of comparative approach through this course.
	DSC -1 C ECO - 352	<ol style="list-style-type: none"> 1. Learners will understand the various concept and Principles of International Trade 2. Learners studied the concepts of Theory of international trade gains of Trade. 3. Learners studied the concepts of Trade policies, BOP and exchange of rate.
	DSC -1 C ECO - 353	<ol style="list-style-type: none"> 1. Student will able to analyze different concept of public finance. 2. The student will understand the imbalance between public revenue and public expenditure. 3. The students will suggest various measures to decrease deficit. 4. The student will be able to evaluate working of recent finance commission
	DSC -1 C ECO - 354	<ol style="list-style-type: none"> 1. Students will able to calculate and apply measures of Central tendency. 2. Students will able apply collection of data.
	SEC -1 ECO - 350	<ol style="list-style-type: none"> 1) Student will be able To Understand Economics Growth and Development. 2) Student will be able To Understand Indicators of Development. 3) Student will be able To Understand Concept of Poverty, Inequality and Development. 4) Student will be able To Understand Theories of Development.
	GE ECO - 001	<ol style="list-style-type: none"> 1. Students will able to understand development of cities and industrial townships. 2. Students will able to understand changes in life of peoples in citifies. 3. Students will able to understand problems like urbanization, a shortage of space, lack of amenities, and traffic congestion.
	GE ECO - 002	<ol style="list-style-type: none"> 1. To enable students to have understanding the various issue of Industrial Economics. 2. Students will able to industrial scenario in the country. 3. Students will able appear competitive exam.
	DSC -1 D ECO - 361	<ol style="list-style-type: none"> 1. Students will get idea of the exploitation of Indian Economy in the British rule. 3. Students will know modern economic views solving economic problems. 3. The students will know the contemporary Economic Ideas at national and international level
	DSC -1 D ECO - 362	<ol style="list-style-type: none"> 1. Learners will understand the various concept capital movement and multinational companies. 2. Learners studied the international institutions financial systems. 3. Learners studied the concepts of devaluation and convertibility Rupee.
	DSC -1 D ECO - 363	<ol style="list-style-type: none"> 1. Student will able to analyze different concept of public finance. 2. The student will understand the imbalance between public revenue and public expenditure. 3. The students will suggest various measures to fiscal policy. 4. The student will be able to evaluate working of recent finance
	DSC -1 D ECO - 364	<ol style="list-style-type: none"> 1. Students will able to understand concept of the desperation & correlation. 2. Students will able to understand concept of the regression and time series analysis.

	SEC-2 ECO - 360	<ol style="list-style-type: none"> 1. Students will able to understand importance of environment in their life. 2. Students will able to know environmental resource problems. 3. Students will able to understand linkages of economy and environment
	GE ECO - 003	<ol style="list-style-type: none"> 1. Students will able to understand labour framework in India. 2. Students will able to understand labour policies in India.
	GE ECO - 004	<ol style="list-style-type: none"> 1) Student will be able to understand concept of Demography. 2) Student will be able to understand Theories of Population. 3) Student will be able to understand concept of Fertility, Nuptiality and Mortality. 4) Student will be able to understand concept of Migration and Urbanisation.
FYMA	ECO101	<ul style="list-style-type: none"> • Students will be able to demonstrate knowledge of the laws of supply and demand and equilibrium; and apply the supply and demand model to analyze responses of markets to external events
		<ul style="list-style-type: none"> • By the end of the course, students will be able to demonstrate an understanding of producer choice, including cost and break-even analysis
	ECO102	<ul style="list-style-type: none"> • To have conceptual clarity of public expenditure and revenue theories. • To apply the principle of optimal taxation in analyzing various governments tax policies.
	ECO103	<ul style="list-style-type: none"> • How to calculate and apply measures of location and measures of dispersion - grouped and ungrouped data cases • How to apply discrete and continuous probability distributions to various business problems.
	ECO104	<ul style="list-style-type: none"> • Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling. • Have basic knowledge on qualitative research techniques.
	ECO105 (A)	<ul style="list-style-type: none"> • Explain demographic changes in the world and their major determinants • Apply demographic concepts and population theories to explain past and present population characteristics.
	ECO105 (B)	<ul style="list-style-type: none"> • Sensitize the overall development and engine of growth in agriculture. Draw distinctive features of rural and urban economy or agricultural and non-agricultural which can influence the whole economy.
	ECO201	<ul style="list-style-type: none"> • Students will be able to demonstrate knowledge of the laws of supply and demand and equilibrium; and apply the supply and demand model to analyze responses of markets to external events. • By the end of the course, students will be able to demonstrate an understanding of producer choice, including cost and break-even analysis.
	ECO202	<ul style="list-style-type: none"> • To have conceptual clarity of public expenditure and revenue theories. • To apply the principle of optimal taxation in analysing various governments tax policies.
	ECO 203	<ul style="list-style-type: none"> • How to calculate and apply measures of location and measures of dispersion - grouped and ungrouped data cases. • How to apply discrete and continuous probability distributions to various business problems.
	Eco 204 (A)	<ul style="list-style-type: none"> • Define the return to education and understand its empirical estimates. • Understand and evaluate the debate regarding school accountability.
	Eco 204 (B)	<ul style="list-style-type: none"> • Sensitize the overall development and engine of growth in agriculture. Draw distinctive features of rural and urban economy or agricultural and non-agricultural which can influence the whole economy.
	Eco 205	<ul style="list-style-type: none"> • Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and

		natural systems.
		<ul style="list-style-type: none"> Understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales.
SYMA	ECO301	<ul style="list-style-type: none"> The course will help the students to learn about the concept of Monetary economics National income and Keynesian theory of employment and interest. It may also provide the information to the students Theories of Output and Employment and consumption function, investment function and rate of interest
	ECO302	<ul style="list-style-type: none"> Ability to understand the concepts of international economics such as comparative cost, terms of trade, trade policies. Ability to interpret and apply theory relating to international Economics
		<ul style="list-style-type: none"> Ability to discuss and debate the effects of trade policy, trade agreements, exchange rate policies on the world economy/trade.
	ECO303	<ul style="list-style-type: none"> Students will be able to understand knowledge of the development concepts and theories. Students will be able to understand the Policies of Indian Government for development. Students will be able to know the sector aspects of development process.
	ECO304	<ul style="list-style-type: none"> Explain and discuss the empirical foundations upon which practices in financial institutions and markets are based and the factors that influence decision making within these contexts.
	ECO305(A)	<ul style="list-style-type: none"> The paper is useful for the students for illustrating concepts of economics by mathematical techniques. Helpful to understand more advanced branches of economics like econometrics, quantitative techniques etc.
	ECO305(B)	<ul style="list-style-type: none"> Know the development process in India after independence. Understanding the problems and measures in their contextual perspective. Identifying and analyzing current issues.
	ECO401	<ul style="list-style-type: none"> The course will help the students to learn about the concept of monetary economics and Economic Stabilization and Macroeconomics Policies
	ECO402	<ul style="list-style-type: none"> Ability to understand and interpret the concepts such as Balance of Payments, Exchange Rates, Foreign Exchange Transactions, and International Capital flows, etc. Ability to critically analyze the effects of deficits, exchange risk, role of foreign capital on the world economy/trade Ability to discuss and debate on subjects related to international trade and finance.
	ECO403	<ul style="list-style-type: none"> Students will be able to demonstrate knowledge of the Growth concepts and theories. Students will be able to understand of the classical, neo classical and Keynesian approaches of Growth. Students will be able to knowledge of the technological changes towards growth.
	ECO404(A)	<ul style="list-style-type: none"> The paper is useful for the students for illustrating concepts of economics by econometrics techniques. Helpful to understand more advanced branches of economics through econometrics.
	ECO404(B)	<ul style="list-style-type: none"> Knowing the perspectives of globalization Understand the banking sector reforms. Knowing the working of federal finance.
	ECO405	<ul style="list-style-type: none"> Student will understand the empirical foundations upon which practices in financial institutions and markets are based and the factors that influence decision making within these contexts

DEPARTMENT OF ELECTRONICS

Class	Course	Outcomes (Student will be able to)
FYB Sc	ELE-111	<ul style="list-style-type: none"> • Apply knowledge to develop circuits using electronic devices.
		<ul style="list-style-type: none"> • Apply the concept and knowledge of electronics devices to real life problems.
		<ul style="list-style-type: none"> • Simulate complex circuits and understand the behavior of the systems.
		<ul style="list-style-type: none"> • Understand and analyse, linear and digital electronic circuits.
	ELE-112	<ul style="list-style-type: none"> • To get familiar with various numbers systems and Boolean algebra.
		<ul style="list-style-type: none"> • To study basic building block of digital electronics like logic gates and arithmetic circuits.
		<ul style="list-style-type: none"> • To learn about latches, Flip flops, shift register and counter.
	ELE-121 & ELE-122	<ul style="list-style-type: none"> • Apply the concept and knowledge of integrated circuit chips to develop new systems.
		<ul style="list-style-type: none"> • Apply practical knowledge to solve real life problems of the society.
		<ul style="list-style-type: none"> • Understand of the course and create scientific temperament and give exposure to the students for independent use of integrated circuit chips for innovative applications.
		<ul style="list-style-type: none"> • Model complex circuits and simulate them.
		<ul style="list-style-type: none"> • Handle simulation software to analyse electronics circuits.
SYB Sc	ELE-231	<ul style="list-style-type: none"> • To convey knowledge of analog communication techniques
		<ul style="list-style-type: none"> • To provide the knowledge and methodology essential for building, simulating and testing modulation circuits.
		<ul style="list-style-type: none"> • To provide exposure of AM and FM in detail
	ELE-232	<ul style="list-style-type: none"> • To explore applications in the field of electronics communication.
		<ul style="list-style-type: none"> • Understand the internal architecture of basic microprocessor 8085
	ELE-233	<ul style="list-style-type: none"> • Develop the application programs of 8 bit microprocessor using 8085
		<ul style="list-style-type: none"> • To design circuits of analog modulation and demodulation.
		<ul style="list-style-type: none"> • Apply the concept and knowledge of microprocessors to real life problems.
		<ul style="list-style-type: none"> • Analyze modulation circuits and understand the behavior of the systems.
	ELE-230	<ul style="list-style-type: none"> • Familiar with the basics of measurement system and its input, output configuration of measurement system.
		<ul style="list-style-type: none"> • Familiar with both static and dynamic characteristics of measurement system.
		<ul style="list-style-type: none"> • Familiar with the principle and working of various sensors and transducers.
		<ul style="list-style-type: none"> • Able to design signal conditioning circuit for various transducers.
		<ul style="list-style-type: none"> • Able to identify or choose a transducer for a specific measurement application.
		<ul style="list-style-type: none"> • Familiar with the different temperature measurement techniques used in process industries
		<ul style="list-style-type: none"> • Familiar with various flow instrumentation used in industrial flow measurement.
		<ul style="list-style-type: none"> • Able to understand the working principle of different pressure transmitters and level sensors used in industries.
		<ul style="list-style-type: none"> • Able to identify or choose temperature, flow, pressure and level measuring device for specific process measurement.
	ELE-241	<ul style="list-style-type: none"> • To develop simple basic circuits of digital communication.
		<ul style="list-style-type: none"> • Understand the behaviour of digital communication techniques.

		<ul style="list-style-type: none"> • Develop scientific temperament in their self
	ELE-242	<ul style="list-style-type: none"> • Inculcate self-interest in modern technological developments. • Handle 8051 microcontroller
		<ul style="list-style-type: none"> • Write various programs for applications using interface
	ELE-243	<ul style="list-style-type: none"> • Apply knowledge to develop real time applications. • Apply the concept and knowledge of digital communication to develop new systems.
		<ul style="list-style-type: none"> • Apply practical knowledge of microcontrollers to solve real life problems of the society.
	ELE-240	<ul style="list-style-type: none"> • Gain practical knowledge of microcontroller programming. • Select and use the components for electrical systems.
		<ul style="list-style-type: none"> • Identify, formulate and solve the problems using pneumatic system in instrumentation and control engineering.
		<ul style="list-style-type: none"> • Identify, formulate and solve the problems using hydraulic system in instrumentation and control system.
TYBSC	ELE- 351: Operational Amplifiers and Applications	<ul style="list-style-type: none"> • Have fundamental knowledge of operational amplifier.
		<ul style="list-style-type: none"> • Can apply this knowledge for designing concept op-amp circuits.
	ELE-352: Design with Analog ICs	<ul style="list-style-type: none"> • Have fundamental knowledge of designing electronic circuits using IC
		<ul style="list-style-type: none"> • Apply this designing knowledge for different special purpose ICs and their applications
	ELE-353: Power Electronics	<ul style="list-style-type: none"> • Have fundamental knowledge of semiconductor power electronic device
		<ul style="list-style-type: none"> • Apply this knowledge for designing power electronic circuits
	ELE-354: Embedded System	<ul style="list-style-type: none"> • Understand the internal architecture and interfacing of different peripheral devices with Microcontrollers.
		<ul style="list-style-type: none"> • 2. Understand and develop the programs for microcontroller.
		<ul style="list-style-type: none"> • 3. Understand the role of embedded systems in industry & house held application.
		<ul style="list-style-type: none"> • 4. Understand the design concept of embedded systems.
	ELE-355: Sensors and Actuators	<ul style="list-style-type: none"> • Have knowledge of different sensors and its parameters.
		<ul style="list-style-type: none"> • Have knowledge of different actuators.
		<ul style="list-style-type: none"> • Understand signal conditioning circuits and signal transmission
	ELE-356 (A): Instrumentation	<ul style="list-style-type: none"> • Use sensors for measurement of various physical quantities.
		<ul style="list-style-type: none"> • Understand the use of sensors in process control system
		<ul style="list-style-type: none"> • Construct signal conditioning circuit for various physical quantities & environment.
		<ul style="list-style-type: none"> • Avoids errors in measurements of physical quantities
	ELE-356 (B): Process Automation and Programmable Logic Control	<ul style="list-style-type: none"> • Understand the automation process and PLC basics

		<ul style="list-style-type: none"> • Design and use of Industrial control circuits
		<ul style="list-style-type: none"> • Develop PLC programming
		<ul style="list-style-type: none"> • Aware about SCADA and DCS
	ELE-350: Programming with LabVIEW	<ul style="list-style-type: none"> • Develop a program using LabVIEW.
		<ul style="list-style-type: none"> • Work on data acquisition and controls with LabVIEW.
	ELE-357: Laboratory – I	<ul style="list-style-type: none"> • Design various applications of op-amp.
		<ul style="list-style-type: none"> • Understand and Design circuits using Analog IC.
		<ul style="list-style-type: none"> • Understand and handle power electronics circuits
	ELE-358: Laboratory – II	<ul style="list-style-type: none"> • Understand the hardware and software of embedded system.
		<ul style="list-style-type: none"> • Understand the characteristics of sensors.
		<ul style="list-style-type: none"> • Design embedded system for real life problems.
	ELE-359: Project – I	<ul style="list-style-type: none"> • Aware of various techniques to perform physics experiments in detail
		<ul style="list-style-type: none"> • Successfully carry out advanced tasks and projects, both independently and in collaboration with others, and also across disciplines
	ELE-361: Advanced Digital System Design	<ul style="list-style-type: none"> • Design digital circuits.
		<ul style="list-style-type: none"> • Write VHDL code for digital circuit with the help of different modeling style.
	ELE-362: Transmission Lines, Antenna and Wave Propagation	<ul style="list-style-type: none"> • Understand in-depth study of transmission lines which play an important role in high- speed digital communication.
		<ul style="list-style-type: none"> • Analyze the fundamentals of antenna theory.
		<ul style="list-style-type: none"> • Understand the different types of antennas and the radiation mechanism.
		<ul style="list-style-type: none"> • Identify the atmospheric and terrestrial effects on radio wave propagation
	ELE-363: Optoelectronics	<ul style="list-style-type: none"> • Understand the basic concept of optoelectronics.
		<ul style="list-style-type: none"> • Understand design and operation of light emitting diodes and LASER
		<ul style="list-style-type: none"> • Understand detailed knowledge of optical fiber.
	ELE-364: Biomedical Instrumentation	<ul style="list-style-type: none"> • Understand and measure biological signals present in human body
		<ul style="list-style-type: none"> • Aware various blocks of biomedical sensors
		<ul style="list-style-type: none"> • Understand the working principles of various therapeutic and monitoring systems
		<ul style="list-style-type: none"> • Understand the patient imaging and monitoring systems.
	ELE-365: Python Programming	<ul style="list-style-type: none"> • Explain basic principles of Python programming language
		<ul style="list-style-type: none"> • Apply the best features of mathematics, engineering and natural sciences to program real life problems.
	ELE-366 (A): Numerical Simulation in Electronics	<ul style="list-style-type: none"> • Understand the numerical method in electronics

		<ul style="list-style-type: none"> Solve the numerical problem in electronics
	ELE-366(B): Mechatronics and Digital Machining	<ul style="list-style-type: none"> Understand the basics of Mechatronics
		<ul style="list-style-type: none"> Learn the working and use of electrical drives, pneumatics and hydraulics
		<ul style="list-style-type: none"> Understand the basic concepts of Signal Conditioning and Data Representation
		<ul style="list-style-type: none"> Design and use various microprocessor and microcontroller based control systems
		<ul style="list-style-type: none"> Study CNC Machining and programming
	ELE-360: Introduction to Arduino	<ul style="list-style-type: none"> Understand handle the Arduino board.
		<ul style="list-style-type: none"> Do Arduino Programming
		<ul style="list-style-type: none"> Do Arduino communication and interfacing
	ELE-367-Laboratory-I	<ul style="list-style-type: none"> Understand and design digital systems
		<ul style="list-style-type: none"> Understand and handle optoelectronics circuits.
	ELE-368: Laboratory-II	<ul style="list-style-type: none"> Understand and handle biomedical instruments.
		<ul style="list-style-type: none"> Develop program using python programming language.
		<ul style="list-style-type: none"> Apply and solve numerical methods in electronics system.
	ELE-369: Project – II	<ul style="list-style-type: none"> Aware of various techniques to perform electronics experiments in detail.
		<ul style="list-style-type: none"> Successfully carry out advanced tasks and projects, both independently and in collaboration with others, and also across disciplines

DEPARTMENT OF ENGLISH

Class	Course	Outcomes (Student will be able to)
FYBA	CENG 111	<ul style="list-style-type: none"> To enable students to use etymological approach to improve their vocabulary To inculcate moral values among students through literature
	CENG 112	<ul style="list-style-type: none"> To make students learn and use grammar effectively To inculcate moral values among students through literature
	OENG 111	<ul style="list-style-type: none"> To acquaint the students with the particular genres of literature- Poetry & Prose. To develop understanding of literature and reading skill of the students through literature.
	OENG 111	<ul style="list-style-type: none"> To acquaint the students with the particular genres of literature- Short Story To develop understanding of literature and reading skill of the students through literature
	CENG 121	<ul style="list-style-type: none"> To encourage students to build vocabulary using etymological approach To inculcate moral values among students through literature
	CENG 122	<ul style="list-style-type: none"> To make students learn and use grammar effectively To inculcate moral values among students through literature
	OENG 121	<ul style="list-style-type: none"> To acquaint the students with the particular genres of literature- Poetry & Prose.

		<ul style="list-style-type: none"> To develop understanding of literature and reading skill of the students through literature.
	OENG 122	<ul style="list-style-type: none"> To acquaint the students with the particular genres of literature- One-Act Play
		<ul style="list-style-type: none"> To develop understanding of literature and reading skill of the students through literature
	AECC-1111	<ul style="list-style-type: none"> Improved English reading and listening skills of students.
		<ul style="list-style-type: none"> Improved English writing skills of students.
		<ul style="list-style-type: none"> Improved English speaking skills of students.
FYBCOM	BCOM-111	<ul style="list-style-type: none"> Familiar with the contextual vocabulary.
		<ul style="list-style-type: none"> Acquainted with day-to-day vocabulary.
		<ul style="list-style-type: none"> Able to use English in various contexts.
		<ul style="list-style-type: none"> Oriented in human values.
	AECC-1111	<ul style="list-style-type: none"> Impart language skills to students with a practical approach.
		<ul style="list-style-type: none"> enable students to use English language for professional and personal purposes
		<ul style="list-style-type: none"> inculcate the habit of using language with individual linguistic creativity
SYBA	CENG-231	<ul style="list-style-type: none"> Acquired essential vocabulary.
		<ul style="list-style-type: none"> Understood important processes of word formation.
		<ul style="list-style-type: none"> Awareness of gender issues and human nature in general.
	CENG-232	<ul style="list-style-type: none"> Use grammatically correct sentences in daily life situations.
		<ul style="list-style-type: none"> Understand issues concerning gender, democracy and examinations.
	SENG-230	<ul style="list-style-type: none"> To understand technical writing and its characteristics.
		<ul style="list-style-type: none"> To write different kinds of technical documents.
	SENG-231	<ul style="list-style-type: none"> Study the growth and development of 16th and 17th century English drama.
		<ul style="list-style-type: none"> Learn the various aspects and genres of drama.
	SENG-232	<ul style="list-style-type: none"> Learn novel as a genre.
		<ul style="list-style-type: none"> Understand the human values and issues.
	CENG-241	<ul style="list-style-type: none"> Acquired essential vocabulary.
		<ul style="list-style-type: none"> Ability to write well organized paragraphs.
		<ul style="list-style-type: none"> Awareness about contemporary issues.
	CENG-242	<ul style="list-style-type: none"> Use grammatically correct sentences.
		<ul style="list-style-type: none"> Read effectively and understand the given text .
	SENG-240	<ul style="list-style-type: none"> Aware of information mechanics and ethics.
		<ul style="list-style-type: none"> Able to write outlines progress and technical reports with graphics.
	SENG-241	<ul style="list-style-type: none"> Learn American, African and Indian Poets.
		<ul style="list-style-type: none"> Analyze and evaluate poems.
	SENG-242	<ul style="list-style-type: none"> Understand minor literary forms.
		<ul style="list-style-type: none"> Develop interest in reading literature.

FYMA	ENG-101	<ul style="list-style-type: none"> • Acquainted with the nature of language. • Introduced to the developments in the field of linguistics. • Aware of the relation between language and society. • Have understood the relation between language and brain.
	ENG-102	<ul style="list-style-type: none"> • Acquainted with significant Indian, English and American Poets through the study of the representative poems. • Trained in the close reading of the poems prescribed. • Able to analyze different thematic patterns, poetic structures, poetic devices and stylistic peculiarities. • Have the ability to interpret, analyze and evaluate Poetry in English in the context of literary history.
	ENG-103	<ul style="list-style-type: none"> • To analyze and understand drama as a literary genre. • To identify trends and movements of drama. • Analyze selected literary texts in different socio-cultural contexts. • Have a holistic attitude and cross-cultural sensibility.
	ENG-104	<ul style="list-style-type: none"> • Familiar with the key concepts in academic writing. • Able to develop and present an argument. • Able to use grammar and vocabulary associated with academic writing. • Trained in processes and strategies of academic writing.
	ENG-105	<ul style="list-style-type: none"> • Have a better understanding of the discipline of Translation Studies. • familiar with the history of translation • Have an understanding about the central issues in translation. • have basic translation competence.
SEM-II	ENG-201	<ul style="list-style-type: none"> • familiar with the recent trends in linguistics. • have been acquainted with computational linguistics. • aware of the relation of language to brain, society, machine and law. • have developed the stylistic competence for analyzing literary texts.
	ENG-202	<ul style="list-style-type: none"> • acquainted with significant Indian, English and American Poets through the study of the representative poems. • able to do close reading of the poems prescribed . • able to analyze different thematic patterns, poetic structures, poetic devices and stylistic peculiarities. • have the ability to interpret, analyze and evaluate Poetry in English in the context of
	ENG-203	<ul style="list-style-type: none"> • able to analyse and understand drama as a literary genre and appreciate it aesthetically. • able to understand trends and movements of drama. • have a broadened perspective and understanding about different socio-cultural contexts of the periods in which the plays were written. • familiar with select English, American and Indian dramas. • familiar with the major dramatists of world literature.
	ENG-204	<ul style="list-style-type: none"> • able to identify various social issues through contemporary literature.

		<ul style="list-style-type: none"> able to appreciate contemporary fiction.
		<ul style="list-style-type: none"> able to appreciate contemporary poetry.
		<ul style="list-style-type: none"> able to appreciate the co-mingling of literary and other texts.
	ENG-205	<ul style="list-style-type: none"> familiar with methods and strategies of translation.
		<ul style="list-style-type: none"> familiar with the recent trends in translation
		<ul style="list-style-type: none"> have developed basic translation competence.
		<ul style="list-style-type: none"> aware of the ethics of translation.
SYMA	ENG-301	<ul style="list-style-type: none"> literary history
SEM-III		<ul style="list-style-type: none"> have been familiar with key concepts in Indian aesthetics.
	Eng-302	<ul style="list-style-type: none"> able to get acquainted with the contribution of the novelists to the Genre of Novel.
		<ul style="list-style-type: none"> able to understand the human values, psyche and issues raised in the representative novels.
	ENG-303	<ul style="list-style-type: none"> able to identify research problems, questions and hypotheses
		<ul style="list-style-type: none"> able to collect, sort and analyze data
		<ul style="list-style-type: none"> able to construct a research design
		<ul style="list-style-type: none"> able to deduct results and formulate conclusions
	Eng-304	<ul style="list-style-type: none"> have acquired essential professional skills to students
		<ul style="list-style-type: none"> have acquired essential soft skills to students
		<ul style="list-style-type: none"> have acquired essential communication to students
		<ul style="list-style-type: none"> have acquired essential presentation skills to students.
	Eng-305	<ul style="list-style-type: none"> able to know what basic elements go into the making of a creative piece of writing.
		<ul style="list-style-type: none"> able to understand the steps and methods of creative writing.
		<ul style="list-style-type: none"> able to practice writing creative literature.
SEM-IV	ENG-401	<ul style="list-style-type: none"> have been introduced to selected theories and concepts in literary criticism.
		<ul style="list-style-type: none"> Students will have been introduced to familiarized with recent trends in literary theory and criticism.
	ENG-402	<ul style="list-style-type: none"> able to read and critically analyse the novels.
		<ul style="list-style-type: none"> able to get familiarized to the major novelists of world literature and thus develop comparative study of all
	ENG-403	<ul style="list-style-type: none"> able to understand the parts and structures of Research paper/Dissertation
		<ul style="list-style-type: none"> able to use documentation style as per MLA 7th edition
		<ul style="list-style-type: none"> able to understand ethics of Research
		<ul style="list-style-type: none"> able to write a scholarly research paper & outline of the dissertation
	ENG-404	<ul style="list-style-type: none"> able to study and analyze various trends in contemporary literature
		<ul style="list-style-type: none"> able to study and analyze various trends in contemporary literature
		<ul style="list-style-type: none"> able to read and analyze various literary concerns of present times
	ENG-405	<ul style="list-style-type: none"> able to practice expressing their creative thoughts in Poetry, Drama and Script for Radio and Television
		<ul style="list-style-type: none"> able to know and apply the processes of revision of Creative Writing
		<ul style="list-style-type: none"> able to know the challenges and scope in the field of Creative Writing

TYBA	CENG-351 Compulsory English-IX	After successfully completing the course, students 1. will have acquired some essential English Vocabulary. 2. will be able to use verbs expressing present, past and future. 3. will be able to transform different types of sentences. 4. will be able to write essays and reviews and make advertisements.
	SENG-351- DSE-1C Special English-V: Study of English Drama	After successfully completing the course, students will have been acquainted with the growth and development of English Drama. will be familiar with dramatic analysis. will have understood literary response to social class conflict. will have been introduced to comedy of menace and political satire.
	SENG-352- DSE-1C Special English-VI: Study of English Novel (20 th Century)	After successfully completing the course, students will have been acquainted with important socio-cultural, political and historical context that influence British Novel. will be familiar with science fiction. will have understood literary response to conflict between civilization and slavery. will be familiar with stream of consciousness technique and complexity of human relationships.
	SENG-353 Special English-VII: Study of English Language-I	After successfully completing the course, the students will be able to classify the properties, functions and varieties of English language. familiar with Phonetics and Phonology. able to identify the formation process and do the morphological analysis of a word.
	SENG-354 Special English-VIII: Literary Criticism-I	After successfully completing the course, students will have been acquainted with Indian aesthetics. will be familiar with Classical criticism. will have been acquainted with Renaissance and Neoclassical criticism. will be familiar with Romantic criticism.
	SENG-350 SEC -1 Creative Writing-I	At the end of the course, the students will be able to know what basic elements go into the making of a creative piece of writing. understand the properties and methods of creative writing. understand and put into practice key techniques of fiction as they are exemplified in the short story. understand and put into practice key techniques or poetry while writing their thoughts in poetic form.
	GENG-001 GE Literary Musings-I	After successfully completing the course, the students will be able to 1. enjoy and appreciate a rich variety of contemporary literature. 2. to sharpen their literary sensibility. 3. understand the social and cultural issues reflected in literature. 4. understand the different streams of literature like poetry, short stories and non- fictional prose.
	GENG-002 Literary Musings-II	After successfully completing the course, students will be aware about universal brotherhood and peace. will have understood the futility of violence and the importance of truth. will be aware about the dangers of materialism and the significance of innocence. will be aware about pitfalls of technology and human-nature relation.

		will have understood the importance of gender equality.
	CENG-361 Compulsory English-X	After successfully completing the course, students 1. will have acquired some essential English Vocabulary. 2. will be able to use modals, conditionals, non-finite, active and passive verb forms. 3. will be able to transform different types of sentences. 4. will be able to listen and understand English.
	SENG-361 DSE-1D Special English-IX: Study of English Poetry (20 th Century)	After successfully completing the course, students will have been acquainted with Indian, British, American and Canadian poetry will have developed understanding of cross cultural issues among students will have developed an ability to interpret and evaluate poetry in English in its context will be familiar with thematic patterns and poetic devices
	SENG-362 Special English-X: Literature Translated in English	After completing the course successfully, the students will be acquainted with literal translations. will have developed interest in Indian regional languages. will have understood the concept of Indianness in multiple literatures. will have understand the notion of Bhasha literature
	SENG-363 Special English-XI: Study of English Language- II	After successfully completing the course, the students will be able to analyze noun phrases and verb phrases. do the sentence analysis in a tree diagram. identify semantic features and relations.
	SENG-364 Special English-XII: Literary Criticism-II	After successfully completing the course, students will have been acquainted with Victorian and Modern Criticism. will be familiar with Russian Formalism, New Criticism, Structuralism and Deconstruction. will have been acquainted with Psychoanalytic Criticism, Archetypal Criticism, Marxist Criticism and Feminist Criticism. will be familiar with Dialogic Criticism, Postcolonial Studies, New Historicism and Ecocritical Approach.
	SENG-360 SEC -2 Creative Writing-II	At the end of the course, the students will be able to; understand and apply the techniques of feature articles. know and apply the techniques of travel writing. know and apply the processes of revision of Creative Writing. know the challenges and scope in the field of Creative Writing.
	GENG-003 GE Literary Musings-III	After successfully completing the course, students will have been introduced to contemporary fiction writing. will be familiar with the literature that is on the line between literary fiction and popular fiction. will be familiarized with the myth-centric, social, and popular fiction. will have been encouraged to appreciate different trends in fiction writing.
	GENG-004 Literary Musings-IV	After successfully completing the course, students will have been introduced to the genre of Science fiction. will be able to appreciate Science fiction. will be able to appreciate the special uses of language in literary texts.

will have enhanced creativity and imagination.

DEPARTMENT OF GEOGRAPHY

Class	Course	Outcomes (Student will be able to)
FYBA	GG.111	<ul style="list-style-type: none"> • To understand the work of external and internal forces. • To understand the formation of different types of rocks and minerals. • To understand the origin of ocean and continents.
	GG.112	<ul style="list-style-type: none"> • To introduce the temporal changes in landforms. • To understand the geomorphologic process in detail. • To understand the role of geomorphic agents in sculpting of the earth surface
	GG.121	<ul style="list-style-type: none"> • To understand the climatic phenomena. • To understand the basic knowledge of Atmosphere, Weather & Climate. • Enhance the ability of student to understand the atmospheric disasters.
	GG.122	<ul style="list-style-type: none"> • To understand the terminology of the Tsunami disaster. • To know the importance of properties oceans. • To know the importance of movement oceans
FYB Sc.	GG. 111	<ul style="list-style-type: none"> • To understand the work of external and internal forces. • To understand the formation of different types of rocks and minerals. • To understand the origin of ocean and continents.
	GG. 112	<ul style="list-style-type: none"> • To introduce the temporal changes in landforms. • To understand the geomorphologic process in detail. • To understand the role of geomorphic agents in sculpturing of the earth surface.
	GG. 113	<ul style="list-style-type: none"> • To represent the data using statistical diagrams. • To enhance the map interpretation skill of the students. • To make the student able to prepare distributional maps.
	GG. 121	<ul style="list-style-type: none"> • To understand the climatic phenomenon • To understand the basic knowledge of Atmosphere, Weather & Climate. • Enhance the ability of student to understand the atmospheric disasters.
	GG. 122	<ul style="list-style-type: none"> • To understand the terminology of the Tsunami disaster. • To know the importance of properties oceans. • To know the importance of movement oceans.
	GG. 123	<ul style="list-style-type: none"> • To understand map making process using basic projections. • To understand the methods of construction of various projection. • To identify choice of projection
S.Y.B.A.	Geog.231 (DSE)	<ul style="list-style-type: none"> • To integrate the people on religion and language. • To maintain the unity in diversity.

	Geog.232 (DSE)	<ul style="list-style-type: none"> • Students will get idea to read and interpret the map.
		<ul style="list-style-type: none"> • Students will make map with scale and projection.
	Geog.230 (SEC)	<ul style="list-style-type: none"> • Student will familiar with remote sensing data and there characteristics
		<ul style="list-style-type: none"> • Student get knowledge how to use remote sensing data in different field of Geography.
	Geog. 241 (DSE)	<ul style="list-style-type: none"> • Student will familiar with prospective of Maharashtra.
		<ul style="list-style-type: none"> • Student enhance his knowledge for doing research on Maharashtra's problem and futuristic development plan for Maharashtra
	Geog. 242 (DSE)	<ul style="list-style-type: none"> • Student will use graphs, maps and statistical techniques in geographical research.
		<ul style="list-style-type: none"> • Student will identify and interpret graphical and diagrammatic distribution of data.
	Geog.240 (SEC)	<ul style="list-style-type: none"> • It helps in preparation of thematic maps.
		<ul style="list-style-type: none"> • It is helpful in Data analysis, management and map preparation.
S.Y. B.Sc.	Geog.231 (DSC)	<ul style="list-style-type: none"> • To integrate the people on religion and language.
		<ul style="list-style-type: none"> • To maintain the unity and diversity.
	Geog.232 (DSC)	<ul style="list-style-type: none"> • The study will be beneficial to the aspirants of competitive exams.
		<ul style="list-style-type: none"> • To understand the basic status of our country.
		<ul style="list-style-type: none"> • To understand the climatic variation.
	Geog. 233(DSC)	<ul style="list-style-type: none"> • To enhance map reading skill.
		<ul style="list-style-type: none"> • It will beneficial to the students.
		<ul style="list-style-type: none"> • To understand the different elements of map.
	Geog.230 (SEC)	<ul style="list-style-type: none"> • To make students familiar with remote sensing techniques.
		<ul style="list-style-type: none"> • To know the application and use of remote sensing data in various fields.
	Geog. 241(DSC)	<ul style="list-style-type: none"> • To study the economic activities of man.
		<ul style="list-style-type: none"> • To study the agricultural and industrial development.
		<ul style="list-style-type: none"> • To study the theories of industrial location and economic development.
	Geog.242 (DSC)	<ul style="list-style-type: none"> • To study the economic activities of man.
		<ul style="list-style-type: none"> • To study the agricultural and industrial development of our country.
		<ul style="list-style-type: none"> • To study the theories of industrial location and economic development.
	Geog. 243 (DSC)	<ul style="list-style-type: none"> • To familiar students about surveying techniques.
		<ul style="list-style-type: none"> • To enhance the ability of students in drawing profiles and layouts.
		<ul style="list-style-type: none"> • To develop the skill of field survey.
	Geog.240(SEC)	<ul style="list-style-type: none"> • It helps in preparation of thematic maps.
		<ul style="list-style-type: none"> • It is helpful in Data analysis, management and map preparation.
TYBA	GEOG.351- Geography of India	<ul style="list-style-type: none"> • Student will know the geographic location of country
		<ul style="list-style-type: none"> • Understand the relationship between available resources and industry
		<ul style="list-style-type: none"> • Study problems and prospect of Indian agriculture

	GEOG.352- Environmental Geography	<ul style="list-style-type: none"> To understand the dynamic nature of environment
		<ul style="list-style-type: none"> To understand structure and functioning of ecosystem
		<ul style="list-style-type: none"> To understand the causes of environmental problems
		<ul style="list-style-type: none"> To know the role of National Environmental Policy
	GEOG.353- Interpretation of SOI Topographical and IMD weather maps	<ul style="list-style-type: none"> To acquire interpretation skill
		<ul style="list-style-type: none"> Understand the Indian daily weather maps
		<ul style="list-style-type: none"> To understand the mechanism of weather instruments
	GEOG.354- Practical in Remote sensing	<ul style="list-style-type: none"> To understand the basics of aerial photography
		<ul style="list-style-type: none"> To understand the interpretation of aerial photography
		<ul style="list-style-type: none"> To understand types of satellite images and its application
		<ul style="list-style-type: none"> Develop the skill of interpretation.
	GEOG.350- Morphometric Analysis	<ul style="list-style-type: none"> To understand the hierarchical ordering of drainage
		<ul style="list-style-type: none"> To understand the areal aspects of basin
		<ul style="list-style-type: none"> To understand relief aspects of basin
		<ul style="list-style-type: none"> Learn to draw the profiles
	GEOG.001- Urban Settlement Geography	<ul style="list-style-type: none"> To understand types of urban settlements
		<ul style="list-style-type: none"> To understand the functions of settlement.
		<ul style="list-style-type: none"> To understand the systematic growth of settlement.
		<ul style="list-style-type: none"> To understand the morphological characteristics of Indian cities
	GEOG 002: Economic Geography-I	<ul style="list-style-type: none"> To understand the dynamic nature of economic geography.
		<ul style="list-style-type: none"> To acquire advanced knowledge and understanding of scientific principles of the economic activities.
		<ul style="list-style-type: none"> To understand theories related to agriculture location.
		<ul style="list-style-type: none"> To understand the role of agriculture in Indian economy.
	GEOG.361- Geography of Tourism	<ul style="list-style-type: none"> To understand recent development in tourism
		<ul style="list-style-type: none"> To understand the bases of tourism
		<ul style="list-style-type: none"> To understand infrastructural facilities to develop a tourist place
		<ul style="list-style-type: none"> To understand sustainable development in tourism industry
	GEOG.362 Surveying	<ul style="list-style-type: none"> To understand the procedure of surveying
		<ul style="list-style-type: none"> To understand various purpose of surveying.

		<ul style="list-style-type: none"> • Students understand the use of surveying instruments
	GEOG.363- Practical on Statistical methods in Geography	<ul style="list-style-type: none"> • Understand to prepare frequency table
		<ul style="list-style-type: none"> • Understand the use of statistical methods
		<ul style="list-style-type: none"> • To understand in research calculation of deviations
		<ul style="list-style-type: none"> • Understand the processes of testing of hypothesis
	GEOG.364- Village Survey and Project based on field work	<ul style="list-style-type: none"> • Students understand the nature, importance of data.
		<ul style="list-style-type: none"> • To understand the importance of village survey.
		<ul style="list-style-type: none"> • Students understand analysis of data.
	GEOG.360- Geography of Resource	<ul style="list-style-type: none"> • Understand the optimum use of varies resources
		<ul style="list-style-type: none"> • Understand the need of resources
		<ul style="list-style-type: none"> • Understand problems of resource utilization
		<ul style="list-style-type: none"> • Understand the need of management of resources
	GEOG.003- Rural Settlement Geography	<ul style="list-style-type: none"> • Understand the Cultural integrity of man in settlement.
		<ul style="list-style-type: none"> • Understand the functions of rural settlement.
		<ul style="list-style-type: none"> • Understand the systematic growth of settlement.
		<ul style="list-style-type: none"> • Understand the building material used in different parts in India.
	GEOG.004- Economic Geography II	<ul style="list-style-type: none"> • Understand the economic development model
		<ul style="list-style-type: none"> • To find out comparative transport cost
		<ul style="list-style-type: none"> • Understand the concept of rural development
		<ul style="list-style-type: none"> • Understand the index of rural development
TYBSc	GG-351: Rural Settlement Geography	<ul style="list-style-type: none"> • Understand nature of rural settlement.
		<ul style="list-style-type: none"> • Understand various functions and pattern of settlement.
		<ul style="list-style-type: none"> • Understand the systematic growth of settlement.
		<ul style="list-style-type: none"> • Understand house types in different parts of the India.
	GG-352: Geographical Thoughts	<ul style="list-style-type: none"> • Understand the thought of Greek, Roman and Indian philosopher.
		<ul style="list-style-type: none"> • Understand contribution of different thinkers.
		<ul style="list-style-type: none"> • Understand of current research within the breadth of geography, as well as more in depth knowledge of research in their specialty areas.

		<ul style="list-style-type: none"> • Understand the process of regionalization
	GG-353: Remote Sensing	<ul style="list-style-type: none"> • Understand the principles of Remote sensing techniques.
		<ul style="list-style-type: none"> • To analyze the energy interactions in the atmosphere and earth surface features.
		<ul style="list-style-type: none"> • To identify the earth surface features from satellite images.
		<ul style="list-style-type: none"> • Understand the properties and use of different satellite data.
	GG-354: Soil Geography	<ul style="list-style-type: none"> • Understand importance of soil conservation.
		<ul style="list-style-type: none"> • Understand excess and deficiency of physical and chemical parameters.
		<ul style="list-style-type: none"> • Know the role of climatic factor in soil formation.
		<ul style="list-style-type: none"> • Understand the causes and measures of soil degradation.
	GG-355: Global Positioning System	<ul style="list-style-type: none"> • Understand the functions of satellite.
		<ul style="list-style-type: none"> • Know the different segments of GPS.
		<ul style="list-style-type: none"> • Get the accurate location of a place.
		<ul style="list-style-type: none"> • Understand the advance techniques of GPS.
	GG-356: Water Resource Management	<ul style="list-style-type: none"> • Understand the concept hydrological cycle.
		<ul style="list-style-type: none"> • Understand problems of water resources.
		<ul style="list-style-type: none"> • Know the importance of water conservation
		<ul style="list-style-type: none"> • Understand the remote sensing techniques in water resource management and planning.
	GG-357: Practical in Soil Analysis	<ul style="list-style-type: none"> • To understand textural properties of soil.
		<ul style="list-style-type: none"> • To understand the importance of physical and chemical properties of soil
		<ul style="list-style-type: none"> • To suggest the suitable crop to maintain fertility of soil.
	GG-358: Practical in Aerial Photographs & Satellite Imageries	<ul style="list-style-type: none"> • Understand the uses of Aerial photography
		<ul style="list-style-type: none"> • Understand skill of aerial photograph interpretation.
		<ul style="list-style-type: none"> • Understand geometry calculations from aerial photograph.
		<ul style="list-style-type: none"> • Know the identification of features from satellite image.
	GG-359: Practical on Statistical Methods in Geography	<ul style="list-style-type: none"> • Understand methods of representation of data.
		<ul style="list-style-type: none"> • Understand calculation of mean, mode and median.
		<ul style="list-style-type: none"> • Understand the correlation between variable will help student in research work.

		<ul style="list-style-type: none"> • Understand methods of testing of hypothesis.
	GG-350: Fundamentals of Tourism	<ul style="list-style-type: none"> • Understand role of geography in tourism.
		<ul style="list-style-type: none"> • Understand bases of classification of tourism.
		<ul style="list-style-type: none"> • Know the status of tourism in India.
		<ul style="list-style-type: none"> • Understand concept of sustainable tourism.
	GG-361: Urban Settlement Geography	<ul style="list-style-type: none"> • Understand role of geography in tourism.
		<ul style="list-style-type: none"> • Understand bases of classification of tourism.
		<ul style="list-style-type: none"> • Know the status of tourism in India.
		<ul style="list-style-type: none"> • Understand concept of sustainable tourism.
	GG-362: Geography of Resource	<ul style="list-style-type: none"> • Understand the need of optimum use of varies resources
		<ul style="list-style-type: none"> • To understand availability and scarcity of resources.
		<ul style="list-style-type: none"> • Understand the concept of conservations of management of resources.
		<ul style="list-style-type: none"> • Understand national policy on natural resources.
	GG-363: Population Geography	<ul style="list-style-type: none"> • It will help in human resource planning.
		<ul style="list-style-type: none"> • Understand the sources of population.
		<ul style="list-style-type: none"> • Understand the characteristics of population.
		<ul style="list-style-type: none"> • To understand demographic structure of our country.
	GG-364: Agriculture Geography	<ul style="list-style-type: none"> • To understand the fundamentals of agricultural geography.
		<ul style="list-style-type: none"> • To understand the physical and other determinants of agriculture.
		<ul style="list-style-type: none"> • To understand familiar about agriculture system of world.
		<ul style="list-style-type: none"> • To understand agriculture landuse models of Von Thunen.
	GG-365: Disaster Management	<ul style="list-style-type: none"> • To create awareness among students about disasters.
		<ul style="list-style-type: none"> • Understand impacts of disasters.
		<ul style="list-style-type: none"> • Understand manifesting the mitigation.
		<ul style="list-style-type: none"> • Understand role of government agencies.
	GG-366: Geography of Environmental Issues	<ul style="list-style-type: none"> • Understand the concept of environment.
		<ul style="list-style-type: none"> • Understand the causes and effects of some global and regional issues.
		<ul style="list-style-type: none"> • Understand the various conservational movements in India.

		<ul style="list-style-type: none"> • Understand the status of various management programs in India.
	GG-367: Morphometric Analysis	<ul style="list-style-type: none"> • Understand description and comparison of different forms of drainage basin.
		<ul style="list-style-type: none"> • Understand geometry of basin.
		<ul style="list-style-type: none"> • Understand the importance of relief aspect.
		<ul style="list-style-type: none"> • Understand the idea of the basin relief.
	GG-368: Interpretation of SOI Topographical Map	<ul style="list-style-type: none"> • Understand the basis of topographical maps.
		<ul style="list-style-type: none"> • Understand the methods of interpretation of topographical maps.
		<ul style="list-style-type: none"> • Understand the Indian daily weather maps and its uses.
		<ul style="list-style-type: none"> • Understand the functions of weather instruments.
	GG-369: Village Survey and Project Report	<ul style="list-style-type: none"> • Students understand the nature, importance of data.
		<ul style="list-style-type: none"> • Understand the importance of village survey.
		<ul style="list-style-type: none"> • Students understand analysis of data.
		<ul style="list-style-type: none"> • Understand the process of report writing
	GG-360: Thematic Map	<ul style="list-style-type: none"> • Learn about the types of maps.
		<ul style="list-style-type: none"> • Develop the map skill of students.
		<ul style="list-style-type: none"> • Know the modern technique of analyze of maps.
M.A. /M. Sc. I	GG.101	<ul style="list-style-type: none"> • Introduce the temporal changes in landforms.
		<ul style="list-style-type: none"> • Understand the geomorphologic process in detail.
		<ul style="list-style-type: none"> • Understand the role of geomorphic agents in sculpting of the earth surface
	GG.102	<ul style="list-style-type: none"> • Familiar with weather phenomena, dynamics of global climates and compilation.
		<ul style="list-style-type: none"> • Understand the basic climatic information and their application.
		<ul style="list-style-type: none"> • Understand the atmospheric disasters.
	GG.103	<ul style="list-style-type: none"> • Learn about the relief and slope analysis.
		<ul style="list-style-type: none"> • Understand the drainage morphometric analysis and its interpretation.
		<ul style="list-style-type: none"> • Study application of geomorphic techniques in terrain analysis.
	GG.104	<ul style="list-style-type: none"> • Get the knowledge of weather forecasting using meteorological satellite images
		<ul style="list-style-type: none"> • Understand the weather reports and its interpretation.
		<ul style="list-style-type: none"> • Understand the methods of representation of climatic data.
	GG.105	<ul style="list-style-type: none"> • Learn and understand the techniques of GIS.
		<ul style="list-style-type: none"> • Use GIS techniques in various fields and develop the skill human resources.
		<ul style="list-style-type: none"> • Learn the modern trends of GIS.
	GG. 106 (A)	<ul style="list-style-type: none"> • Students will learn origin of issues of global environmental problems.

		<ul style="list-style-type: none"> To find out the solutions on environmental problems.
		<ul style="list-style-type: none"> To understand the role of human being to environmental management.
	GG. 106 (B)	<ul style="list-style-type: none"> To make effective representation of statistical data using GIS software.
		<ul style="list-style-type: none"> To represent the data using statistical diagrams.
		<ul style="list-style-type: none"> To enhance the map interpretation skill of the students.
		<ul style="list-style-type: none"> To make the student able to prepare distributional maps.
	GG. 201	<ul style="list-style-type: none"> Acquired with the nature and man environment relationship.
		<ul style="list-style-type: none"> Aware of the human geography to adopt and modify the environment under its varied conditions.
		<ul style="list-style-type: none"> Familiar with the conceptual from human Geography
	GG.202	<ul style="list-style-type: none"> Understand the processes driving spatial economic differences in a global era, and the roles of key factors.
		<ul style="list-style-type: none"> To learn the role of resources in economic development.
		<ul style="list-style-type: none"> To understand the causes of economic disparities.
	GG.203	<ul style="list-style-type: none"> These techniques will be helpful to the students in research.
		<ul style="list-style-type: none"> To find out inferences using various techniques.
	GG. 204	<ul style="list-style-type: none"> Cartographic techniques will helpful to representations of thematic maps.
		<ul style="list-style-type: none"> It increased speed and accuracy of map making.
		<ul style="list-style-type: none"> The student will get map making skill.
	GG. 205 (A)	<ul style="list-style-type: none"> To be introduced include the history and development of navigation and GPS.
		<ul style="list-style-type: none"> To know the applications of GPS in various fields.
	GG. 205 (B)	<ul style="list-style-type: none"> To learn methods of Conservation of Plant and Animal.
		<ul style="list-style-type: none"> The students know the place of biogeography in the world of knowledge.
		<ul style="list-style-type: none"> To study the wildlife acts in India.
	GG. 206 (A)	<ul style="list-style-type: none"> To study Causes and depletion of water resources
		<ul style="list-style-type: none"> To know various methods of recharging of water Resources.
		<ul style="list-style-type: none"> To find out the sustainable solutions for water crises.
	GG. 206 (B)	<ul style="list-style-type: none"> To get the knowledge about causes and consequences diseases.
		<ul style="list-style-type: none"> To create awareness among the students about health.
		<ul style="list-style-type: none"> To understand the world health organization.
M.A/M. Sc. II	GG-301	<ul style="list-style-type: none"> Learn about the optimum use of resources.
		<ul style="list-style-type: none"> Understand the importance of reuse, reproduce and recycle of resources.
		<ul style="list-style-type: none"> Aware the need of conservation of resources.
	GG-302	<ul style="list-style-type: none"> Learn the advanced statistical approaches.
		<ul style="list-style-type: none"> Find out the inferences while doing research.
		<ul style="list-style-type: none"> Explain the statistical data more effectively.
	GG-303	<ul style="list-style-type: none"> Calculate the height of an object.

		<ul style="list-style-type: none"> • Make accurate survey of any region.
		<ul style="list-style-type: none"> • Learn new advance mapping techniques
	GG-304	<ul style="list-style-type: none"> • Enhance interpretative skills of the students.
		<ul style="list-style-type: none"> • Know the physical as well as cultural features.
		<ul style="list-style-type: none"> • Understand the overall scenario of the region.
	GG-305	<ul style="list-style-type: none"> • Use the satellite data in various fields.
		<ul style="list-style-type: none"> • It is an important tool in land resource exploration and disaster management.
		<ul style="list-style-type: none"> • Enhance the visual interpretation skill.
	GG-306 (A)	<ul style="list-style-type: none"> • Know the importance of planning regions.
		<ul style="list-style-type: none"> • Understand the hierarchy of planning regions.
		<ul style="list-style-type: none"> • Explain the concept of regional planning.
	GG-306 (B)	<ul style="list-style-type: none"> • Know the environmental ethics.
		<ul style="list-style-type: none"> • Understand about conservation of resources.
		<ul style="list-style-type: none"> • Know the role of individual in sustainable development.
	GG-401	<ul style="list-style-type: none"> • Understand the mapping processes.
		<ul style="list-style-type: none"> • Enhance the map making skill of students.
		<ul style="list-style-type: none"> • Know the applications of Geoinformatics in different fields.
	GG-402	<ul style="list-style-type: none"> • Develop the research ability and get solution of various problems in geography.
		<ul style="list-style-type: none"> • Learn how to design the research problem.
		<ul style="list-style-type: none"> • Write project report.
	GG-403	<ul style="list-style-type: none"> • Examine various types of images, intensity transformations and spatial filtering.
		<ul style="list-style-type: none"> • Evaluate the methodologies for image segmentation, restoration etc.
		<ul style="list-style-type: none"> • Prepare accurate map of any region.
	GG-404	<ul style="list-style-type: none"> • Find out the solutions of the problem.
		<ul style="list-style-type: none"> • Develop the report writing skill of the student.
		<ul style="list-style-type: none"> • Understand the various steps of research projects.
	GG-405 (A)	<ul style="list-style-type: none"> • Aware the students about concept of disaster.
		<ul style="list-style-type: none"> • Study the origin of disasters.
		<ul style="list-style-type: none"> • Understand the role of geographer in Disaster Management.
	GG-405 (B)	<ul style="list-style-type: none"> • Understand the basics of geography of tourism.
		<ul style="list-style-type: none"> • Getting job various fields of tourism.
		<ul style="list-style-type: none"> • Start their own consultancy or tour and travel agency.
	GG-406(A)	<ul style="list-style-type: none"> • Study recent trends in geographical thoughts.
		<ul style="list-style-type: none"> • Learn the historical background of various geographical thoughts.
		<ul style="list-style-type: none"> • Understand the stages of development of geographical thoughts according to time.
	Gg-406 (B)	<ul style="list-style-type: none"> • Learn concept of watershed management and planning.

- Understand the various techniques of watershed management and planning.
- Learn the use of RS and GIS in watershed management

DEPARTMENT OF HINDI

Class	Course	Outcomes (Student will be able to)
FYBA	HIN-111	<ul style="list-style-type: none"> • छात्र हिंदी साहित्य के प्रति रुचि बढ़ाना तथा छात्रों को साहित्य की विविध विधाओं एवं इतिहास काल से परिचित होंगे। • छात्रों को हिंदी के प्रतिनिधि गद्यकारों एवं कवियों से परिचय होगा। • छात्रों में हिंदी भाषा के श्रवण, पठन एवं लेखन की क्षमता विकसित होगी। • छात्रों की विचार क्षमता तथा कल्पनाशीलता को बढ़ावा मिलेगा।
	HIN-112	<ul style="list-style-type: none"> • निबंध, कहानी, रेखाचित्र, एकांकी, रिपोर्टाज, संस्मरण, व्यंग्य आदि विधाओं के माध्यम से छात्रों का भावात्मक विकास होगा। • छात्रों में नैतिक मूल्य, राष्ट्रीय मूल्य एवं उत्तरदायित्व के प्रति आस्था निर्माण होगी। • छात्रों में राष्ट्र के प्रति प्रेम, राष्ट्रीय ऐक्य की स्थापना एवं सामाजिक प्रतिबद्धता निर्माण होगी। • राजभाषा हिंदी का प्रचार-प्रसार होगा।
	HIN-121	<ul style="list-style-type: none"> • छात्रों की हिंदी भाषा के प्रति रुचि बढ़ेगी। • छात्र हिंदी भाषा के विविध आयामों से परिचित होंगे। • छात्र हिंदी के दैनिक व्यवहार से परिचित होंगे। • छात्रों में हिंदी भाषा के श्रवण, पठन एवं लेखन की क्षमता विकसित होगी। • छात्रों को हिंदी के मानक लेखन तथा लिपि प्रयोग का ज्ञान मिलेगा।
	HIN-122	<ul style="list-style-type: none"> • छात्रों में हिंदी लेखन के प्रति रुचि निर्माण होगी। • हिंदी के व्यावहारिक उपयोगिता का ज्ञान मिलेगा। • छात्र प्रस्तुत पाठ्यक्रम के द्वारा रोजगार की संभावनाओं से अवगत हो पाएंगे। • छात्रों की विचार क्षमता तथा कल्पनाशीलता को बढ़ावा मिलेगा।
FYB Com	HIN-111	<ul style="list-style-type: none"> • छात्र साहित्य की विभिन्न विधाओं से परिचित होंगे। • छात्रों में जीवन मूल्यों के प्रति आस्था निर्माण होगा। • छात्रों को पारिभाषिक शब्दावली से परिचय होगा। • छात्र हिंदी के दैनिक व्यवहार से परिचित हो सकेंगे। • छात्रों में हिंदी भाषा के श्रवण, पठन एवं लेखन की क्षमता विकसित होगी।
	HIN-112	<ul style="list-style-type: none"> • छात्रों को जीवनी विधा से परिचय होगा। • छात्रों में व्यावसायिक तथा साहित्यिक मूल्यों की समझ बढ़ेगी। • छात्र विज्ञापन तथा पत्र लेखन शैली तथा कौशल से परिचित हो सकेंगे। • छात्रों को हिंदी के दैनिक व्यवहार से परिचय होगा। • छात्रों में हिंदी भाषा के श्रवण, पठन एवं लेखन की क्षमता विकसित होगी।

SYBA	HIN-231	<ul style="list-style-type: none"> • छात्र आधुनिक हिंदी कथा साहित्य और उसकी प्रवृत्तियों से परिचित होंगे। • छात्र उपन्यास के तात्विक स्वरूप का ज्ञान प्राप्त करेंगे। • छात्रों में सामाजिक मूल्यों का बीजवपन होगा।
	HIN-232	<ul style="list-style-type: none"> • छात्र आधुनिक हिंदी काव्य और उसके स्वरूप से परिचित होंगे। • छात्र खंडकाव्य के तात्विक स्वरूप का ज्ञान प्राप्त करेंगे। • छात्रों में भारतीय संस्कृति की समझ एवं समीक्षात्मक दृष्टि विकसित होगी।
	HIN-230	<ul style="list-style-type: none"> • छात्र विज्ञापन के महत्त्व को जानेंगे। • छात्र विज्ञापन की उपादेयता को जान पाएंगे। • छात्रों में विज्ञापन लेखन की क्षमता विकसित होगी।
	HIN-241	<ul style="list-style-type: none"> • छात्र आधुनिक हिंदी नाटक साहित्य एवं उसकी प्रवृत्तियों से परिचित हो पाएंगे। • छात्रों को नाटक के तात्विक स्वरूप का ज्ञान होगा। • छात्रों में सामाजिक मूल्यों का बीजवपन होगा।
	HIN-242	<ul style="list-style-type: none"> • छात्र लघुकथा साहित्य एवं प्रवृत्तियों से परिचित होंगे। • छात्रों को लघुकथा के तात्विक स्वरूप का ज्ञान मिलेगा। • छात्रों में सामाजिक मूल्यों का बीजवपन होगा।
	HIN-240	<ul style="list-style-type: none"> • छात्र पटकथा के महत्त्व से परिचित होंगे। • छात्र पटकथा की उपादेयता को जानेंगे। • छात्रों में पटकथा लेखन की क्षमता विकसित हो सकेगी।
TYBA	HIN-351	<ol style="list-style-type: none"> 1. Student will become familiar with the period division and nomenclature of Hindi literature . 2. Student will get the knowledge of major situations, trends and major compositions of ancient literature. 3. Student will be familiar with the major situations , trends and works of major creators of devotional literature. 4. Student will be aware of the main circumstances, trends and creations of major creators of Retikalin literature. 5. The study of presented course will prove useful to the students from the point of view of pre-preparation for SET-NET exam and competitive exam .
	HIN-352	<ol style="list-style-type: none"> 1. Interest will be created towards the language. 2. Will be able to get acquainted with the linguistic principles of the language, 3. Knowledge of the theoretical side of the language and various forms of the language will increase the skills related to the use of the language . 4. Student will be able to know the history of propagation of Hindi.
	HIN-353	<ol style="list-style-type: none"> 1. Student will be introduced to the general introduction of prose distinctions of literature. 2. Student will be made aware of the elemental nature of prose. 3. Student will be introduced to the knowledge of vocabulary.(Word of power)

		4. The ability of criticism will be developed in the students.
		5. The fundamental understanding prose literature will be developed in the students .
	HIN-354	1. Student will be familiar with modern hindi prose and its trends.
		2. There will be knowledge of the trends of the sketch and its elemental nature.
		3. Will be able to connect with the writing skills of the author through the prescribed sketches.
		4. Faith and critical vision towards folk culture will be developed.
	HIN-350	1. Learn the importance of creative writing.
		2. There will be an introduction to the forms of creative writing.
		3. Understand the technique of creative writing.
		4. The ability of creative writing will develop.
	HIN-001	1. Student will be introduced to the essence of the story.
		2. Student will be made aware of the story type and development journey.
		3. Student will be made aware of various problems of the society.
		4. Sense of humanity and vision of value addition will be developed in the students.
		5. The ability of story writing skills will be developed in the students.
	HIN-002	1. Will be familiar with hindi satirical literature.
		2. Will understand the difference between humor and sarcasm.
		3. Will be familiar with the euphemistic language of satire.
		4. Will be aware of Hindi satirical writing tradition.
	HIN-361	1. Students will get knowledge of the main features of Bhartendu period poetry.
		2. Students will be aware of the main features of Dwivedi's poetry.
		3. Students will get an introduction to literary promises.
		4. Students will be introduced to the literary contribution of modern prose writers.
		5. students will be familiar with the prose works of the modern period.
		6. The study of the presented course will prove useful to the students from the point of view of pre-preparation for SET-NET exam and competitive exam .
SY.BA	HIN-362	1. Interest will be created towards the language.
		2. Will be able to get acquainted with the theoretical side of linguistics .
		3. knowledge of various forms of linguistics will increase the skills related to the use of language.
SY.BA	HIN-363	1. Students will be introduced to various genres of poetry.
		2. Students will be made aware of the essential nature and characteristics of poetry.
		3. Students will be introduced to chhand, Ras, Alankar.
		4. The ability to receive poetry will be developed in the students.

	HIN-364	1. Students will be familiar with the personality and work of a particular litterateur. 2. By studying the works of a particular writer, students will develop an understanding of social values and human values. 3. Studying the works of a particular writer will develop interest in the genre of songs and ghazals.
	HIN-360	1. Will know the importance of communication media . 2. There will be an introduction to the forms of communication media . 3. Understand the technique of writing for the forms of communication media . 4. The ability to write for the medium of communication will develop.
	HIN-003	1. Students will be introduced to modern poetry and its trends. 2. Students will be made aware of the essential nature of prabandkavya. 3. Students will be made aware of the dignity of importance of women in indian culture. 4. Values like humanity and patriotism will be developed in the students. 5. Students will be introduced to the philosophy of Gandhiji. 6. The ability to receive poetry will be developed in the students.
	HIN-004	1. Will be able to understand the social, cultural, political, literary, religious conditions of the era of bound monogamists. 2. A sense of social harmony will be created in the students. 3. Moral values will develop in the students. 4. Students will develop sensitivity towards literature , art and culture.
MA I	HIN-101	<ul style="list-style-type: none"> • छात्र आधुनिक हिंदी कथा साहित्य एवं उसकी प्रवृत्तियों से परिचित हो पाएंगे। • उपन्यास और नाटक की प्रवृत्तियाँ एवं उनके तात्विक स्वरूप का ज्ञान मिलेगा। • भारतीय संस्कृति के प्रति आस्था एवं समीक्षात्मक दृष्टि विकसित होगी। • छात्रों में सामाजिक मूल्यों का बीजवपन संभव होगा।
	HIN-102	<ul style="list-style-type: none"> • छात्रों की हिंदी साहित्य के प्रति रुचि बढ़ेगी। • छात्रों को हिंदी साहित्य के इतिहास से परिचय होगा। • छात्र हिंदी के मध्यकालीन कवियों तथा उनके साहित्य से परिचित होंगे। • छात्रों को मध्यकालीन हिंदी कवियों के काव्य विषय, भाषा - शैली, तथा कविता में निहित मानवीय, सामाजिक एवं सांस्कृतिक मूल्यों का ज्ञान मिलेगा।
	HIN-103	<ul style="list-style-type: none"> • छात्रों की हिंदी साहित्य तथा भाषा के प्रति रुचि बढ़ेगी। • छात्र भारतीय काव्यशास्त्र से परिचित होंगे। • छात्रों को भारतीय काव्यशास्त्र की परंपरा तथा विशेषताओं से परिचय होगा। • छात्रों को भारतीय आलोचना की परंपरा और आलोचनामूल्यों की जानकारी मिलेगी। • छात्रों की विचार क्षमता तथा कल्पनाशीलता में वृद्धि होगी।

	HIN-104	<ul style="list-style-type: none"> • छात्रों में अनुवाद की क्षमता विकसित होगी। • अनुवाद के सांस्कृतिक महत्त्व का परिचय होगा। • अनुदित साहित्य का महत्त्व समझेगा। • व्याकरण के महत्त्व को समझेगा। • रोजगारमूलकसंभावनाओं से अवगत हो पाएंगे।
	HIN-105	<ul style="list-style-type: none"> • छात्रों को आधुनिक हिंदी कथा साहित्य एवं उसकी प्रवृत्तियों से परिचय होगा। • उपन्यास और नाटक की प्रवृत्तियाँ एवं उनके तात्विक स्वरूपका ज्ञान मिलेगा। • छात्रों में विमर्शमूलक साहित्य को लेकर समीक्षात्मक दृष्टि विकसित होगी। • छात्रमानवीय जीवन मूल्यों से परिचित होंगे।
	HIN-201	<ul style="list-style-type: none"> • छात्र आधुनिक हिंदी कहानी विधा और निबंध विधासे परिचित होंगे। • छात्रों को आधुनिक हिंदी कहानी और निबंध विधाके विकासक्रम की जानकारी प्राप्त होगी। • निर्धारित विधाओं के माध्यम से भारतीयसंस्कृति एवं सामाजिक मूल्यों का परिचय मिलेगा। • छात्रों की कल्पनाशीलता के साथ-साथ साहित्य की समझ बढ़ेगी।
	HIN-202	<ul style="list-style-type: none"> • छात्र हिंदी की मध्यकालीन साहित्य परंपरा से अवगत हो पाएंगे। • छात्रों को हिंदी के प्रतिनिधि मध्यकालीन कवियों का परिचय होगा। • हिंदी के प्रतिनिधि मध्यकालीन कवियों की काव्यगत विशेषताओं से परिचय होगा। • छात्रों को मध्यकालीन हिंदी कवियों की कविता में निहित मानवीय, सामाजिक एवं सांस्कृतिक मूल्यों का ज्ञान प्राप्त होगा।
	HIN-203	<ul style="list-style-type: none"> • छात्रों को पाश्चात्य काव्यशास्त्र से परिचय होगा। • छात्र पाश्चात्य काव्यशास्त्र की परंपरा तथा विशेषताओं को जान पाएंगे। • छात्रों को पाश्चात्य काव्यशास्त्र की आलोचना की परंपरा और मूल्यों की जानकारी मिलेगी। • छात्रों की विचार क्षमता तथा कल्पनाशीलता में वृद्धि होगी।
	HIN-204	<ul style="list-style-type: none"> • छात्रों को हिंदी व्याकरण से परिचय होगा। • छात्रों में शुद्ध एवं मानक लेखन कौशल विकसित होगा। • छात्र मुद्रित शोधन के कर्तव्य से परिचित होंगे। • छात्र रोजगारमूलक संभावनाओं से अवगत होंगे।
	HIN-205	<ul style="list-style-type: none"> • छात्रों को आधुनिक हिंदी कथा साहित्य एवं उसकी प्रवृत्तियों से परिचय होगा। • आधुनिक काल के उपन्यास और नाटक की प्रवृत्तियाँ एवं उनके तात्विक स्वरूपका ज्ञान मिलेगा। • छात्रों में स्त्री संवेदना के विमर्शमूलक साहित्य को लेकर समीक्षात्मक दृष्टि विकसित होगी। • छात्रमानवीय जीवन मूल्यों से परिचित होंगे।
MA II	HIN-301	<ul style="list-style-type: none"> • छात्र आधुनिक हिंदी काव्य एवं उसकी प्रवृत्तियों से परिचित होंगे। • छात्रों को महाकाव्य और खंडकाव्य की प्रवृत्तियाँ एवं उनके तात्विक स्वरूप का ज्ञान होगा। • छात्रों में भारतीय संस्कृति और समाज के प्रति आस्था एवं समीक्षात्मक दृष्टि विकसित होगी।

	HIN-302	<ul style="list-style-type: none"> भाषा के प्रति छात्रों की रुचि में बढावा होगा। छात्र भाषा विज्ञान के इतिहास और सिद्धांत से परिचित होंगे। छात्र भाषा के भिन्न-भिन्न शाखाओं से परिचित होंगे।
	HIN-303	<ul style="list-style-type: none"> छात्र हिंदी साहित्य के इतिहास से परिचित होंगे। आदिकाल, भक्तिकाल और रीतिकाल की प्रमुख साहित्यिक प्रवृत्तियों की जानकारी मिलेगी। हिंदी के आदिकाल और मध्यकाल के कवियों के व्यक्तित्व और रचनाओं से परिचित हो पाएंगे।
	HIN-304	<ul style="list-style-type: none"> छात्र हिंदी पत्रकारिता के इतिहास और विकासयात्रा को समझेंगे। छात्र आधुनिक काल में हिंदी पत्रकारिता के अध्ययन से परिचित होंगे। छात्र हिंदी पत्रकारिता की व्यापकता को जानेंगे। छात्रों को रोजगार के अवसर और नए संभावनाओं से परिचय होगा।
	HIN-305	<ul style="list-style-type: none"> छात्रों को लोकसाहित्य के स्वरूप और उसके अध्ययन का महत्व समझेंगे। लोकसाहित्य की विविध विधाओं के अध्ययन द्वारा लोकजीवन में उसकी व्यापकता का पता चलेगा। छात्रों को लोकसाहित्य का सामाजिक, राष्ट्रीय एवं सांस्कृतिक महत्व बताकर उसके विशेष अध्ययन के लिए प्रेरणा प्राप्त होगा।
	HIN-401	<ul style="list-style-type: none"> छात्र राष्ट्रीय आंदोलन और उससे संबंधित कविताओं से परिचित होंगे। छात्र हिंदी गजल की परंपरा और गजलकारों से परिचित होंगे। छात्रों को भारतीय संस्कृति एवं सामाजिक मूल्यों का परिचय होगा।
	HIN-402	<ul style="list-style-type: none"> छात्र हिंदी भाषा के उद्भव और विकास को जानेंगे। छात्र हिंदी भाषा के गठन और व्यवहार को समझेंगे। छात्र देवनागरी लिपि का मानक रूप और उपादेयता को जानेंगे। छात्रों को सगणक में हिंदी और देवनागरी लिपि के प्रयोग का ज्ञान होगा।
	HIN-403	<ul style="list-style-type: none"> हिंदी साहित्य के आधुनिक काल की प्रमुख साहित्यिक प्रवृत्तियों की जानकारी मिलेगी। आधुनिक काल के गद्यकारों की रचनाओं का साहित्यिक परीचय होगा। आधुनिक काल की पद्य रचनाओं का परीचय मिलेगा।
	HIN-404	<ul style="list-style-type: none"> छात्र मीडिया लेखन के महत्व को जानेंगे। छात्रों को मीडिया लेखन का परिचय होगा जानेंगे। छात्र मीडिया लेखन की उपादेयता जानेंगे। छात्रों में मीडिया लेखन की क्षमता विकसित होगी।
	HIN-405	<ul style="list-style-type: none"> छात्र हिंदी एवं देवनागरी लिपि के बारे में जानेंगे। छात्रों को पत्राचार के विविध रूपों से परिचय होगा। छात्र जनसंचार माध्यमों से अवगत होंगे। छात्र अनुप्रयोगात्मक ज्ञान प्राप्त करेंगे।

DEPARTMENT OF HISTORY

Class	Course	Outcomes (Student will be able to)	
FYBA	HIS.111	1) Students will able to understand the important role of sources in historiography. 2) Understand the basic concept of ancient India.	
	HIS.112	1) Study the distinguished characters and features of different civilisations. 2) Describe and interpret the importance of the study of ancient world civilisations.	
	HIS.121	1) Understand the history of Indian subcontinent after the decline of the mauryan empire 2) Find out the factors responsible for the rise of Indo-Greeks, Perthians and kushanas	
	HIS.122	1) Comprehend the aspects on various civilisations and religious traditions. 2) Identify the core values propogated by the various civilisations and religious traditions.	
SYBA	HIS.231	1) Understand early difficulties of Sultan in India and grasp territorial expansion of the Sultanate. 2) Know about the regional kingdoms in the Deccan during period of the Sultanate.	
	HIS.232	1) The students will perceive the great revolution like French and industrial revolution. 2) The students will study the political changes in Europe.	
	HIS.230	1) Gain introduction to the history and theory of Heritage Studies. 2) Gain an insight into the nature and historic heritage.	
	HIS.241	1) Understand early difficulties of the Mughals in India. 2) Grasp territorial expansion of the Mughals	
	HIS.242	1) The students will understand the role of Bismarck in European politics. 2) To the students understand the consequences of the world.	
	HIS.240	1) The student will be able to enter in the tourist industry with the knowledge of basic skills required	
	TYBA	HIS.351	1) Understand early difficulties of the Marathas as well as the inspirations behind establishment of Swarajya. 2) Know about the struggle of the Marathas with contemporary kingdoms. 3) Grasp the administrative aspect of the Swarajya during the 17th Century.
		HIS.352	1) The Students will understand the growth of political awakening 2) To understand the different trends of Nationalism.
HIS.353		1) Explain the achievements of American society and democracy. 2) Explain the historical process of the rise of America as the World Power	
HIS.354		1) Analyse the factors responsible for the making of modern China as a Nation. 2) Explain the evolution of modern china in world politics.	
HIS.350		1) Understand basic concepts and methods of archaeology 2) Aware about the various aspects of archaeological science	
HIS.001		1) Understand and critically describe about the early structure of British raj 2) To know about the various council acts	
	HIS.002	1) Describe the facts related to contemporary world politics. 2) Link various political events of the world polity.	
	HIS.361	1) Grasp territorial expansion of the Maratha state under the Peshwas.	

		<ol style="list-style-type: none"> 2) Undertake the administrative setup of the Maratha state in the 18th century. 3) Know about the downfall of the Marathas.
	HIS.362	<ol style="list-style-type: none"> 1) The Students will understand the political ideology of various freedom fighters. 2) Students will be able to know about Nationalist Movement. 3) Understand the processes of the transfer of power and partition of India.
	HIS.363	<ol style="list-style-type: none"> 1) Analyse the relevant events and the themes related to history of USA. 2) Understand the American spirit being the democratic society.
	HIS.364	<ol style="list-style-type: none"> 1) Explain the historical process of the emergence of modern Japan as the one of world power. 2) Historically analyze the rise of modernity in Japan.
	HIS.360	<ol style="list-style-type: none"> 1) Explain the historical heritage and importance of coinage in India. 2) Historically analyze the coins of various dynasties of India.
	HIS.303	<ol style="list-style-type: none"> 1) Students should know the main features of the Government of India act-1935 2) Understand about the different suggestions given by the various committees formed during the process of Indian independence
	HIS.004	<ol style="list-style-type: none"> 1) Explain the historical process of the making of the modern and democratic nation in India. 2) Cope with the crises and challenges in front of the democracy and nation.
MA I	HIS.101	<ol style="list-style-type: none"> 1) Distinguish the various types of philosophies and theories related to the discipline of history. 2) Assessing the major approaches of historical research. 3) Explain the importance of various types of sources related to the history of ancient India.
	HIS.102	<ol style="list-style-type: none"> 1) Explain the evolutionary progression of the political ideas and institutions of ancient Indian history. 2) Acquaint with various sources useful to study Medieval Indian History.
	HIS.103	<ol style="list-style-type: none"> 1) Understand of Political scenario and ideas in Medieval India. 2) Explain the definition and scope of archaeological science.
	HIS.104	<ol style="list-style-type: none"> 1) Understand the historical evolution and the growth of the Archaeological sciences through the ages. 2) Understand the importance of the historical heritage of Indian Arts.
	HIS.105	<ol style="list-style-type: none"> 1) Explain the historical development of arts and architecture through the ages. 2) Perceive various sources to study of tribal history in India.
	HIS.105B	<ol style="list-style-type: none"> 1) Comprehend social, cultural and economical life of tribal in India. 2) Understand the various tradition of historical writings.
	HIS.201	<ol style="list-style-type: none"> 1) Compare and contrast the various trends of historical writings 2) Identify the basic elements of geographical setting and the process of urbanization in Indian history.
	HIS.202	<ol style="list-style-type: none"> 1) Compare and contrast the various trends of religion and philosophy in Early India. 2) Acquire adequate knowledge about various aspects of feudal based structure of society in Medieval India.
	HIS.203	<ol style="list-style-type: none"> 1) Understand of socio-economic and religious life of medieval India. 2) Explain the concept of Nation and Nationalism.
	HIS.204	<ol style="list-style-type: none"> 1) Describe the distinct feature of various trends of Indian Nationalism 2) Describe the process of development of science and technology in historical time frame
	HIS.205-A	<ol style="list-style-type: none"> 1) Recognize the western impact of science and technology.

		2) Student will be able to understand the nature of Pre ambedkarite dalit movement.
	HIS.205-B	1) Describe the achievement of reforms in pre -Ambedkarite Dalit movements. 2) Students will be able to understand the reciprocal relationship of British Raj and the emergence of Modern India.
MA II	HIS.301	1) Think Critically about Administrative policies such as Land revenue, Law, Press & Education Interpret Historical context of social reforms and the emancipator efforts for women Integrate the view on the early resistance against British Raj 2) Perceive various sources to study History of Mediaeval Maharashtra.
	HIS.302	1) Comprehend theory of kingship and nature of state in the Medieval Maharashtra. Understand the general structure of administration under the Marathas Perceive the Military and Judicial system in the Medieval Maharashtra. 2) The students will study the World War I and II.
	HIS.303	1) The students will understand between the nations in the world. 2) At the end of the course, the student will be able to demonstrate knowledge of methodological application in historical research
	HIS.304	1) Student will analyze the relevant importance of methodology in the processes of historical knowledge building 2) Explain important themes and debates in Indian history
	HIS.305-A	1) Critically describe the different approaches of various debates 2) Comprehend the aspects on Women's movement
	HIS.305-B	1) Cope up with the issues related to women's movement of emancipation 2) Demonstrate knowledge and understanding of the British Imperialism and Indian freedom movement
	HIS.401	1) Analyze historical process that shaped the various trends of Nationalism 2) Describe the achievements of India after independence
	HIS.402	1) Explain various aspects of history of post independent India. 2) The students will examine regional tensions in the world.
	HIS.403	1) The students will understand the decline of USSR. 2) Explain the achievements of social reform movement and reformers in India
	HIS.404	1) Critically analyze the nature of various trends in Indian social reform movement. 2) The student will be able to demonstrate basic knowledge of the reciprocal relationship of Indian history with Cinema, Cricket and Mass Media.
	HIS.405-A	1) The student will be able to comprehend the role of Cinema, Cricket and Mass Media in the everyday life of Indian people. 2) Describe the historical process of the development of Peasants and Working class Movements in India.
	HIS.405-B	1) Discuss the issues related to the peasants and working class movement.

DEPARTMENT OF MARATHI

Class	Course	Outcomes (Student will be able to)
FYBA	MAR 111	<ul style="list-style-type: none"> • Student's literary awareness will be Develop.

		<ul style="list-style-type: none"> • Students will Develop Writing Creative ability.
		<ul style="list-style-type: none"> • Students will be introduced to the literary genre story.
	MAR 112	<ul style="list-style-type: none"> • Student's linguistic ability will be developed.
		<ul style="list-style-type: none"> • Various skills of the students will be developed.
		<ul style="list-style-type: none"> • Professional awareness will be strengthening among students.
	MAR 121	<ul style="list-style-type: none"> • Student's poetical sense will be developed.
		<ul style="list-style-type: none"> • Students will develop poetry writing skills.
		<ul style="list-style-type: none"> • Students will be introduced medieval and modern poetry.
	MAR 122	<ul style="list-style-type: none"> • Students will be introduced Marathi grammar writing skills.
		<ul style="list-style-type: none"> • Students will develop grammar writing process and its Techniques.
		<ul style="list-style-type: none"> • Employment awareness will be developed amongst students.
FYBCOM	BCOM 112 C	<ul style="list-style-type: none"> • Students will be introduced literary type and will understand the importance of Character writing.
		<ul style="list-style-type: none"> • Among the students through the study of successful entrepreneur.
		<ul style="list-style-type: none"> • Students will know the Mantra of success in business world success in business world through the study of character of corporate Gandhi Narayan Murthy.
	BCOM 122 C	<ul style="list-style-type: none"> • Students will become aware of language skills.
		<ul style="list-style-type: none"> • Employment opportunities will be available to the students.
		<ul style="list-style-type: none"> • Students will be introduced communication skills, reading skills and modern social media.
		<ul style="list-style-type: none"> • it will help in the personality development of the students.
SYBA	MAR 230	<ul style="list-style-type: none"> • Students will know the introduction and technique medium wise writing.
		<ul style="list-style-type: none"> • Students will know the importance of relationship betnsocial media and language.
		<ul style="list-style-type: none"> • Students can write for social media.
	MAR 231	<ul style="list-style-type: none"> • Students will be able to express their own experience due to the fictional prose of literature.
		<ul style="list-style-type: none"> • Student's literary awareness will be developed.
		<ul style="list-style-type: none"> • Students will be inspired by the memories of others.
	MAR 232	<ul style="list-style-type: none"> • Students will develop language skills.
		<ul style="list-style-type: none"> • Students will know the techniques of advertisement and office correspondence.
	MAR 240	<ul style="list-style-type: none"> • Students will be develop creativity.
		<ul style="list-style-type: none"> • Student's human senses will be awakened.
		<ul style="list-style-type: none"> • Students will develop song writing technique.
	MAR 241	<ul style="list-style-type: none"> • Students will understand foreign culture.

		<ul style="list-style-type: none"> • Cultural inter relationship will be developed among the students.
	MAR 242	<ul style="list-style-type: none"> • Students will be introduced to various elements of Marathi grammar. • Students will know the usage of grammar in the language.
TYBA	MAR 350	<ol style="list-style-type: none"> 1. students will be introduced to the techniques of creative writing. 2. students writing skills will be developed and able to write creativity. 3. values for creative writing will be into inculcated among students.
	MAR 351	<ol style="list-style-type: none"> 1. students will be introduced to literature of the medieval period. 2. students will be able to understand the nature and features' of Bhausahebs Bakhar. 3. students will be interested to medieval writing and narrative style. 4. students will be able to understand uniqueness of Bhausahebs Bakhar. 5. students will be learn the linguistic specialties of Bhausahebs Bakhar from medieval period.
	MAR 352	<ol style="list-style-type: none"> 1. literary awareness will be developed among students. 2. students will develop and attitude toward 's the purpose of L literature 3. students will understand more about the production process of literature. 4. students will be able to enjoy the literature.
	MAR 353	<ol style="list-style-type: none"> 1. literary awareness will be developed among students. 2. students will develop and attitude toward 's the purpose of literature. 3. students will understand more about the production process of literature.
	MAR 354	<ol style="list-style-type: none"> 1. students will be introduced to the literary history of the period 1818 to 1874. 2. students will be understand nature and features of social life from 1818 to 1874. 3. to different social realisms'. 4. to make the students understand the different translated literature of the period from A.D. 1818 to 1874.
	MAR GE 001	<ol style="list-style-type: none"> 1. To familiar students with Marathi biography as part of literature. 2. students will get acquainted understand the important uniqueness literature. 3. reading biographies will inspire students to do good deeds in life.
	MAR GE 002	<ol style="list-style-type: none"> 1. to familiar students with Marathi Autography as part of literature. 2. students will get acquainted and understand importance and uniqueness of life. 3. reading autobiographies will inspire students to do good deeds in life.
	MAR 360	<ol style="list-style-type: none"> 1. the capacity of writing for social media will get develop in the students. 2. the ability of blog writing will get developed in the students. 3. students will understand techniques of blog writing.

	MAR 361	1. students will get familiar to the type of poetry in the mediaeval period.
		2. To understand the form and future of poetry in the medieval period.
		3. To introduce Abhangas of Saint poetess of the mediaeval period.
		4. to make students understand the uniqueness of the 'Abhyangas' of saint poetess of medieval period.
	MAR 362	1. students will be able to differentiate between literary and professional language.
		2. students will be developed liking for literature.
		3. students will be understand literary theories and the importance of literature.
	MAR 363	1. to introduce the traditional grammar of the Marathi students.
		2. this will help students for various competitive examination.
		3. language ability will be developed in students.
		4. writing ability will be developed in students.
	MAR 364	1. to make students understand the cultural background of the period from A.D. 1875 to 1920.
		2. to make students understand writing from of newspaper periodical from 1875 to 1920.
		3. students will notice the literary from and future of poetry and essay of the period from A.D.1875 to 1920.
		4. student will understand the literature forms and future of novel and drama from A.D. 1875 to 1920.
	MAR GE 003	1. students will develop the ability of ideological writings.
		2. to understand mutual relation between ideological literature and Society.
		3. to assess students traditional Ideological writing in Marathi.
		4. to understand the importance of the ideological text 'Stree purush Tulana' (A Comparison of men and women).
	MAR GE 004	1. students will be introduction to conceptual literature.
		2. students will notice the importance and suitability of conceptual literature.
		3. conceptual awareness will be developed in the students.
		4. to introduce students to various is writing through assessment and conceptual article collection.
MA I	MAR 101	• to make students understand the background of Marathi literature in mediaeval period.
		• to introduce students to social cultural and political transition's in mediaeval period.
		• To make students understand and inspire regarding various communal sects' in the mediaeval period.
	MAR 102	• to make students understand major forms of modern period i.e. poetry, novel, drama, fine process etc.
		• to industrial social values from Modern literature text's.
		• to familiar students of literary form's future a poetry ,novel, drama fine process etc of modern period.
	MAR 103	• To make students understand issues related to literature and criticism.

		<ul style="list-style-type: none"> To develop and evaluator students and create awareness from literary criticism.
		<ul style="list-style-type: none"> To develop students point of view for literary creation and evolution process.
		<ul style="list-style-type: none"> To understand the agreement between literature and criticism.
	MAR 104	<ul style="list-style-type: none"> to make students understand issues related to elemental part of translation the concept of translation its, form, translation, conversion, translation – metaphysics it's major components and types etc.
		<ul style="list-style-type: none"> As students will develop translation abilities; employment opportunities in various Domains will be available for them.
		<ul style="list-style-type: none"> to make students understand the translate metaphysics and its different types.
	MAR 105	<ul style="list-style-type: none"> to make students understand the oral Marathi literature background.
		<ul style="list-style-type: none"> to introduce students to the concept of folk literature, its form, Originate and development.
		<ul style="list-style-type: none"> students will be able to understand Indian tradition of folk literature.
		<ul style="list-style-type: none"> students will be introduced to different inter-disciplinary folk literature, its relation and different sects of folk literature.
	MAR 201	<ul style="list-style-type: none"> to understand mediaeval periods philosophy of devotional sects, its form and contribution.
		<ul style="list-style-type: none"> to introduce students to prose and poetry writings in mediaeval period.
		<ul style="list-style-type: none"> to introduce scholarly poetry and Bakhhar literature its form and unevenness mediaeval period.
		<ul style="list-style-type: none"> to introduce students to devotional sects of mediaeval period.
	MAR 202	<ul style="list-style-type: none"> to make students understand modern era's major literature i.e. Autobiographies ,story collection articles Collection travelogue etc.
		<ul style="list-style-type: none"> the social values Expressed through modern literary works will take root in the students.
		<ul style="list-style-type: none"> students will understand the nature and future of important representative literary work of modern times such autobiographies' collection of short story, collection of writing
		<ul style="list-style-type: none"> students will notice the uniqueness of important representative literary works of Modern Times such as autobiographies collection of stories, collection of writings, travelogues etc.
	MAR 203	<ul style="list-style-type: none"> students will be introduced to the theoretical path of in relation to the conceptual of form of research , process, stages and review methods etc.
		<ul style="list-style-type: none"> students will develop passion for research.
		<ul style="list-style-type: none"> students will develop a research approach.
		<ul style="list-style-type: none"> students will be motivated to do research.
	MAR 204	<ul style="list-style-type: none"> students will understand the concept of various literary genres in Marathi.
		<ul style="list-style-type: none"> students will be introduced to the literary genres like poems, stories and novels.
		<ul style="list-style-type: none"> students will develop literary awareness.
		<ul style="list-style-type: none"> students will be Motivated to write different literary genres.
	MAR 205	<ul style="list-style-type: none"> Students will be introduced to oral vocabulary in Folklore.

		<ul style="list-style-type: none"> Analytical Study of folklore can be done.
		<ul style="list-style-type: none"> Students will be introduced folk culture through oral tradition.
		<ul style="list-style-type: none"> Regional Folklore can be collected and classified.
MA II	MAR 301	<ul style="list-style-type: none"> Students will be introduced to the major poets and poetic genres from 1920 to 1960 period.
		<ul style="list-style-type: none"> Students will be able to understand the nature and future of Marathi nec- poetry from 1945 to 1960 period.
		<ul style="list-style-type: none"> The novel from 1920 to 1960 will introduce the society.
		<ul style="list-style-type: none"> student will be able to understand the nature and the variety of the Themes of the novel from 1920 to 1960 period.
		<ul style="list-style-type: none"> students will be able to understand the nature and value of short stories from 1920 to 1960 period.
	MAR 302	<ul style="list-style-type: none"> students will be understand the importance of language in human life.
		<ul style="list-style-type: none"> students will be introduced to various concepts in linguistics.
		<ul style="list-style-type: none"> Linguistics will be help students to have better understanding of language usage.
	MAR 303	<ul style="list-style-type: none"> students will understand the nature of Dalit and rural Marathi literature of the post- independence period.
		<ul style="list-style-type: none"> students will be inspired by the autobiography.
		<ul style="list-style-type: none"> study of short will help in understanding the rural reality.
		<ul style="list-style-type: none"> understanding the word of Dalit and rural writing will create social consciousness among the students.
	MAR 304	<ul style="list-style-type: none"> students will be understand various concept in translation.
		<ul style="list-style-type: none"> students will develop interest in Translation.
		<ul style="list-style-type: none"> translation will provide Employment opportunity to the students.
	MAR 305	<ul style="list-style-type: none"> students will be able to understand the concept of standard writing ,printing and editing.
		<ul style="list-style-type: none"> students will be able to learn standard writing printing and editing techniques.
		<ul style="list-style-type: none"> employment opportunities will be available in the publication field print media audio- visual media.
	MAR 401	<ul style="list-style-type: none"> students are introduced to the major poets and poetics of the sixties.
		<ul style="list-style-type: none"> students will study of the sixties’.
		<ul style="list-style-type: none"> students will be able to understand the nature and uniqueness of the plays of the sixties.
		<ul style="list-style-type: none"> The stories of the sixties will be e studies.
	MAR 402	<ul style="list-style-type: none"> students will be able to understand the concept of socio – linguistic.
		<ul style="list-style-type: none"> students will be able to study the use of language in the community.
		<ul style="list-style-type: none"> Student’s will be able understand the language differences and the process of language communication in everyday life.
		<ul style="list-style-type: none"> It will help in understanding the language usage in dialects, Standard language and Socio-cultural system.

	MAR 403	<ul style="list-style-type: none"> students will be able to understand women's consciousness and tribal consciousness in the post independence period.
		<ul style="list-style-type: none"> the student's will get acquainted with the expressions of the female mind and reality of tribal social life in the poem.
	MAR 404	<ul style="list-style-type: none"> Students will be able to understand the nature structure different types of forms.
		<ul style="list-style-type: none"> The nature of the literary genres like drama, fine process and autobiography can be understood.
		<ul style="list-style-type: none"> Inspiring characters and autobiographical studies will bring about positive change in the students.
	MAR 405	<ul style="list-style-type: none"> Students will be able to understand various concepts in creative writing.
		<ul style="list-style-type: none"> Students will develop a passion for creative writing.
		<ul style="list-style-type: none"> Writing skill can be developed by understanding different type of writing techniques.
DEPARTMENT OF MATHEMATICS		
Class	Course	Outcomes (Student will be able to)
FYB Sc	MTH-111	<ul style="list-style-type: none"> Understand basic concepts on limits and continuity.
		<ul style="list-style-type: none"> Understand use of differentiations in various theorems.
		<ul style="list-style-type: none"> Know the Mean value theorems and its applications.
		<ul style="list-style-type: none"> Make the applications of Taylor's, Maclaurin's theorem.
		<ul style="list-style-type: none"> Know the applications of calculus.
	MTH-112	<ul style="list-style-type: none"> Students can visualize geometrical concepts and draw two dimensional figures and can find their standard forms by shifting and rotation of axes.
		<ul style="list-style-type: none"> Students also can draw three dimensional figures and their equations particularly Sphere, Cone and Cylinder.
	MTH-113(A)	<ul style="list-style-type: none"> Understand operations on matrices.
		<ul style="list-style-type: none"> Understand the concept of rank of a matrix and inverse of a matrix.
		<ul style="list-style-type: none"> To use theory of matrices in solving linear equations.
		<ul style="list-style-type: none"> Understand the concept of eigen values and eigen vectors.
		<ul style="list-style-type: none"> To use theory of matrices for solving linear system of equations by matrix inversion, Gauss elimination and Gauss Jordan method (3x3 system).
	MTH-113(B)	<ul style="list-style-type: none"> Understand operations on matrices.
		<ul style="list-style-type: none"> Understand the concept of rank of a matrix and inverse of a matrix.
		<ul style="list-style-type: none"> To use theory of matrices in solving linear equations.
		<ul style="list-style-type: none"> Understand the concept of eigen values and eigen vectors.
		<ul style="list-style-type: none"> To use theory of matrices to Scaling & Shearing, Reflection, Rotation & Translation.
	MTH-121	<ul style="list-style-type: none"> Understand basic concepts in differential equations.
		<ul style="list-style-type: none"> Understand method of solving differential equations.

		<ul style="list-style-type: none"> Understand use of differential equations in various fields.
	MTH-122	<ul style="list-style-type: none"> Students can find out roots of any equation of degree less than or equal to five.
		<ul style="list-style-type: none"> Theory of equations is highly useful in various subjects like algebra, linear algebra, calculus, ordinary and partial differential equations etc.
	MTH-123(A)	<ul style="list-style-type: none"> Understand basic concepts of methods of solutions of equations viz. bisection, iteration, Newton-Raphson methods and method of false position.
		<ul style="list-style-type: none"> Understand methods of curve fitting viz. Gauss's forward and backward difference formulae and Lagrange's interpolation formula.
		<ul style="list-style-type: none"> Use of curve fitting such as least square, polynomial and exponential fittings for set of given data.
		<ul style="list-style-type: none"> Use Taylor's series, Euler's method. Modified Euler's method., Runge Kutta methods for solving ordinary differential equations.
	MTH-123(B)	<ul style="list-style-type: none"> Understand basic concepts of methods of solutions of equations viz. bisection, iteration, Newton-Raphson methods and method of false position.
		<ul style="list-style-type: none"> Understand methods of curve fitting viz. Gauss's forward and backward difference formulae and Lagrange's interpolation formula.
		<ul style="list-style-type: none"> Use of curve fitting such as least square, polynomial and exponential fittings for set of given data.
		<ul style="list-style-type: none"> Fit curves of straight line, power function $y=ax+c$, polynomial of degree two $y=a+bx+cx^2$, exponential function $y=ae^{(bx)}$
SYBSC	MTH-231	<ul style="list-style-type: none"> Understand limit and continuity of functions of several variables.
		<ul style="list-style-type: none"> Explain fundamental concepts of multivariable Calculus and series expansion of functions.
		<ul style="list-style-type: none"> Explain extreme points of function and their maximum, minimum values at those points.
		<ul style="list-style-type: none"> Understand meaning of definite integral as limit as sums.
		<ul style="list-style-type: none"> Learn how to solve double and triple integration and use them to find area by double integration and volume by triple integration.
	MTH-232(A)	<ul style="list-style-type: none"> Understand group and their types which is one of the building blocks of pure and applied mathematics.
		<ul style="list-style-type: none"> Explain Lagrange, Euler and Fermat theorem.
		<ul style="list-style-type: none"> Explain concepts of homomorphism, isomorphism and automorphism of groups.
		<ul style="list-style-type: none"> Learn basic properties of rings and their types such as integral domain and field.
	MTH-232(B)	<ul style="list-style-type: none"> Understand group and their types which is one of the building blocks of pure and applied mathematics.
		<ul style="list-style-type: none"> Explain Lagrange, Euler and Fermat theorem.
		<ul style="list-style-type: none"> Explain concepts of homomorphism, isomorphism and automorphism of groups.
		<ul style="list-style-type: none"> Learn basic concepts in coding theory.
	MTH-233	<ul style="list-style-type: none"> Understand and solve problems on Functions of Two and Three Variables , Composite Functions and Mean Value Theorems, Taylor's Theorem and Extreme Values, Double and Triple Integrals
		<ul style="list-style-type: none"> Apply theorems of Lagrange, Euler and Fermat to solve problems.

		<ul style="list-style-type: none"> • Explain concepts and solve problems on homomorphism, isomorphism and automorphism of groups.
		<ul style="list-style-type: none"> • Apply concepts of coding theory to solve problems.
	MTH-230	<ul style="list-style-type: none"> • Understand the issues associated with different types of finite and infinite sets via countable uncountable sets.
		<ul style="list-style-type: none"> • Explain the language of set theory, designing issues in different subjects of mathematics.
		<ul style="list-style-type: none"> • Explain the concepts and methods of mathematical logic, set theory, relation calculus, and concepts concerning functions which are included in the fundamentals of various disciplines of mathematics.
		<ul style="list-style-type: none"> • Understand the role of propositional and predicate calculus.
	MTH-241	<ul style="list-style-type: none"> • Understand the theory for functions of complex variables.
		<ul style="list-style-type: none"> • Explain fundamental concepts of concept of analytic function and Cauchy Riemann Equations.
		<ul style="list-style-type: none"> • Explain extreme points of function and their maximum, minimum values at those points.
		<ul style="list-style-type: none"> • Understand meaning of complex integration.
		<ul style="list-style-type: none"> • Learn how to solve problems on calculus of residues and contour integrations.
	MTH-242(A)	<ul style="list-style-type: none"> • Understand formation of differential equations and their solutions, concept of Lipschitz condition.
		<ul style="list-style-type: none"> • Explain method of variation of parameters for second order L.D.E.
		<ul style="list-style-type: none"> • Explain concepts of simultaneous linear differential equations and method of their solutions.
		<ul style="list-style-type: none"> • Learn Pfaffian differential equations, difference equations and method of their solutions.
	MTH-242(B)	<ul style="list-style-type: none"> • Understand formation of differential equations and their solutions, concept of Lipschitz condition.
		<ul style="list-style-type: none"> • Explain method of variation of parameters for second order L.D.E.
		<ul style="list-style-type: none"> • Explain concepts of simultaneous linear differential equations and method of their solutions.
		<ul style="list-style-type: none"> • Learn Pfaffian differential equations, numerical differentiation and method of their solutions.
	MTH-243	<ul style="list-style-type: none"> • Understand and solve problems on Functions of complex Variables , Complex integration and calculus of residues.
		<ul style="list-style-type: none"> • Apply theory of ordinary differential equations and Simultaneous Differential Equations to solve problems.
		<ul style="list-style-type: none"> • Explain concepts and solve problems on Total Differential or Pfaffian Differential Equations and Difference Equations.
		<ul style="list-style-type: none"> • Apply concepts of differential equations to solve problems on Numerical differentiation.
	MTH-240	<ul style="list-style-type: none"> • Understand the uses of the graph theory, designing issues in different problems like Konigsberg Seven Bridge Problem, Travelling salesman Problem.
		<ul style="list-style-type: none"> • Understand the issues associated with different types of graphs via connected graphs, connected graphs.
		<ul style="list-style-type: none"> • Explain find the minimal Spanning trees.
		<ul style="list-style-type: none"> • Form flowchart using rooted trees.

TYBSC	MTH-351: Methods of Real Analysis	After successful completion of this course, a student expected to: <ul style="list-style-type: none"> • Decide, whether a given series is convergent or divergent. • Use different tests for absolute convergence. • Understand Fourier series for even and odd functions. • Understand sine and cosine series in half range.
	MTH-352: Integral Calculus	After successful completion of this course, a student expected to: <ul style="list-style-type: none"> • Understand the concept of Riemann Integration. • Understand Improper integrals with finite limit and infinite limit their properties. • Learn the concepts of Beta and Gamma Integrals.
	MTH-353: Modern Algebra	After successful completion of this course, a student expected to: <ul style="list-style-type: none"> • Know the use permutation groups. • Know normal subgroups and group isomorphism's. • Know ideals in rings, quotient rings and isomorphism of rings. • Know polynomial rings and irreducibility of polynomials.
	MTH-354: Lattice Theory	After successful completion of this course, a student expected to: <ul style="list-style-type: none"> • Understand the structure of poset and lattice. • Represent lattice in diagrammatic form. • Understand the terms Maximal element, Minimal element, Greatest element, Least elements. • Learn the concepts of ideals and their properties. • Learn the concepts of homomorphism. • Understand modular and distributive lattice and their interrelation. • Understand complemented and relatively complemented lattice.
	MTH-355: Number Theory	After successful completion of this course, a student expected to: <ul style="list-style-type: none"> • Understand prime numbers, theory of Congruences and their properties which is one of the building blocks of pure mathematics. • Explain Diophantine equations, Euler and Fermat theorem. • Explain concepts of perfect numbers, Mersenne numbers and Fermat's numbers, Fibonacci numbers. • Learn basic properties of Finite continued fractions.
	MTH-356: Fourier Transforms	After successful completion of this course, a student expected to: <ul style="list-style-type: none"> • Apply transform techniques to signals and systems. • Analyze Linear Time-Invariant systems by transform techniques. • Understand different solution techniques.
	MTH-350: Laplace Transform	After successful completion of this course, a student expected to: <ul style="list-style-type: none"> • Understand basic concepts on Laplace and Inverse Laplace transforms. • Understand convolution theorem. • Understand use of Laplace transform in solving differential equations.
	MTH-357: Practical	After successful completion of this course, a student expected to:

	course based on MTH-351 and MTH-352	<ul style="list-style-type: none"> • Explain concepts and solve problems on sequence, series and Fourier series. • Solve problems related to Riemann integration. • Solve problems on improper integrals. • Solve problems on beta functions and gamma functions. • Solve problems on mean value theorem.
	MTH-358: Practical course based on MTH-353 and MTH-354	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand and solve problems on permutations, normal subgroups, ideals in rings, reducible and irreducible polynomial rings. • Apply isomorphism theorems to solve problems on isomorphic groups and rings. • Explain concepts and solve problems on posets, lattices, sublattices and dual ideals in lattices. • Understand distributive and modular lattices and solve the problem on it.
	MTH-359: Practical course based on MTH-355 and MTH-356	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand and solve problems on prime numbers and congruences. • Apply theorems of Euler and Fermat to solve problems. • Explain concepts and solve problems on Fibonacci sequence. • Apply concepts of finite continued fractions to solve problems on Diophantine equations. • Solve the problems on Fourier transforms and Z-transforms. • Solve the boundary value problems by using Fourier transform. • Solve the finite difference equations by using Z-transform.
	MTH-361: Measure and Integration Theory	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Learn measurable sets. Learn the concept of Sets of measure zero. • Understand why a more sophisticated theory of integration and measure is needed. • Show that certain functions are measurable. • Understand properties of the Lebesgue integrals.
	MTH-362: Metric Spaces	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand the Euclidean distance function on \mathbb{R}^n and appreciate its properties, and state and use the Triangle and Reverse Triangle Inequalities for the Euclidean distance function on \mathbb{R}^n. • Explain the definition of continuity for functions from \mathbb{R}^m to \mathbb{R}^n and determine whether a given function from \mathbb{R}^m to \mathbb{R}^n is continuous. • Explain the geometric meaning of each of the metric space properties (M1) –(M3) and be able to verify whether a given distance function is a metric. • Distinguish between open and closed balls in a metric space and be able to determine them for given metric spaces. • Define convergence for sequences in a metric space and determine whether a given sequence in a metric space converges. • State the definition of continuity of a function between two metric spaces.
	MTH-363: Linear Algebra	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand subspaces, linear span and their properties which is one of the building blocks of pure

		<p>mathematics.</p> <ul style="list-style-type: none"> • Explain basis and dimensions, Extension theorem. • Explain concepts of Linear transformations, kernel and image of linear transformation. • Learn eigen values and eigen vectors, Diagonalisation of Matrices.
	MTH-364: Partial Differential Equations	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand the order and degree of partial differential equations. • Solve a partial differential equations using Charpit's and Jacobi's methods. • Extract information from partial derivative models in order to interpret reality.
	MTH-365: Optimization Techniques	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Solve the linear programming problem by graphical method and simplex method. • Learn the unbounded, alternative and infeasible solutions of LPP by graphical and simplex method. • Understand the standard and canonical form of LPP. • Find the optimal solution of TP by MODI method. • Solve the solution of assignment problems by Hungarian Method. • Understand the unbalanced, balanced, maximization, restricted AP and alternative solution of AP. • Understand the two person zero sum game, saddle point, maximin-minimax principal. • Use of dominance property to find the solution games.
	MTH-366: Dynamical Systems	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Confidently analyze a small system of ordinary differential equations and produce a quantitatively accurate local map and a qualitatively accurate global phase portrait. • Understand how the mathematical changes from bifurcations change the structure of the phase portrait. • Describe dynamical systems geometrically and represent them graphically via phase plane analysis.
	MTH-360: Vector Analysis	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand scalar and vector products. • Understand vector valued functions and their limits and continuity and use them to estimate velocity and acceleration of partials. • Calculate the curl and divergence of a vector field. • Set up and evaluate line integrals of functions along curves.
	MTH-367: Practical course based on MTH-361 and MTH-362	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand and solve problems on measurable set. • Apply Fundamental theorems to solve problems. • Solve problems on Metric space.
	MTH-368: Practical course based on MTH-363 and MTH-364	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Understand and solve problems on linearly dependent, linearly independent sets and integral surface. • Apply isomorphism theorems to solve problems. • Explain concepts and solve problems on bases, dimensions, Cayley Hamilton theorem and compatible system. • Apply concepts of Eigen values and Eigen vectors to solve problems in matrix theory.

		<ul style="list-style-type: none"> • Solve a partial differential equation by using Charpit's method, Monge's method, Jacobi's method. • Solve problems on compatible system.
	MTH-369: Practical course based on MTH-365 and MTH-366	<p>After successful completion of this course, a student expected to:</p> <ul style="list-style-type: none"> • Develop problem solving analytical and computational skills. • Solve problems on LPP by Graphical method and simplex method. • Solve problems of transportation problems and assignment problems. • Solve problems of game theory. • Describe qualitatively the behaviour of the solution of a dynamical system without necessarily finding the exact solution. • Draw phase portraits and interpret them in several applications from biology, physics, chemistry and engineering. • Identify gradient fields and use their special properties to obtain phase portrait.
MSC	MT-101	<ul style="list-style-type: none"> • Understand Lebesgue outer measure, Riemann and Lebesgue integrals.
		<ul style="list-style-type: none"> • Explain the Schroeder- Bernstein theorem, Cantors theorem and the continuum Hypothesis, Lebesgue differentiation theorem.
		<ul style="list-style-type: none"> • Learn the concept of Functions of bounded variation, differentiation of monotone function.
	MT-102	<ul style="list-style-type: none"> • Understand basic concepts on Metric spaces.
		<ul style="list-style-type: none"> • Understand the concepts of Sequences and their convergence.
		<ul style="list-style-type: none"> • Understand the important theorems and their applications of Topology.
		<ul style="list-style-type: none"> • Understand the Compact and Connected spaces.
	MT-103	<ul style="list-style-type: none"> • Understand class equation for finite groups and its applications.
		<ul style="list-style-type: none"> • Explain Sylow theory and solvable groups.
		<ul style="list-style-type: none"> • Learn Euclidean domains, Principal ideal domains, unique factorization domains, Noetherian rings and the Hilbert Basis Theorem.
	MT-104	<ul style="list-style-type: none"> • Understand second Order L.D.E. with constant coefficients, power series solutions and special functions.
		<ul style="list-style-type: none"> • Explain the series solution, generating function, recursion relations.
		<ul style="list-style-type: none"> • Learn applications of partial differential equations of the second order in Physics, Linear P.D.E. with constant coefficients.
	MT-105(A)	<ul style="list-style-type: none"> • Understand the output operator, characters, literals, variables and declaration, program token, simple programs.
		<ul style="list-style-type: none"> • Explain statement blocks, compound conditions, short-circuiting, Boolean expressions, nested selection, else-if, switch statements and conditional expression operators.
		<ul style="list-style-type: none"> • Learn functions and arrays.
	MT-105(B)	<ul style="list-style-type: none"> • Understand the concept system of linear equations.
		<ul style="list-style-type: none"> • Explain the Numerical Solution of O.D.E using Picard, Taylor series, Modified Euler and Runge-

		Kutta fourth order methods.
		<ul style="list-style-type: none"> Learn initial value problem method, finite difference methods and finite element methods.
	MT-106(A)	<ul style="list-style-type: none"> Understand the fundamental concepts of measure theory and Advanced metric spaces.
		<ul style="list-style-type: none"> Explain important techniques of solving problems on Riemann and Lebesgue integrals.
		<ul style="list-style-type: none"> Explain important techniques of solving problems on complete, compact and connected metric spaces.
	MT-106(B)	<ul style="list-style-type: none"> Understand the fundamental concepts of Algebra and Differential equations.
		<ul style="list-style-type: none"> Explain important techniques of solving problems on finite groups, Euclidean domains, principal ideal domains, unique factorization domains and Noetherian rings.
		<ul style="list-style-type: none"> Explain important techniques of solving problems on Second Order L.D.E. with constant Coefficients, Partial differential equations of the second order.
	MT-201	<ul style="list-style-type: none"> Understand the concept of Power series, Analytic functions, Riemann-Stieltjes Integrals.
		<ul style="list-style-type: none"> Explain the well known theorems: Louville's Theorem, Fundamental Theorem of Algebra, Maximum Modulus Theorem, Cauchy's Theorem, Morera's Theorem, The Open mapping Theorem, Goursat's theorem.
		<ul style="list-style-type: none"> Learn the classification of singularities, Laurent's Series, the Riemann mapping Theorem.
	MT-202	<ul style="list-style-type: none"> Understand basis for topology, subspace topology, closed sets and limit points, continuous functions, product topology, Continuous functions.
		<ul style="list-style-type: none"> Explain connected spaces, compact space, separation axioms.
		<ul style="list-style-type: none"> Learn the well know theorems: Urysohn lemma, Urysohn Metrization theorem, Tychonoff theorem.
	MT-203	<ul style="list-style-type: none"> Understand the concept of modules, isomorphism, cyclic modules, direct sum of submodules, free modules.
		<ul style="list-style-type: none"> Explain modules over PID and applications to finitely generated abelian groups.
		<ul style="list-style-type: none"> Learn triangular and canonical forms.
	MT-204	<ul style="list-style-type: none"> Understand the concept of Mobius function, The Euler totient function, Mangolt function, Liouvilles function, The divisor function, Bell series.
		<ul style="list-style-type: none"> Explain Residue classes, Lagrange's theorem and its applications, Polynomial congruences with prime power moduli.
		<ul style="list-style-type: none"> Learn Quadratic residues, existence and non-existence of primitive roots.
	MT-205(A)	<ul style="list-style-type: none"> Understand the derivation of wave equation, heat equation and Laplace's equation in Cartesian, cylindrical and spherical co-ordinates.
		<ul style="list-style-type: none"> Explain the orthogonality of sets of functions in the space of piecewise continuous functions on (a, b), generalized Fourier Series, approximation in the mean, closed and complete orthonormal sets, Fourier series and half range Fourier series, Sturm-Liouville problems.
		<ul style="list-style-type: none"> Learn the boundary value problems, Bessel function of first kind, second kind, Fourier Bessel Series.
	MT-205(B)	<ul style="list-style-type: none"> Understand the Euler's Equations, Functionals dependent on Higher order derivatives, Lagrange's Equation, Invariance of Euler Equation.

		<ul style="list-style-type: none"> • Explain the transversality condition, basic Problem with variable end, one sided variation, Extremals with corners.
		<ul style="list-style-type: none"> • solve various types of problems of Jacobi condition, Wierstrass Function, Legendre condition.
	MT-206(A)	<ul style="list-style-type: none"> • Understand the fundamental concepts of Analytic functions, Cauchy's Theorem, .
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on Analytic functions, Cauchy's Integral Formula, Singularities, Laurent's Series,.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on topological spaces, basis, continuous functions, connected spaces, compact spaces, separation axioms.
	MT-206(B)	<ul style="list-style-type: none"> • Understand the fundamental concepts of module theory and canonical forms, arithmetic functions, congruences, quadratic residues.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on free modules, direct sum of submodules, canonical forms.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on arithmetic functions, Euler-Fermat's theorem, Lagrange's theorem, Legendre's symbol, primitive roots.
	MT-301	<ul style="list-style-type: none"> • Understand normed linear spaces, Banach spaces, inner product spaces and Hilbert spaces.
		<ul style="list-style-type: none"> • Explain the concept and applications of Functional analysis.
		<ul style="list-style-type: none"> • Learn the concept of Functional analysis to develop mathematical skills.
	MT-302	<ul style="list-style-type: none"> • Understand the concept of Queuing Numerical differentiation and Integration.
		<ul style="list-style-type: none"> • Explain important principles and techniques of solving ODE by numerical methods.
		<ul style="list-style-type: none"> • Learn important principles and techniques of solving PDE by numerical methods.
	MT-303	<ul style="list-style-type: none"> • Understand the concept of finite and algebraic extensions, splitting field, normal extensions, separable extensions.
		<ul style="list-style-type: none"> • Explain the finite fields and roots of unity
		<ul style="list-style-type: none"> • Learn the important theorems in Galois theory and their applications
		<ul style="list-style-type: none"> • Understand the geometric constructions.
	MT-304	<ul style="list-style-type: none"> • Understand the fundamental concepts of Lattice Theory and Lattice-ordered Groups.
		<ul style="list-style-type: none"> • Explain the relation between Graph Theory and Lattice Theory.
		<ul style="list-style-type: none"> • Learn the beauty of Lattice-ordered Groups and related concepts.
	MT-305(A)	<ul style="list-style-type: none"> • Understand the fundamental concepts of combination and permutation.
		<ul style="list-style-type: none"> • Explain the important theorems and their applications of inclusion-exclusion.
		<ul style="list-style-type: none"> • Learn the problems using generating function and recurrence relations.
	MT-305(B)	<ul style="list-style-type: none"> • Understand the concept of Kinematics.
		<ul style="list-style-type: none"> • Explain the important theorems and their applications concerned with Fluid Dynamics.
		<ul style="list-style-type: none"> • Learn the concepts of Irrotational motion and Laminar flow.
	MT-306(A)	<ul style="list-style-type: none"> • Understand the fundamental concepts of Functional Analysis and Numerical methods.

		<ul style="list-style-type: none"> • Explain important techniques of solving problems on Banach spaces and Hilbert spaces.
		<ul style="list-style-type: none"> • Explain important techniques of solving PDE by numerical methods.
	MT-306(B)	<ul style="list-style-type: none"> • Understand the fundamental concepts of Field theory, Lattice theory.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on field extensions, Galois extensions, transcendental extensions.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on Lattice theory and Lattice-Ordered Groups.
	MT-401	<ul style="list-style-type: none"> • Understand the concept of linear integral equations, Volterra Integro-Differential Equations, Volterra-Fredholm Integro-Differential Equations.
		<ul style="list-style-type: none"> • Explain the origins of Integral Equations, Methods of solutions to Linear integral equations.
		<ul style="list-style-type: none"> • Learn the fundamental properties of eigen values and eigen functions for symmetric kernels.
	MT-402	<ul style="list-style-type: none"> • Understand the concept of Network diagrams and Queuing theory.
		<ul style="list-style-type: none"> • Explain the important principles and techniques of decision theory and replacement theory.
		<ul style="list-style-type: none"> • Learn the principles of inventory control and non-linear programming.
	MT-403	<ul style="list-style-type: none"> • Understand the concept of exact sequences, projective and flat modules.
		<ul style="list-style-type: none"> • Explain the concepts of Noetherian modules and primary decomposition theorem.
		<ul style="list-style-type: none"> • Learn the Valuation rings and Discrete valuation rings.
	MT-404	<ul style="list-style-type: none"> • Understand the concept of maximal ideals, prime ideals, nil radical of an ideal, semiprime ideals and primary ideals.
		<ul style="list-style-type: none"> • Explain the concepts of Jacobson radical of a ring, Prime radical of a ring, Quasi-regular element, J-radical and J-semisimple ring.
		<ul style="list-style-type: none"> • Learn the Prime avoidance theorem, Cohen's theorem and Krull intersection theorem.
	MT-405(A)	<ul style="list-style-type: none"> • Understand the algorithms: Kruskal's Algorithm, Prim's Algorithm, Breadth First Search (BFS) algorithm, Backtracing algorithm, Dijkstra's Algorithm, Hungarian algorithm.
		<ul style="list-style-type: none"> • Explain the well known theorems: Cayley's Theorem, Dirac theorem, Bondy and Chavatal theorem, Travelling salesman problem.
		<ul style="list-style-type: none"> • Learn the Planar graphs and Coloring of graphs.
	MT-405(B)	<ul style="list-style-type: none"> • Understand the fundamental concepts and methods in algebraic topology.
		<ul style="list-style-type: none"> • Explain the well known theorems: The Euler-Poincare theorem, Euler's theorem, Brouwer's fixed point theorem.
		<ul style="list-style-type: none"> • Learn the relation between first homology group and fundamental group.
	MT-406(A)	<ul style="list-style-type: none"> • Understand the fundamental concepts of Linear Integral Equations and Operations Research.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on linear integral equations, Volterra Integro-Differential Equations, Volterra-Fredholm Integro-Differential Equations, symmetric kernels.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on Network diagrams, Queuing theory, simulation.
	MT-406(B)	<ul style="list-style-type: none"> • Understand the fundamental concepts of ring theory and module theory.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on modules, local rings, integral extensions,

		valuation rings.
		<ul style="list-style-type: none"> • Explain important techniques of solving problems on Ideal theory, radical theory, direct sum of rings.
DEPARTMENT OF MICROBIOLOGY		
Class	Course	Outcomes (Student will be able to)
FYBSc	MB-111	How the subject emerge as new branch of biology and its current scope.
		Aware about historical developments and contribution of various pioneers.
		Understand the comparative characteristics of prokaryotes and eukaryotes.
	MB-112	Aware about diversity of microorganism and microbial taxonomy.
		Understand theory in microscopy, their handling techniques and staining procedures.
		Know concept of growth, media of cultivation, quantitative measurement of bacterial growth.
		Aware about types of bacterial cultures such as batch, continuous and synchronous.
		Understand the modes of microbial nutrition and able to classify bacteria based on nutrition.
		Understand the basic microbial practices, instruments, appropriate protective and emergency procedures.
	MB-113	Study the comparative characteristics of prokaryotes and eukaryotes.
		Analyse, interpret, document and report results from a variety of microbiological methods.
		Demonstrate theory and practical skills in microscopy, staining procedures and growth
MB-121		Understand the basic microbial structure and function.
		Study the comparative characteristics of prokaryotes and eukaryotes.
		Understand the structural architecture and differences among bacteria/archaea.
MB-122	Know basic knowledge pertinent to Microbial ecology and interactions.	
	Know microbial techniques for isolation of pure cultures of bacteria, fungi, algae and virus.	
	Demonstrate theory and practical skills in handling microbial culture.	
	Understand various physical and chemical means of control of microbes.	
	Understand various methods for sterilization.	
	MB-123	Introduce microbiology laboratory skills for advanced staining methods.
Use pure culture and selective techniques to enrich and isolate microorganisms.		
Understand the bacterial growth and comprehend various physical and chemical means of sterilization.		
Understand preparation of standard solutions required in various assays.		
SYBSC	MB -231	Cognizant the basic structure, classification and functions of biomolecules with examples.
		Understand the classification and mechanism of microbial enzymes action.
		Aware about concept and fundamental pathways of metabolism.
	MB-232	Understand the advance microscopy with respect to principle, working and applications.
		Cognizant with different basic concepts of medial microbiology.
		Understand the Principle, method and applications of bio analytical techniques.
MB-233	Perform experiment with screening of microbe for enzyme and enzyme assay	
	Analyze water quality, skin flora,	
	Estimate basic biomolecules in qualitative and quantitative manner.	

	MB-230	Understand the skill sets in assessment and enumeration of air, water and soil quality.
		Aware about the biogeochemical cycles and ecological aspects of microbiology.
		Understand the concepts of pollution, indicator bacteria, Water and air-borne diseases.
	MB-241	Aware the basics concepts of genomics related to pro and eukaryotic.
		Understand the organization of chromosome, plasmid and mechanism of mutation.
		Understand the concepts of genetic code, mutation and repair mechanism.
		Cognizant with the basic topics related to infection and immunology
	MB-242	Understand the process of screening important microbes, designing fermentation media.
		Comprehend the basic fermenter design, its accessories and overall fermentation process.
		Be acquainted with diverse downstream processing after fermentation process.
	MB-243	Describe structure and functions of microbial cell's.
		Understand basics of industrial microbiology such as screening of microbes and fermentation.
		Detect blood groups and perform cross-matching.
		Infer the diagnostic/ analytical techniques in medical microbiology and industrial
	MB-240	Understand the skills in dairy industry such as milk testing, preservation of milk.
		Acquaint with production process of milk, food products and probiotics.
		Comprehend mechanism of food poisoning and infections.
TYBSc	MB-351	The students will be acquainted with the concepts of Gene transfer and Central Dogma.
		The candidate with be able to learn the principles and applications of various molecular techniques.
		Will have the basic knowledge of operon and rDNA technology.
	MB-352	Know a bioreactor, its parts, types and working.
		Get knowledge about the crucial processes in a bioreactor like strain improvement, in oculum development, sterilization and scale-up.
		Understand the knowhow of Inoculum development for Industrial Fermentations.
	MB-353	Get well versed with the catabolic and anabolic pathways.
		Understand the concept of ETC and principles of thermodynamics.
		Apply the principles of metabolism in various bacteria.
	MB-354	Get a clear vision of various aspects of human systems and infectious diseases.
		Understand the principles of diagnosis of infection and chemotherapeutic agents.
		Carry out fundamental or applied research in the field of Medical microbiology
	MB-355	Get acquainted with Antigenicity and Immunogenicity.
		Know the role of immune cells, organs and the functional mechanisms of each.
		Understand the structure and role of MHC and APC
	MB-356	Understand diverse strategies for food preservation.
		Comprehend the methods and application in geo-microbiology.
		Acquaint with the basic concept in bioinformatics and IPR.
	MB-350	Understand microbial spoilage and preservation of pharmaceutical formulations during production and in products.

		Get hands-on knowledge of various methods/processes required in pharmaceutical quality control and assurance.
		Acquire knowledge of GMP practice, CGMP, FDA., GLP and Pharmacopeia.
	MB-357	Understand the operations in fermentation processes.
		Inculcate the salient features of quality management and regulatory processes.
		Use computer for data generation and maintenance.
	MB-358	Achieve skill in pure culture techniques.
		Learn principles underlying diagnostic tests and handle kits for diagnosis of disease.
		Know various stages involved in malarial and diarrhoeal infections.
	MB-359	Isolate and identify agriculturally important microbes like Azotobacter and cellulolytic microbes.
		Detect food poisoning causing microbes and perform the tests to determine quality
		Synthesize nanoparticles by biological method/s and characterize them using U.V.- Visible Spectrophotometry
	MB-361	Get well versed with the regulatory mechanisms of Lactose and Tryptophan operon.
		Understand the principles and applications of advanced molecular techniques.
		Know the methodology involved in the engineering of genes and their practical Applications
	MB-362	Understand fermentation processes involved in the production of various products.
		Get acquainted with the needs of a fermentation industry.
		Know about the large-scale production of various valuable prod
	MB-363	Know the role of coenzymes in enzyme action.
		Understand the regulation of enzymatic reactions about allosteric proteins and covalent modification.
		Acquire knowledge about purification of enzymes by various methods, immobilization of enzymes and enzyme engineering techniques.
	MB-364	Become aware of the various types of diseases and their sources.
		Justify the variation between viral, bacterial and other diseases.
		Explain the prognosis of diseases and understand the role of medical microbiology in public health.
	MB-365	Be well versed with protective immunity and tolerance in the body.
		Gain knowledge about the serological tests and their applications.
		Know the path that may help to overcome the challenges in the synthesis of novel vaccines.
	MB-366	Acquire the concepts in Environmental Microbiology and waste management.
		Understand the classification of plant pathology with regional plant diseases and methods to control them.
		Comprehend knowledge regarding Agricultural Microbiology.
	MB-360	The course will give an overview of the appropriate use of microbial biofertilizers and biopesticides.
		The students will become familiar with the vast reserves of available microbial biodiversity that provide abundant opportunities to harness the ability of microorganisms and their chemical constituents.
		To sustainably minimize damage from pests or increase agricultural productivity and production
	MB-367	Design bioprocesses for commercially valuable products.
		Learn techniques for the validation of instruments used in the fermentation industry.
		Investigate the role of immobilization in enzyme activity and apply it for various purposes.

	MB-368	Perform pure culture techniques and apply them for pathogenic bacteria.
		Inculcate the method involved in the collection of mouth and skin swabs for diagnostic.
		Perform diagnostic tests for Syphilis and AIDS.
M.SC	MB-101	Learn microbial taxonomy with respect to basic and advance approaches.
		Understand habitat, physiological adaptation and applications of Archaea.
		Know the ultrastructure, classification, applications of algae, fungi and special forms.
	MB-102	Learn structure and properties of Biomolecules.
		Understand Transport and energy metabolism.
		Know metabolism of carbohydrates, lipids, amino acid and nucleotide.
	MB-103	Learn bio-safety procedures in microbiology.
		Understand cultivation of algae, and fungi.
		Know nucleic acid and protein separation techniques.
	MB-104	Learn Basic biochemistry preparations.
		Understand biochemical analysis of sugar, protein & nucleic acid.
		Hands on qualitative and quantitative estimations in biochemistry.
		Know the bioinformatics to study the bio-molecule
	MB-105	Understand basic concept of enzyme and protein techniques.
		Learn the diagnostic methods in virology.
		To understand the cell culture technique in plant and animals.
		Know the concept of biomarker and biosensor.
	MB-106	Understand basic concept of cell structure and molecular biology.
		Learn the process of DNA replication and mechanism of damage / repair.
		To understand the process of transcription, translation.
		Know the mechanism of protein targeting and degradation
	MB-201	Learn Basic genome organization of microbes.
		Understand microbial genome vocabulary.
		Know the biology of plasmid and their applications.
		Learn implications of mutation and DNA biotechnology.
	MB-202	Learn concepts in Enzymology.
		Understand Catalytic mechanisms and regulation.
		Learn Enzyme kinetics and inhibitions.
		Know the Industrial applications of enzymes and extremozymes
	MB-203	Learn methods used in molecular biology of microorganism.
		Understand process of DNA amplification using PCR technique.
		Learn technique of isolation of plasmid and microbial DNA.
		Know the immunological techniques useful in microbiology.
	MB-204	Learn qualitative and quantitative enzyme assay and basic enzymology.
		Understand Effect of environmental factors on enzyme.

		Learn Enzyme kinetics, inhibitions and immobilization.
		Know the purification process of enzymes.
	MB-205	Learn Principles of biophysical chemistry.
		Understand Methods of separation techniques.
		Learn Radio-labeling techniques.
		Know the Microscopic techniques for electron microscopy.
	MB-206	Learn Immune system and immune response.
		Understand detail procedure of hyper immune response.
		Learn Immune response to infections and diseases.
		Know the Histochemical and immune techniques.
	MB-301	Aquent with skills related microbial analysis of food and waste water treatment.
		Understand use of microbes in solid and liquid waste treatment as well as bioremediation.
		Explore the strategies of microbial waste management.
	MB-302	Get in-depth knowledge on mechanisms of different antimicrobial agents an biopharmaceuticals.
		Understand quality control and regulatory aspects used in pharmaceuticals.
		Discriminate conventional and combinatorial tools used in drug design and discovery
	MB-303	Perform the basic molecular techniques related to RNA and DNA.
		Understand plant microbe relations with plant and rhizoshpere.
		Use the methods in biogas analysis and estimation of antibiotics.
	MB-304	Undertake various quality control tests of pharmaceutical products and media.
		Carry out sterility testing of pharma products and perform the validation of LAF.
		Understand various methods used for saccharification of lignocellulosic biomass.
	MB-305	Perform the research with systematic and scientific approach.
		Understand research process, formulate research plan and analyse the data.
		Use the methods of report writing and checking plagiarism.
	MB-306	Understand microbial ecology and mechanism of plant microbe interactions.
		Describe mechanism of plant and pathogen interactions and its biocontrol.
		Gain insight of recent approaches such as Rhizosphere engineering, GMO etc.
	MB-401	Justify industrially relevant microbial products, their production and recovery process.
		Get knowledge about bioreactor configuration.
		Understand regulatory procedures required for final product.
	MB-402	Understand tools of rDNA such as enzyme, vectors and basic ideas on methods of rDNA.
		Know about genomics such as genome sequencing, mapping and editing.
		Understand the protein engineering with mapping and protein and protein interactions.
	MB-403	Able to analyse experimental data with central tendency, its dispersion and presentation graphically.
		Access biological databases, interpret structural aspects.
		Familiar with statistical and bioinformatics software.
	MB-404	Carry out comprehensive survey of literature and comprehend a problem based on review.

		Plan experimental framework for research and present the work in written format.
		Present the research with ICT tools and face viva voce.
	MB-405	Practice biostatistics for interpretation of experimental data.
		Understand fundamentals of database bioinformatics.
		Access information from databases and interpret phylogenetic tree to gain insight into evolutionary path.
	MB-406	Understand fundamental business, management, marketing, operation and HRM.
		Able to develop skill set required for entrepreneurship in microbiology.
		Address the issues related to business ethics and understand concept of safety and IPR.

DEPARTMENT OF MUSIC

Class	Course	Outcomes (Student will be able to)
FYBA	MUS 111	<ul style="list-style-type: none"> On completion of the course, students are able to: Being able to express oneself orally in music singing composing by experimenting with the voice and participating in playing music together and vocal performances. Being able to express oneself in writing in music: using various forms of notation. Writing is also used to experiment with language rhymes, rhythm and sound, to present musical experiences, ideas and forms of expression, and to reflect upon subject knowledge. Being able to read in music: being able to interpret and understand various musical expressions, symbols, signs .
SYBA	MUS 231	<ul style="list-style-type: none"> On completion of the course, students are able to: Music continued to grow and flourish with the encouragement being given to the performing arts. It takes time to develop mastery in the Indian Classical Music. First you need to decide that you want to be Instrumentalist or vocalist or want to play percussion instruments like tabla.
TYBA SEM V	MUS-351-Bharatiy Sangit Gayana Va swarvadya (Theory)- I	Sings, plays and moves to a range of music demonstrating awareness of musical concepts
	MUS-352 (Practical) - I	Be able to make practical presentation.
	MUS-353-Theory of General applied Music(Theory) – II	Being able to express oneself orally in music singing, composing by experimenting with the voice and participating in playing music together and vocal performances.
	MUS-354- (Practical) - II	Increasing memory increases due to the music of students.
	MUS-350- Theory of musi - I	Music continued to grow and flourish with the encouragement being given to the performing arts.
	MUS 001-Introduction of Music Theory -I	It takes time to develop mastery in the Indian Classical Music. First you need to decide that you want to be Instrumentalist or vocalist or want to play percussion instruments like tabla.
	MUS 002- Practical –III	To develop the professional abilities in students as performer, playback singer, music director, music teachers, Accompanist, Event manager etc.
TYBA	MUS-361-Bharatiy Sangit	Participates in simple speech, singing, playing and moving activities, demonstrating an awareness of musical

SEM VI	Gayana Va Swarvadya (Theory) - III	concepts
	MUS-362- (Practical) - IV	Students will identify, analyze and work conceptually with the elements and organizational patterns of music and their interaction, employing this understanding in aural, verbal, and visual analyses and applications.
	MUS-363- History & Theory of Music – IV	Creates own rhymes, games, songs and simple compositions Explores, creates selects and organises sound in simple structures Uses symbol systems to represent pitch
	MUS-364- (Practical) - V	Creates own rhymes, games, songs and simple compositions
	MUS-360- Theory of Music-II	The examiner can easily find the presentation on the stage of the students. Being able to read in music: being able to interpret and understand various musical expressions, symbols, signs .
	MUS-003- Introduction of Music Theory -II	To nurture performing skills in students in the field of Hindustani classical and semi classical music Popular music (film music/light music/natyasangeet etc.)
	MUS-004- (Practical) - VI	Be able to make practical presentation.
M.A.I	MV 101	<ul style="list-style-type: none"> On completion of the course, students are able to:
		<ul style="list-style-type: none"> Increasing memory increases' due to the music of students.
		<ul style="list-style-type: none"> The examiner can easily find the presentation on the stage of the students.
		<ul style="list-style-type: none"> Being able to read in music: being able to interpret and understand various musical expressions, symbols, signs.
M.A.II	MV 301	<ul style="list-style-type: none"> On completion of the course, students are able to:
		<ul style="list-style-type: none"> Hindustani classical and semi classical music
		<ul style="list-style-type: none"> Popular music (film music/light music/natyasangeet etc.)
		<ul style="list-style-type: none"> To develop the professional abilities in students as performer, playback singer, music director, music teachers, Accompanist, Event manager etc.

DEPARTMENT OF PHILOSOPHY

Class	Course	Outcomes (Student will be able to)
FYBA Sem 1	PHI 111 Introduction to Philosophy I	<ul style="list-style-type: none"> To understand the subject domain knowledge. To understand basic philosophical tools.
	PHI 112 Introduction to Philosophy II	<ul style="list-style-type: none"> To understand the basic concepts of philosophical tools. To understand the application of philosophical tools.
FYBA Sem 2	PHI 121 Ethics	<ul style="list-style-type: none"> To understand the nature, scope and theories behind Ethics To understand the applied aspects of Ethics in social and environmental context
	PHI 122 Introduction to Logic	<ul style="list-style-type: none"> To understand the nature, scope and theories behind Logic To understand Logical Reasoning and its application
SYBA Sem 3	DSC-1C PHI-231 Indian Philosophy I	Develop understanding and critical analytics of the elements of Indian Philosophy.

	DSC-1C PHI 232 Man and Environment	Develop understanding of environmental aspects of human life its sustainability on planet earth. Learn critical analysis of the environmental philosophy and ethics.
	SEC-1 PHI 230 Logical Reasoning and Application	Develop capability to understanding the premise and making conclusions under deductive and inductive type of reasoning methodology. Understand the scientific explanations and the laws of thought.
SYBA Sem 4	DSE-1D PHI 241 Western Philosophy	Develop understanding of the concepts of western philosophical thoughts and those applied in twentieth century.
	DSE-1D PHI 242 Emerging Trends of Thought	Develop the concepts of ethics applied in different human social aspects to be able to apply critical analytics and solutions to the ethical problems of human society.
	SEC-2 PHI 240 Philosophy of Human Rights	Develop understanding and critical analysis of the philosophies behind human rights. Learn about the provisions in Indian constitutions to ensure human rights of citizens.
TYBA Sem 5	DSE-1C PHI 351 Indian Epistemology 1	Gain understanding about Indian epistemology and develop the ability to investigate the origin, structure, methods and the validity of knowledge.
	DSE-1C PHI 352 Logic I	Develop competence in the concepts and methodologies of systematic analysis of various types of deductive and inductive logical reasoning principles, identification of mistakes in arguments, testing arguments for correctness and its application in decision making in daily life.
	DSE-1C PHI 353 Indian Epistemology 2	Gain understanding about Indian epistemology and develop the ability to investigate the origin, structure, methods and the validity of knowledge.
	DSE-1C PHI 354 Indian Philosophy II	Develop concept and critical analytics of the elements of different dimensions of Indian Philosophy. Learn about the origin and evolution of Indian philosophy and its various traditional schools of thoughts, their unique characteristics and the common world vision.
	SEC 3 PHI 350 Logic 2	Develop concepts and methodologies of systematic analysis of various types of deductive or inductive logical reasoning and its application in decision making in daily life
	GE PHI 001 Social and Political Philosophy	Develop understanding to critically analyse the social and political dimensions of philosophies and their interrelationship.
	GE PHI 002 Philosophy of Religion	The learner develops adequate rationality and respect about other religions than one's own. Philosophy of Religion develops wisdom towards all kinds of dogmatism, fanaticism, irrationalism and superstitions in religions, which have been responsible for much abuse of its name.
TYBA Sem 6	DSE-1D PHI 361 Indian Philosophical Thought	Develop understanding of the modern Indian philosophical thoughts which emanated from Indian philosophical traditions and our cultural value systems.
	DSE-1D PHI 362 Meta Ethies	It will enable to think more methodically and beyond ethics.
	DSE-1D PHI 363 Western Philosophical Thought	Develop understanding of the concepts of western philosophical thoughts and those applied in twentieth century.
	DSE-1D PHI 364 Western Philosophy 1	Understand how the chief philosophical reflection was around human's relationship with other human beings, the world, and God. Critically understand this period of 'tension' between philosophy and theology of major

		monotheistic religions. How, during this era philosophy became a system, with well-established schools.
	SEC-4 PHI 360 Applied Ethics	Knowledge of core issues, problems and concerns in application of acceptable ethical standards in every walk of life for a healthy co-existence. Learn the critical nature of its role in bringing harmony in all aspects of human life. Rationalise, develop and propagate to elevate the ethical standards in lives of individual, social, socio-economic, business, political and environmental on earth.
	GE PHI 003 Western Philosophy 11	Understand the evolution of western philosophical thought into modern western philosophy, which revolves around rationalism, empiricism and how it is propagated by prominent western proponents in modern western philosophy.
	GE PHI 004 Ethics (Indian and Western)	Gain the knowledge of core issues, problems and concerns in both, Indian and Western Ethics and its implications in life such as to understand, develop and propagate suitable ethical standards in various aspects of human life.
MA I Sem 1	DSC 101 Indian Philosophy I	Develop reasonably good understanding of Indian philosophical thoughts and its characteristics with critical analytics.
	DSC 102 Epistemology	Generate an awareness of the issues in Indian and western epistemology and debates that uniquely characterize Indian and Western epistemology.
	DSC 103 Ethics Part I	Develop a high level of understanding about morality and ethical behavior aspects of human life and be able to reasonably correlate with real world situation and be able to apply the principles and thoughts of ethical behavior and practices.
	SEC 104 Traditional Logic	Develop an ability to understand and apply the principles of logical reasoning
	DSE 105 Philosophy of Saints of Maharashtra	Develop a good understanding of the philosophical thoughts of thought leaders in Maharashtra and related applications in social life.
	(OR)	
	DSE 105 Philosophy of Mind	Develop a good understanding and applications of the philosophy of mind in both Indian and western thinking.
MA I Sem 2	DSC 201 Indian Philosophy II	Develop a good understanding and applications of the Indian philosophy.
	DSC 202 Metaphysics	Develop the knowledge and analytical ability on Indian metaphysics and its applications.
	DSC 203 Ethics Part II (Ethical Conflicts and Case Studies)	Develop the knowledge and analytical ability to resolve the conflicts of thoughts and follow the ethical principles in applications.
	SEC 204 Philosophy of Yoga	Develop the knowledge and understanding of different yogic traditions and philosophies.
	DSE 205 Modern Indian Thinkers	Develop understanding of application of inductive logic and scientific methods.
	(OR)	
	DSE 205 Inductive Logic & Scientific Method	Develop and understanding of their philosophical thought and critical philosophical analysis
MA II Sem 3	DSC PHI 301 Western	Develop deep understanding and critical analytics of the elements of Western Philosophy.

	Philosophy	
	DSC PHI 302 Indian Aesthetics	Develop deep understanding and critical analysis of various aspects of Indian Aesthetics.
	DSC PHI 303 Philosophy of Religion	Critical analysis of the general philosophy of religion, and its application in the context of religions of Indian and non-Indian origin.
	SEC PHI 304 Research Methodology	Develop the ability to conduct credible philosophical research.
	DSE PHI 305 Existentialism	Critical understanding and analysis of the concepts, methods and applications of existentialism studied in Philosophy.
	(OR)	
	DSE PHI 305 Modern Logic	Critical understanding and analysis of the concepts, methods and applications of existentialism studied in Philosophy.
MA II Sem 4	DSC PHI 401 General Philosophy	Understand general core philosophical thoughts of Indian and Western origins.
	DSC PHI 402 Western Aesthetics	Develop deep understanding and critical analysis of aspects of Western Aesthetics.
	DSC PHI 403 Meta-Ethics	Critical understanding and analysis of different aspects of Meta ethics.
	SEC PHI 404 Contemporary Philosophy (Indian & Western)	Critique of the contemporary Indian and western philosophy evolving from traditional philosophies to deliberate on its developmental wisdom.
	DSE PHI 405 Analytic Philosophy	Develop critique level understanding in the subject of analytic philosophy.
	(OR)	
	DSE PHI 405 Phenomenology	Develop critique level understanding in the subject of phenomenology.

DEPARTMENT OF PHYSICS

Class	Course	Outcomes (Student will be able to)
FYB Sc	PHY111, PHY112	<ul style="list-style-type: none"> Apply the concept of use of knowledge of mechanics to real life problems.
	PHY113	<ul style="list-style-type: none"> Understanding of the course will create scientific temperament.
	PHY121, PHY 122	<ul style="list-style-type: none"> Apply the concept of use of knowledge of electricity and magnetism to real life problems.
	PHY123	<ul style="list-style-type: none"> Understanding of the course will create scientific temperament.
SYBSC	PHY231	<ul style="list-style-type: none"> Apply the concept of use of knowledge of thermal physics to real life problems.
		<ul style="list-style-type: none"> Apply the first law of thermodynamics and calculate Heat, Internal energy, Work in a various thermo dynamical processes and systems.
		<ul style="list-style-type: none"> Estimate the entropy changes in reversible and irreversible processes.
	PHY232	<ul style="list-style-type: none"> Analyze and distinguish the various electronic components such as resistor, capacitor, inductor,

		transformer, diode and transistor.
	PHY233	<ul style="list-style-type: none"> • Understand the various logic gates and design the logic circuit using Boolean algebra. • Understand and verify the practical aspects of thermodynamics.
		<ul style="list-style-type: none"> • Test and use various electronic components such as resistor, capacitor, inductor, transformer, diode and transistor in electronic circuits.
	PHY230	<ul style="list-style-type: none"> • Understand the various logic gates and design the logic circuit using Boolean algebra. • Apply the concept of use of knowledge of Instrumentation to real life problems. • Develop an understanding of principle, construction and working of different devices.
	PHY241	<ul style="list-style-type: none"> • Apply the concept of use of knowledge of Waves and Oscillation to real life problems. • Understanding of the course will create scientific temperament.
	PHY242	<ul style="list-style-type: none"> • To create the ability of students towards application of sound knowledge of acoustics. • Understand the concept of polarization, interference and diffraction. • Understand the idea of various kinds of polarization of light wave and their detection. • Clear the idea of spatial and temporal coherence for the formation of interference fringes. • Describe the operation of optical devices including, polarisers, retarders, and interferometers. • Study Fraunhofer and Fresnel diffraction.
	PHY243	<ul style="list-style-type: none"> • Understand and verify the practical aspects of Waves and oscillations, sound and light.
	PHY240	<ul style="list-style-type: none"> • Familiarize to use various electricity measuring instruments. • Design various simple electrical circuits. • Apply the concept of use of knowledge of electrical circuits and network skills to real life problems
TYBSC	PHY-351- Mathematical Methods for Physics	<ul style="list-style-type: none"> • Apply the concept and knowledge of Mathematical physics to understand and solve real life problems. • Understand the concept of vector integration, gradients, divergence and curl of vector for solving mechanics and electrodynamics problems • Understand the concept of special functions for solving a problems based on quantum mechanics. • Understand the concept of special theory of relativity for solving the problem based on Newtonian Mechanics.
	PHY-352: Solid State Physics	<ul style="list-style-type: none"> • Apply the concept and use of knowledge of solid state physics to understand and solve the real life problems. • Understand arrangements of atoms, Crystal, Lattice, Unit cell, Translation vectors. • Comprehend free electrons, cohesive energy and band theory of solids.
	PHY-353: Classical Mechanics	<ul style="list-style-type: none"> • Demonstration of conceptual understanding of basic principles and other advanced mathematical problems like i) complicated oscillatory systems, ii) the motion of rigid bodies iii) mechanics of continuous media of classical mechanics. • Understand the motion of a mechanical system using Lagrangian Hamilton formalism. • Apply advanced mathematical and numerical techniques used in all modern physics to solve the

		problem.
	PHY-354: Advanced Electronics	<ul style="list-style-type: none"> Understand and analyze the IC 741 operational amplifier and its characteristics.
		<ul style="list-style-type: none"> Design the solution for linear & non-linear applications using IC741.
		<ul style="list-style-type: none"> Design & built oscillator for various applications.
		<ul style="list-style-type: none"> Use counters multiplexer, demultiplexer, encoder, decoder in various applications
	PHY-355: Elements of Material Science	<ul style="list-style-type: none"> Apply the concept of use of knowledge of Material Science to real life problems.
		<ul style="list-style-type: none"> Understanding of the course will create scientific temperament.
	PHY-356 (A): Laser Physics	<ul style="list-style-type: none"> Know the theoretical and experimental background of atomic and molecular spectra.
		<ul style="list-style-type: none"> Understand various types of Lasers, their working and applications.
		<ul style="list-style-type: none"> Understand basic components of spectroscopic instruments and their functions.
		<ul style="list-style-type: none"> Know about measurements of atomic/molecular spectra using spectrometers
	PHY-356 (B): Medical Physics	<ul style="list-style-type: none"> Apply the concept of knowledge of medical physics to real life problems.
		<ul style="list-style-type: none"> Learn about the human body, its anatomy, physiology and bio Physics, exploring
		<ul style="list-style-type: none"> its performance as a physical machine. Other topics include the Physics of the senses.
		<ul style="list-style-type: none"> Study diagnostic and therapeutic applications like the ECG, radiation Physics, X-ray
		<ul style="list-style-type: none"> Technology, ultrasound and magnetic resonance imaging
	PHY-350: Technical Electronics.	<ul style="list-style-type: none"> Acquire necessary skills/ hands on experience /working knowledge on electric circuit elements, transducers, sensors, optoelectronic devices, dc power sources, ac/dc generators, inductors, capacitors, transformers and basics of electrical wiring.
		<ul style="list-style-type: none"> Understand various types of DC and AC circuits and making electrical drawings with symbols for various systems.
		<ul style="list-style-type: none"> Do electrical wiring with assured electrical protection devices.
		<ul style="list-style-type: none"> Develop knowledge of solid state devices and their uses
	PHY-357: Laboratory-I	<ul style="list-style-type: none"> Understand various material properties and synthesis techniques.
		<ul style="list-style-type: none"> Understand to do proper selection of material synthesis process and its application for developing new material properties through modification in its morphological as well as chemical structure.
		<ul style="list-style-type: none"> Understand the various theories parameters and characteristics of different classes of solids showing varying properties like magnetism, polarization, conductivity, piezoelectricity etc.
	PHY-358: Laboratory-II	<ul style="list-style-type: none"> Design and built various practicals based on technical electronics and medical physics.
		<ul style="list-style-type: none"> Handle optical, Electrical apparatus smoothly.
		<ul style="list-style-type: none"> Acquire technical skill to operate medical instruments.
	PHY-359: Project -I	<ul style="list-style-type: none"> Aware of various techniques to perform physics experiments in detail.

		<ul style="list-style-type: none"> Carry out advanced tasks and projects, both independently and in collaboration with others, and also across disciplines
	PHY-361: Classical	<ul style="list-style-type: none"> Appreciate the need and necessity of electrostatic and the magneto static field.
		<ul style="list-style-type: none"> Know the basic concepts of electrodynamics; fundamental laws of the electromagnetic field; basic principles of the theory of electromagnetic field in vacuum; basic concepts of the theory of radiation
		<ul style="list-style-type: none"> Know the basics of scattering and absorption and relate them to real life phenomena.
		<ul style="list-style-type: none"> Learnt about wave-guides and transmission lines and propagation of waves through them.
	PHY-362: Quantum Mechanics	<ul style="list-style-type: none"> Apply the concept and knowledge of Quantum Mechanics to real life problems.
		<ul style="list-style-type: none"> Understanding of the course will create scientific attitude towards the subject application.
	PHY-363: Atomic and Molecular physics	<ul style="list-style-type: none"> Apply the concept and knowledge of Atomic and Molecular Physics to understand and solve the real-life problems.
		<ul style="list-style-type: none"> Understanding of the course will create scientific temperament.
		<ul style="list-style-type: none"> This area covers a wide spectrum ranging from conventional to new emerging multi-
		<ul style="list-style-type: none"> disciplinary areas like molecular physics, optical science especially spectroscopy.
	PHY-364: Nuclear and Particle Physics	<ul style="list-style-type: none"> Understand the fundamental principles and concepts governing classical nuclear and particle physics and have a working knowledge of their application to real-life problems,
		<ul style="list-style-type: none"> Demonstrate knowledge and understanding of: scientific phenomena, facts, laws, definitions, concepts, theories, scientific vocabulary, terminology, conventions, scientific quantities and their determination, order-of-magnitude estimates, scientific and technological applications of Nuclear Physics.
		<ul style="list-style-type: none"> Relativistic kinematics for computations of the outcome of various reactions and decay processes.
		<ul style="list-style-type: none"> Classify elementary particles according to their quantum numbers and draw simple reaction diagrams
	PHY-365: Physics of Devices and Communication	<ul style="list-style-type: none"> Describe the properties of materials and application of semiconductor electronics
		<ul style="list-style-type: none"> Apply the knowledge of semiconductors to illustrate the functioning of basic electronic devices.
		<ul style="list-style-type: none"> To understand communication systems with emphasis on analog & digital modulation techniques
	PHY-366 (A): Computational Physics Using C Language.	<ul style="list-style-type: none"> To design and write C programs.
		<ul style="list-style-type: none"> To understand the numerical method in physics
		<ul style="list-style-type: none"> To solve, design and write C programs for various numerical methods
	PHY-366 (B): LabVIEW Programmin	<ul style="list-style-type: none"> Develop a program using LabVIEW.
		<ul style="list-style-type: none"> Work on data acquisition and controls with LabVIEW
	PHY-360: Renewable	<ul style="list-style-type: none"> Apply the concept of use of knowledge of Renewable energy sources to real life energy problems.

	Energy and Energy Harvesting	
		<ul style="list-style-type: none"> • Create and apply their skills through gained knowledge
	PHY-367: Laboratory-I	<ul style="list-style-type: none"> • Understand basic concepts of Physics easily.
		<ul style="list-style-type: none"> • Learn the laws and theorems in Physics.
		<ul style="list-style-type: none"> • Determine and verify the values of constants
	PHY-368: Laboratory-II	<ul style="list-style-type: none"> • Write program of computational physics in C language
		<ul style="list-style-type: none"> • Write program using Lab view.
		<ul style="list-style-type: none"> • Do the carrier in use solar energy applications such as solar cooker, solar water heaters, solar lighting system, solar water distillation and so on.
	PHY- 369: Project-II	<ul style="list-style-type: none"> • Aware of various techniques to perform physics experiments in detail.
		<ul style="list-style-type: none"> • Successfully carry out advanced tasks and projects, both independently and in collaboration with others, and also across disciplines
M Sc I	PHY101	<ul style="list-style-type: none"> • To solve real definite integrals in theoretical Physics.
		<ul style="list-style-type: none"> • To use special functions and matrices for solving Quantum Mechanical Problems.
		<ul style="list-style-type: none"> • To use matrices for solving linear algebraic equations and to use group theory for understanding of crystallography.
		<ul style="list-style-type: none"> • To use Fourier series and integral transforms for analysis of wave mechanics and electrical circuit analysis.
	PHY102	<ul style="list-style-type: none"> • Understand the physical principles behind the derivation of Lagrange and Hamilton's equations, and the advantages of these formulations,
		<ul style="list-style-type: none"> • Master different problem-solving strategies within mechanical physics and assess which of these strategies is most useful for a given problem,
		<ul style="list-style-type: none"> • Be familiar with the fundamental principles of central force motion
		<ul style="list-style-type: none"> • Understand the intricacies of coupled oscillations.
	PHY103	<ul style="list-style-type: none"> • differences between classical and quantum mechanics
		<ul style="list-style-type: none"> • knowledge of wave function and uncertainty relations
		<ul style="list-style-type: none"> • logic necessary to solve Schrödinger equation for simple potentials
	PHY105	<ul style="list-style-type: none"> • The student will understand the basic concept of MATLAB programming
		<ul style="list-style-type: none"> • The student will be able to learn simulation techniques using MATLAB.
		<ul style="list-style-type: none"> • The student will be able to use MATLAB to solve computational problems
	PHY106	<ul style="list-style-type: none"> • The student will understand structure and theory behind working of few important analog and digital electronics devices.
		<ul style="list-style-type: none"> • The student will be able to analyse the circuits based on these devices.
		<ul style="list-style-type: none"> • The student will learn how these devices are utilized in different applications.
	PHY201	<ul style="list-style-type: none"> • The student will understand the basic theories governing the electricity and magnetism.

		<ul style="list-style-type: none"> The student will be able to know how to apply the basic theories in electromagnetic waves and radiation.
		<ul style="list-style-type: none"> With the help of problems solving student will be able to learn to apply the basic theories to real problems.
	PHY202	<ul style="list-style-type: none"> The knowledge gained may be helpful for the students for their career from research point of view.
		<ul style="list-style-type: none"> The course contents will be useful for the interdisciplinary approach for basic studies as well as applied studies.
	PHY203	<ul style="list-style-type: none"> Students will understand the basic theories governing the different properties of solids.
		<ul style="list-style-type: none"> Students will be able to understand various theories of different classes of solids showing varying properties like magnetism, polarization and superconductivity.
		<ul style="list-style-type: none"> With the help of problems solving skills, students will be able to learn to apply the basic theories to real problems.
	PHY205	<ul style="list-style-type: none"> Students will understand the basic theories of different renewable energy sources.
		<ul style="list-style-type: none"> Students will be able to understand technical aspects in these sources.
	PHY206	<ul style="list-style-type: none"> The students will understand various fundamental properties of materials.
		<ul style="list-style-type: none"> The students will be benefitted in terms of knowledge of thermodynamics behind alloy formation.
		<ul style="list-style-type: none"> The students will also know basics of advanced materials.
M Sc II	PHY301	<ul style="list-style-type: none"> Understand the basic theories of atomic and molecular spectra.
		<ul style="list-style-type: none"> Understand the basic technique and use of Raman spectroscopy
	PHY302	<ul style="list-style-type: none"> Competent to take up research in frontier areas like quantum information, quantum computation, quantum entanglement, quantum fields and quantum gravity.
		<ul style="list-style-type: none"> Apply the variational method, time-independent perturbation theory, time-dependent perturbation theory and WKB method to solve simple problems
	PHY303	<ul style="list-style-type: none"> Understand drawbacks and advantages of different material synthesis techniques.
		<ul style="list-style-type: none"> Understand to do proper selection of material synthesis process and its application for developing new material properties through modification in its morphological as well as chemical structure.
		<ul style="list-style-type: none"> Aware of various material synthesis techniques.
		<ul style="list-style-type: none"> Understand material synthesis and growth process.
		<ul style="list-style-type: none"> Understand the various theories of different classes of solids showing varying properties like magnetism, polarization, conductivity, thermal conductivity. piezoelectricity etc.
		<ul style="list-style-type: none"> Apply logics for writing programmes for solving mathematical problems.
	PHY304	<ul style="list-style-type: none"> Aware of various techniques to perform physics experiments in detail.
		<ul style="list-style-type: none"> Successfully carry out advanced tasks and projects, both independently and in collaboration with others, and also across disciplines.
	PHY305	<ul style="list-style-type: none"> To write C language programs using structure, pointers and file handling features.
		<ul style="list-style-type: none"> To develop C language programs for various numerical methods.
	PHY306	<ul style="list-style-type: none"> Understand material synthesis and growth process.
		<ul style="list-style-type: none"> Synthesis new materials and develop new synthesis techniques in laboratories.

		<ul style="list-style-type: none"> Understand to do proper selection of material synthesis process and its application for developing new material properties through modification in its morphological as well as chemical structure.
		<ul style="list-style-type: none"> Develop a Practical Skill and Scientific understanding of material synthesis.
	PHY401	<ul style="list-style-type: none"> Determine the charge, mass of any nucleus by using various spectrograph. To understand the size of nucleus and all its properties. To understand interaction of various types of radiation with matter which they observe in their daily life.
		<ul style="list-style-type: none"> Understand various methods of accelerating various types of particles to perform scattering experiments.
		<ul style="list-style-type: none"> Understand the detecting methods and instruments for different types of charged and neutral particles
	PHY402	<ul style="list-style-type: none"> Know the theoretical and experimental background of atomic as well as molecular spectra. Understand various types of Lasers, their working and applications. Understand basic components of spectroscopic instruments and their functions.
		<ul style="list-style-type: none"> Know about measurements of atomic/molecular spectra using spectrometers.
	PHY403	<ul style="list-style-type: none"> Student will able to understand and differentiate the Characterization techniques. Student will able to Characterize and to do Analysis of Materials.
		<ul style="list-style-type: none"> Student will understand to do proper selection of particular techniques and its application for data analysis and testing of synthesis material.
		<ul style="list-style-type: none"> Practical Skill and Instrument working as well as handling knowledge will help students in their future research carrier and higher studies.
		<ul style="list-style-type: none"> The students will understand the fundamental process of advanced material characterization techniques.
		<ul style="list-style-type: none"> Students will understand the concept of LASER and its applications as well as fundamental concepts related to optics.
		<ul style="list-style-type: none"> Student will understand the concept of solar photovoltaic system.
		<ul style="list-style-type: none"> The students will know in details different parts of systems with their required specifications as well as working of SPV system.
		<ul style="list-style-type: none"> The students will also know different aspects related to designing and the installation of the system.
		<ul style="list-style-type: none"> Students will understand the basic concept of energy conversion and able to differentiate different generation of solar cells and their photovoltaic conversion efficiency.
	PHY404	<ul style="list-style-type: none"> Aware of various techniques to perform physics experiments in detail.
		<ul style="list-style-type: none"> Successfully carry out advanced tasks and projects, both independently and in collaboration with others, and also across disciplines.
	PHY405	<ul style="list-style-type: none"> Design and install a solar power plant of different capacities.
		<ul style="list-style-type: none"> To start a small scale business on installation and maintenance of solar power plants
	PHY406	<ul style="list-style-type: none"> Student will able to understand and differentiate the Characterization techniques.
		<ul style="list-style-type: none"> Student will able to Characterize and to do Analysis of Materials.

		<ul style="list-style-type: none"> • Student will understand to do proper selection of particular techniques and its application for data analysis and testing of synthesis material. • Practical Skill and Instrument working as well as handling knowledge will help students in their future research carrier and higher studies.
DEPARTMENT OF PSYCHOLOGY		
Class	Course	Outcomes (Student will be able to)
FYBA	PSY 111	<ol style="list-style-type: none"> 1) Students will understand psychology as an applied subject and will learn in detail the basic psychological processes and concepts. 2) Help students think critically about the new information that they have learned and relate it to their own life.
	PSY 112	<ol style="list-style-type: none"> 1) Knowing the theories of personality help one understand how personality traits develop and can personality. An attempt will also be made to look at personality within the Indian context and to contrast it with western conceptualizations. 2) Make the students aware of self concepts and develop the positive self concepts.
	PSY 121	<ol style="list-style-type: none"> 1) Develop Cognitive and Emotive Skills in the students 2) Relate the fundamental principles of Psychology in everyday life.
	PSY 122	<ol style="list-style-type: none"> 1) To Develop the positive mental health. 2) To Develop the Strategies of Stress Management
SYBA	PSY 231	<ol style="list-style-type: none"> 1) To demonstrate a broad working a broad working knowledge of developmental psychology by providing an overview of basic principles related biosocial cognitive and psychosocial changes throughout the entire lifespan. 2) To demonstrate an understanding of different stages of development through the lifespan.
	PSY 232	<ol style="list-style-type: none"> 1) To help the good mental health community. 2) To understand the abnormal behavior.
	PSY 230	<ol style="list-style-type: none"> 1) To develop the applied approach to counseling 2) To learn the practical knowledge.
	PSY 241	<ol style="list-style-type: none"> 1) Identify and apply developmental concepts to everyday life. 2) Developmental psychology will discuss the concept of life span and issues of development and help them understand various developmental theories and their implications.
	PSY 242	<ol style="list-style-type: none"> 1) To develop the positive approach of psychosocial therapies. 2) To building the clinical counselors
	PSY 240	<ol style="list-style-type: none"> 1) To develop the applied approach to counseling 2) To learn the practical knowledge.
TYBA	PSY 351	<ol style="list-style-type: none"> 1) To understand the process of research methods including types of research, hypothesis Data collection, field studies, Questionnaire, Sampling techniques, Research writings. 2) introduction to principles of research in psychology and the various concepts and methods of research. This module will cover the entire process of conducting research which includes methods of data collection, techniques of data analysis, and issues and problems in doing research.
	PSY 352	<ol style="list-style-type: none"> 1) Acquaint the students with Skills of scientific techniques of conducting experiments in psychology 2) To equip the students with the basic information and knowledge about conducting experiments and

		interpretation of the obtained results. 3) To equip practical experience to the students in administrating, scoring and interpreting of the scores.
	PSY 353	1) Acquaint the students with the basic concepts of experimental psychology. 2) Equip the students with the basic information and knowledge about conducting experiments and interpretation of the obtained results.
	PSY 354	1) Understanding basic processes of cognitive psychology to students. 2) Acquaint the students with the application of cognitive process in day-to-day life.
	PSY 350	1) To set counseling techniques and therapies to improve emotional management. 2) To discuss interventions and therapeutic benefits those occur within a mental health practice
	PSY 001	1) To understand the main theories of Organizational Behavior . 2) To help students understand organizational behavior and management.
	PSY 002	1) Identify and evaluate the current and historical research, and research methods of social psychology. 2) Social psychology studies the influence of others on an individual's thoughts, emotions, and behaviors. Because we spend a great deal of each day interacting with others in a variety of different situations, the topics of social psychology are myriad. This module will help students discover ways to apply social-psychological principles to their day-to-day experiences and to better understand themselves and others.
	PSY 361	1) To understand the process of research methodology in psychology. 2) Demonstrate knowledge of research process.
	PSY 362	1) Acquaint the students with Skills of scientific techniques of conducting experiments in psychology 2) To equip the students with the basic information and knowledge about conducting experiments and interpretation of the obtained results. 3) The students will be appraised of the processes involved in experimentation and provided them with the opportunity of devising and evaluating their own experiments.
	PSY 363	1) Equip the students with the basic information and knowledge about conducting experiments and interpretation of the obtained results. 2) Acquaint the students with the basic concepts of psychophysics
	PSY 364	1) Understanding the function of brain 2) Create awareness about the role of biological factors in learning and memory process
	PSY 360	1) To improve new perspectives to see things differently. 2) To improve healthy relationship and communication between clients and psychologist.
	PSY 003	1) To understand the main history 2) To help students understand motivation and Evaluating Job Performance
	PSY 004	1) Understand the relationship between the person and the situation and its influence on attitudes, prejudice, and interpersonal relationships. 2) Identify the group behavior areas of social influence, conformity, obedience.
MA	PSY 101	1) Understand the basic aspects of personality. 2) Understand how to develop personality. 3) Application of personality theories in day to day life.

		4) How to shape behavior by using techniques- Shaping, Systematic Desensitization, Token Economy, Flooding, Virtual Reality.
	PSY 102	1) Understanding basic processes of cognitive psychology to students. 2) Acquaint the students with the application of cognitive process in day-to-day life. 3) How to solve problems with the help of abstract thinking, creative thinking.
	PSY 103	1) Acquaint student with the characteristics of psychological tests. 2) To Understand psychometric theories and principles of test construction. 3) Develop occupational skills in student related with psychological testing.
	PSY 104	1) To develop awareness of Psychological tools, test and techniques. 2) Evaluation and prediction of specific aspects of human behavior
	PSY 105	1) Explain Human Behavior 2) Apply Basic Principal of Behavior Modification
	PSY 201	1) To Understand the major theories of motivation and emotion 2) To Develop positive emotions in human life.
	PSY 202	1) Understanding the function of brain 2) Create awareness about the role of biological factors in learning and memory process.
	PSY 203	1) How to calculate and apply measures of location and measures of dispersion - grouped and ungrouped data cases. 2) How to apply discrete and continuous probability distributions to various business
	PSY 204	1) Acquaint the students with Skills of scientific techniques of conducting experiments in psychology 2) Application of experimental findings in day to day life.
	PSY 205	1) Develop the behavior assessment skills 2) Develop the positive self concepts
	PSY 301	1) To promoting health as well as the prevention and treatment of disease and illness. 2) To improve diagnosis of the disease and set the treatment terminology.
	PSY 401	1) To enhance physical and mental health resilience 2) To focus program for health promotional diagnosis and treatment program.
	PSY 302A	1) Demonstrate understanding of the various manifestations of psychopathology. 2) Demonstrate the ability to use DSM V and ICD 10 classificatory systems.
	PSY 402A	1) Understanding of skills required to diagnose various disorders. 2) Contrast and compare the model of etiology of psychopathologies 3) Demonstrate mastery of skills required for psychopathological formulation.
	PSY 302B	1) To set counseling techniques and therapies to improve emotional management. 2) To discuss interventions and therapeutic benefits those occur within a mental health practice.
	PSY 402B	1) To improve new perspectives to see things differently. 2) To improve healthy relationship and communication between clients and psychologist.
	PSY 303A	1) Understand theory and techniques of major psychotherapy approaches. 2) Demonstrate awareness of ethico-legal issues and other critical issues associated with psychotherapy.
	PSY 403A	1) Develop mastery of basic therapy techniques and associated documentation through and simulation.

		2) Develop and appreciation for the importance of psychotherapy outcome research.
	PSY 303B	1) To understand the basic knowledge and skill needed to help student access careers information and guidance. 2) Develop and appreciation for the importance of career.
	PSY 403B	1) To understand various area of counseling 2) To understand the rationale for careers education and guidance and young peoples need for it.
	PSY 304	1) To understand the process of research methods including types of research, hypothesis Data collection, field studies, Questionnaire, Sampling techniques, Research writings. 2) introduction to principles of research in psychology and the various concepts and methods of research. This module will cover the entire process of conducting
	PSY 404	1) To understand the process of research methodology in psychology. 2) Demonstrate knowledge of research process.
	PSY 305	1) Asses interests and abilities in their field of study. 2) Develop work habits and attitudes necessary for field of counseling. 3) Develop communication, interpersonal and other critical skills in the counseling process. 4) Build a record of work experience in counseling.
	PSY 405	1) Demonstrate the use of APA style in writing. 2) Demonstrate the ethical issues related to academic writing.

DEPARTMENT OF SANSKRIT

Class	Course	Outcomes (Student will be able to)
FYBA	SAN-111	<ul style="list-style-type: none"> Learn the basic knowledge about Sanskrit grammar. Know the importance of creative language. Get the language skill
		<ul style="list-style-type: none"> Know the Sanskrit story literature.
	SAN-121	<ul style="list-style-type: none"> Acquaint the basics of Sanskrit Grammar Learn the basic concept of Sanskrit grammar related stories. Get the language skill. Know the Sanskrit story literature.
		<ul style="list-style-type: none"> Know the Classical Sanskrit Poetry.
	SAN-112	<ul style="list-style-type: none"> Get the knowledge of basic values to the students by medium of Sanskrit poetry Knowledge of moral ethics of human society to the students through the medium of Sanskrit poetry. Know the different personality of people in society through the Sanskrit literature
		<ul style="list-style-type: none"> To know the knowledge of Sanskrit drama to the students To get the ancient dramatist Bhasa to the under graduate student To know the dramatically skill of the great dramatization Bhasa.
	SAN-122	<ul style="list-style-type: none"> To know the language skills, tools and technique of great Sanskrit drama of Bhasa
		<ul style="list-style-type: none"> To know importance of Sanskrit poets.
SYBA	SAN-231	<ul style="list-style-type: none"> To know importance of Sanskrit poets.

		<ul style="list-style-type: none"> To the History of Sanskrit poets.
		<ul style="list-style-type: none"> Learn about great poet and there literature of Sanskrit.
		<ul style="list-style-type: none"> Gain knowledge about the great ancient heritage of Sanskrit hymns & Literature.
	SAN-232	<ul style="list-style-type: none"> Know the importance of Classical Sanskrit Poetry.
		<ul style="list-style-type: none"> Get information about the concepts' of Sanskrit <i>kavyashastra</i>.
		<ul style="list-style-type: none"> get knowledge of the types of <i>Kavya</i>
		<ul style="list-style-type: none"> identify different types of <i>Alankaras</i>
	SAN- 230	<ul style="list-style-type: none"> Acquaint with the Classical Sanskrit Prose & Poetry.
		<ul style="list-style-type: none"> Get information about the Varsities of Literature like old & New.
		<ul style="list-style-type: none"> Negotiate the text independently with the help of Proficiency of Sanskrit.
		<ul style="list-style-type: none"> Acknowledge the students beauty of different Prose & Poetry of Sanskrit.
	SAN-241	<ul style="list-style-type: none"> Know the importance of Sanskrit Drama.
		<ul style="list-style-type: none"> Learn basic concepts of drama in Sanskrit.
		<ul style="list-style-type: none"> Learn tools and technique of great Sanskrit drama.
		<ul style="list-style-type: none"> Get information about the deferent characters and characteristics.
	SAN-242	<ul style="list-style-type: none"> Understand the important of famous Epic of Sanskrit literatures.
		<ul style="list-style-type: none"> Learn the beauty Epics.
		<ul style="list-style-type: none"> Know learn the different them of Epic of <i>Kalidasa</i>.
		<ul style="list-style-type: none"> Get information about the cultural and highlight human values.
	SAN-240	<ul style="list-style-type: none"> Acquaint with the Classical Sanskrit Prose & Poetry.
		<ul style="list-style-type: none"> Get information about the Varsities of Literature like old & New.
		<ul style="list-style-type: none"> Negotiate the text independently with the help of Proficiency of Sanskrit.
		<ul style="list-style-type: none"> acknowledge the students beauty of different Prose & Poetry of Sanskrit
TYBA	DSE- 1C/D SAN-351 /361 Ved-1,2	<ul style="list-style-type: none"> know importance of Vedic Literature
		<ul style="list-style-type: none"> understand the Vedic language and grammar.
		<ul style="list-style-type: none"> learn about great poet and there literature of Sanskrit
		<ul style="list-style-type: none"> Students will get awareness of the great ancient heritage of Sanskrit hymns & literature
	DSE- 1C/D SAN-352-362 Vyakarn I &II	<ul style="list-style-type: none"> know the importance of Sanskrit grammar
		<ul style="list-style-type: none"> Learn the basic knowledge of grammar.
		<ul style="list-style-type: none"> Get the grammar skills.
		<ul style="list-style-type: none"> Know the basic knowledge of grammar of Sanskrit like <i>karaka</i> ,<i>sandhi</i> etc..
	DSE- 1C/D SAN-353- 363 Darshan I &II	<ul style="list-style-type: none"> know the importance of <i>Philosophy</i> of sanskrit.
		<ul style="list-style-type: none"> get information about the concepts' of Sanskrit <i>Tarkshastra</i>.

		<ul style="list-style-type: none"> • get knowledge of the types of Darshanas.
	DSE- 1C/D SAN-354 - 384 Ratnavli – Kumarsanbhav	<ul style="list-style-type: none"> • know the importance of Sanskrit Drama. • learn basic concepts of drama in Sanskrit. • learn tools and technique of great Sanskrit drama. • get information about the deferent characters and characteristics.
	SEC-SAN-350- 360 Sanwad Vyavhar Vikas- Vyvhar Lekhan Vikaas	<ul style="list-style-type: none"> • know the importance of Sanskrit <i>speaking</i>. • get information about the concepts' of Sanskrit <i>Grammer</i>. • get knowledge of the types of Sanskrit <i>Vyaavhaarik Shabdkosh</i>. • identify different types offs anskrits <i>habdrup & Dhaturup</i>.
	GE- SAN-001-003 Vidhykiy Subhashit – Bhaminivilas	<ul style="list-style-type: none"> • know the importance of <i>Ayurvedik Literature</i>. • get information about the concepts' of Sanskrit <i>Ayurvedashastra</i> • get knowledge of the types of <i>Vat, Pitta, Kaphadoshas</i>. • identify different types of <i>Sushrut, Charak & Dhanvantari ,etc</i>
	GE-SAN -002-004 Sanskrit Surbhi Ansha 1- 2	<ul style="list-style-type: none"> • acquaint with the Classical Sanskrit Prose & Poetry. • get information about the Varsities of Literature like old & New. • negotiate the text independently with the help of Proficiency of Sanskrit. acknowledge the students beauty of different Prose & Poetry of Sanskrit
MA I	SAN-101	<ul style="list-style-type: none"> • Know the definition of khandkavya. • Acknowledge with the beauty of kavya/poetry & khandkavya. • Get the language skills of kalidasa. • Understade the comparative study of khandkavya
	SAN-102	<ul style="list-style-type: none"> • Understant the ancient vedic literature. • Know the vedic language and grammar. • Learn the stories in <i>brahmin granthas</i>. • Know the philosophy of <i>kenopanishada</i>.
	SAN-103	<ul style="list-style-type: none"> • Acquaint the ancient tradition of <i>natyashastra</i>. • Get the technical phase of <i>natyashastra</i>. • Knowthe criticism about rupakas. • Learn the kinds of dasharupaka

	SAN-104	<ul style="list-style-type: none"> • Know the importance of language. • Learn the basic knowledge of language. • Get the language skills.
	SAN-105	<ul style="list-style-type: none"> • Know the basic knowledge of language • Know the importance of ancient literature. • Get the basic knowledge of language. • Know the social and geographical aspects in ancient literature. • Learn the literary skills in ancient sanskrit language
	SAN-201	<ul style="list-style-type: none"> • Know the definition and lakshanas of mahakavya. • Get the beauty of kavya/poetry & mahakavya. • Understand study the language skills of <i>bharvi</i> • Equipped with knowledge of the arthaantaranyaas alankara used by <i>bharvi</i>
	SAN-202	<ul style="list-style-type: none"> • Understand the uniqueness of vedic words and their meaning • Know the theory of development of words in nirukta • Get the importance of nirukta. • To the creation of the words in nighantu.
	SAN-203	<ul style="list-style-type: none"> • Know about the social aspects in dramas of shudraka. • Get the technical study of drama. • Know the literary contribution of 'shudrak. • Know the contribution of 'karuna' sentiment in drama
	SAN-204	<ul style="list-style-type: none"> • Know the importance of language. • Know the basic knowledge about grammar of language. • Know the language skills. • Get the literary skills of sanskrit language. • Know about the types of drama & its origin.
	SAN-205	<ul style="list-style-type: none"> • Know the types and origin of epics. • Know historical epics & strotra kavya. • Know story literature, champu kavya & purabhilekhas
MA II	SAN-301	<ul style="list-style-type: none"> • Know the definition of rupak. • Know the awareness of famous drama of kalidas <i>abhigyanashakuntalm.</i> • Learn tools and technique of great sanskrit drama of kalidasa. • Know about the criticisms of drama.
	SAN-302	<ul style="list-style-type: none"> • Acquire with vedic words and their meanings. • Know the concepts of <i>nirukta</i> of yaskacharya. • Get awareness of patnaji <i>mahabhashya.</i> • Understand the theory of development of words in <i>nirukta.</i>

	SAN-303	<ul style="list-style-type: none"> • Know the ancient tradition of philosophy. • Know the concepts' of samkhya karika. • Get information about the philosophical approach of samkhya karika.
		<ul style="list-style-type: none"> • Know about the criticisms of samkhya karika.
	SAN-304	<ul style="list-style-type: none"> • Know the importance of creative language. • Know the basic knowledge of sanskrit language. • Get awareness of language skills. • Know the basic grammar of sanskrit language.
		<ul style="list-style-type: none"> • Know the importance of modern literature. • Study the history of modern literature. • Get awareness of social and geographical aspects in modern literature
	SAN-305	<ul style="list-style-type: none"> • The students will enable to know the literary skills in modern sanskrit language.
	SAN-401	<ul style="list-style-type: none"> • Know definition of natyashastra. • Know the concepts' of bhartas natyashastra. • Get awareness of the tools and technical study of natyashastra. • Understand the importance of rasa & bhavas in drama.
	SAN-402	<ul style="list-style-type: none"> • Know accented and pronunciation of words. • Know the theory of origin & development of language. • Get awareness with importance of linguistics. • Enable to know the family of language.
	SAN-403	<ul style="list-style-type: none"> • The students will know about the social aspects in yoga. • The students will know the importance of yoga in human life . • The students will be aware the yoga in human life. • The students will enable to know the contribution of 'yoga' in Indian society.
	SAN-404	<ul style="list-style-type: none"> • Know the importance of various types of basic grammar • Know the basic knowledge of Sanskrit language. • Get aware of language skills. & creative language. • Enable to know the literary & grammatically skills of Sanskrit language
	SAN-405	<ul style="list-style-type: none"> • Understand the importance of sampradays & its origin. • Know the history of all sampradyas. • Be aware of alankar & niti sampradayas

DEPARTMENT OF SOCIOLOGY

Class	Course	Outcomes (Student will be able to)
FYBA	Soc : 111	<ul style="list-style-type: none"> Students understood discipline and basic concepts In Sociology and social Structure. Students will be able understand the emergence of Sociology as a science.
	Soc : 112	<ul style="list-style-type: none"> Understand the various aspects of society from a sociological perspective. Students will be able to define, compare and contrast, explain and apply the various concepts in sociology to one's day to day life.
	Soc : 121	<ul style="list-style-type: none"> Students will be able understand the Uses of Sociology.
	Soc : 122	<ul style="list-style-type: none"> The course lays the foundation of viewing images and ideas of India thought a sociological lens. It further investigates sociological concepts and institutions in the Indian context. To analyze social Change in relation to religion.
	SYBA	Soc : 231
	Soc : 232	<ul style="list-style-type: none"> The Sociological Knowledge provides students would able to : attitudes to understand the human behavior, phenomena.
	Soc : 230	<ul style="list-style-type: none"> Learn about Demographical Features of Indian Society.
	Soc : 241	<ul style="list-style-type: none"> Knowledge of social issues in order to create social awareness and harmony.
	Soc : 242	<ul style="list-style-type: none"> Acquiring sociological knowledge in the forms of theories and methods would make students good social scientists.
	Soc : 240	<ul style="list-style-type: none"> Knowledge of population would be helpful to the policy makers, researchers and social scientist.
TYBA	Soc 351 - Techniques of Social Research -I	<ul style="list-style-type: none"> a) students Understood nature of social Science research. b) They Understand the importance of research in social science.
	Soc 352 - Tribal society in India - I	<ul style="list-style-type: none"> a) students would be able to understand the issues and problems of tribal communities in india. b) Students will be benefited to get job opportunities in the filed of tribal development and NGOs.
	Soc 353 - Industrial Sociology - I	<ul style="list-style-type: none"> a) Students develop and ability to identify the industrial disputes. b) Students will be able to understand social relation in industry.
	Soc 354 - Social Movement in India -	<ul style="list-style-type: none"> a) After learning this paper, the learners will be able to, understand the dynaics of social movements and their role in the social change and transformation in India. b) At the end of the course, students should be able to distinguish the central principal of different theoretical perspective in the sociology of social movements and relate them to specific historical and empirical contexts.
	Soc 350 - Health and Society - I	<ul style="list-style-type: none"> a) This Course provides knowledge and importance of health. b) knowledge of health helps students to maintain their health.
	Soc 001 - Women in India - I	<ul style="list-style-type: none"> a) Through women studies students become aware of the status of women. b) This course provides awareness of women's problems in india.
	Soc 002 - Political Sociology	<ul style="list-style-type: none"> a) Students learn about the relationship between politics and sociology. b) The awareness will be crated among the students about socio-political factors.

	Soc 361 - Techniques of Social Research-II	a) Quantitative and qualitative approach to Research and Promotes towards research. b) They Understand the importance of research in social science.
	Soc 362 - Tribal society in India - II	a) This course provides knowledge about the socio-economical status of the tribal societies in india. b) Students would be able to understand the issues and problems and of tribal communities in india.
	Soc 363 - Industrial Sociology - II	a) This course provides knowledge about various trade unions in india and analyze their functions. b) Students will be able to understand social relation in industry.
	Soc 364 - Globalization and Society	a) Students identify the various basic concepts in globalization. b) This course help to distinguish between various international financial institution and their functioning.
	Soc 360 - Health and Society - II	a) This course provides knowledge about way of healthy life and system of medicine in India. b) knowledge of health helps students to maintain their health.
	Soc 003 - Women in India - II	a) Students understand necessity of women Empowerment. b) This course provides awareness of women's problems in india.
	Soc 004 - Educational Sociology	a) Students are introduced to old and new debates in sociology of education so as to inculcate the capacity to participate in current issues of society. b) An understanding of the social dimensions of education and its dialectical relationship to the production and reproduction of various social structures categories and identities.
MA I	Soc : 101	• Understood basic knowledge of Social structure & Change of Society and major Segment in social life.
	Soc : 102	• Understanding the grand foundational themes of Sociology.
		• Understood history of social theory, social and political understanding of the society.
	Soc : 103	• Students Understood Nature of Scientific Method in Social Science Research.
		• Quantitative and Qualitative approach to Research and Promotes towards research.
	Soc : 104	• Understanding of dynamic between natural and social worlds from a sociological perspective.
		• Understood population theory and policy, challenges of population growth.
	Soc : 105	• Understand concepts and theories underlying social problems in India and social problems.
	Soc : 201	• Understand the emergence of Sociology as a science.
	Soc : 202	• Understanding the characteristics and dynamics of the social world, and how postclassical sociologists attempt to understand the social world.
		• Appreciating the relevance and limits of the contemporary theories or theoretical approaches to make sense of social reality.
	Soc : 203	• Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods and analysis of data. Some knowledge of elementary statistics is also provided to the students to acquaint them with quantification of data.
	Soc : 204	• Students understand role of media and New Methodologies
		• To analyze media in the context of globalization, impact of media on society.
	Soc : 205	• Knowledge of social issues in order to create social awareness and harmony
		• Students are able to understand social issues and are empowered to face social problems.

MA II	Soc : 301	<ul style="list-style-type: none"> This course provides an opportunity for the students to become familiar with the basic concepts in the field of sociology of development.
	Soc : 302	<ul style="list-style-type: none"> Understanding gender as a social construct.
	Soc : 303	<ul style="list-style-type: none"> Familiarity with theoretical perspectives on gender. Providing sociological understanding of rural social structure, change and development in India. Knowing about the rural education, health and globalization.
	Soc : 304	<ul style="list-style-type: none"> The awareness will be created among the students about the latest and scientific techniques of research. Make students knowledgeable consumers and producers of research applicable to social problems or issues.
	Soc : 305	<ul style="list-style-type: none"> The student understands social welfare as social fact. Students is open for making own arguments and opinions on problems of social group.
	Soc : 401	<ul style="list-style-type: none"> Various theories of development are presented in order to become aware of the different interpretations of development.
	Soc : 402	<ul style="list-style-type: none"> Understanding gender as a social construct. Critical understanding of the role of gender in one's own life and actions.
	Soc : 403	<ul style="list-style-type: none"> Providing sociological understanding of rural social structure, change and development in India. Knowing about the rural education, health and globalization.
	Soc : 404	<ul style="list-style-type: none"> The awareness will be created among the students about the latest and scientific techniques of research. Make students knowledgeable consumers and producers of research applicable to social problems or issues.
	Soc : 405	<ul style="list-style-type: none"> Acquaintance with the conceptual, theoretical and historical aspects of human rights and duties. Acquaintance with the state of human rights and duties in India.

DEPARTMENT OF STATISTICS

Class	Course	Outcomes (Student will be able to)
FYB Sc	ST-111	<ul style="list-style-type: none"> Understand about the collection of the data, condensation and summarization into compact form Understand about the representation of data in a neat, compact and clear form Compare the two or more data sets Help in planning, investigation and sample surveys Explore about the various Statistical institutes and organizations: ISI, NSS, Bureau of Economics and Statistics in States, Indian Institute of Population Sciences (IIPS)
	ST-112	<ul style="list-style-type: none"> Compute of measures of central tendency, dispersion, skewness and kurtosis Understand the concepts of Sample space and events, theory of Permutation and Combinations Understand the concept of Probability, Conditional probability of an event, Independence of events Compute probability and apply Bayes' theorem in real life situations problems Understand the concepts of random variable, discrete random variable, Probability mass function Fundamental/Basic Statistical Analysis using Statistical Software MS-Excel

		<ul style="list-style-type: none"> • Understand the concepts of mean, median and mode of discrete random variable
	ST-113	<ul style="list-style-type: none"> • To apply statistical diagrams and graph in real life situations • To apply concepts of central tendency, dispersion skewness, Kurtosis
		<ul style="list-style-type: none"> • To understand the concept of probability and used in real life situations. • To use the various terms related to data in various statistical institutes.
	ST-121	<ul style="list-style-type: none"> • Understand the concepts of Bivariate data, Correlation, types of correlation • Fit regression lines for forecasting • Identify the association of two attributes and independence (if any) • Compare two or more data sets using appropriate tools such as correlation, regression, covariance etc.
		<ul style="list-style-type: none"> • Apply decision theory in real life situation
	ST-122	<ul style="list-style-type: none"> • Understand the concepts of univariate random variable and bivariate random variable • Compute probabilities of events in bivariate probability distribution • Understand about the application of standard discrete distributions in real life situations • Model sampling from Discrete Uniform, Binomial and Hyper geometric distributions • Understand the concept of standardized random variable. • Able to analyze the statistical data using Software such as MS-Excel etc
		<ul style="list-style-type: none"> • To use the concept of correlation in real life. • To have the knowledge of attributes and statistical tools able to used in real life situations
	ST-123	<ul style="list-style-type: none"> • To analyze the statistical data using Software such as MS-Excel etc
SYB Sc	ST-231	<ul style="list-style-type: none"> • Apply geometric and normal probability distribution in real life situations • Identify discrete and continuous distribution. • Apply exponential and gamma distribution in real life situations. • Understand underlying assumptions for common probability distributions. • Make transformation of random variables. • Obtain the expectation of a random variable and its function.
		<ul style="list-style-type: none"> • Understand multiple linear regression models and its utility in real life situations. • Apply time series models in real life situations. • Understand chance causes of variation and assignable causes of variation. • Test process stability using control chart.
	ST-232	<ul style="list-style-type: none"> • Apply statistical process control techniques in real life situations.
		<ul style="list-style-type: none"> • To apply Geometric and Normal distribution in the real life situations, • To obtain model sample from geometric and Normal distribution • To fit regression equation, to compute and interpret multiple and partial correlation coefficient, • To construct and interpret control charts for quality control purposes, • To determine trend values and seasonal indices for the given time series data.
	ST-233	<ul style="list-style-type: none"> • To fit regression equation, to compute and interpret multiple and partial correlation coefficient, • To construct and interpret control charts for quality control purposes, • To determine trend values and seasonal indices for the given time series data.
		<ul style="list-style-type: none"> • Understand how to download and install R software.
	ST-230	<ul style="list-style-type: none"> • Understand how to download and install R software.

		<ul style="list-style-type: none"> • Know various R packages with their utility.
		<ul style="list-style-type: none"> • Understand data structures in R.
		<ul style="list-style-type: none"> • Use R software for statistical computations.
		<ul style="list-style-type: none"> • Use R software for exploratory data analysis.
	ST-241	<ul style="list-style-type: none"> • Understand the fundamentals of bivariate continuous distributions.
		<ul style="list-style-type: none"> • Obtain mean, median, mode, mgf etc of beta, chi-square, t and F distribution.
		<ul style="list-style-type: none"> • Apply sampling distributions chi-square, t and F in real life situations.
		<ul style="list-style-type: none"> • Understand interrelations among normal, chi-square, t and F distributions.
		<ul style="list-style-type: none"> • Derive probability density functions of chi-square, t and F distributions
	ST-242	<ul style="list-style-type: none"> • Understand concept of statistic, estimator and sampling distributions.
		<ul style="list-style-type: none"> • Construct null hypothesis and alternative hypothesis.
		<ul style="list-style-type: none"> • Understand types of errors in testing of hypothesis.
		<ul style="list-style-type: none"> • Apply large sample tests in real life situations
		<ul style="list-style-type: none"> • Perform one way and two way ANOVA
	ST-243	<ul style="list-style-type: none"> • To understand sampling distribution of a statistic.
		<ul style="list-style-type: none"> • To apply large sample test in the real life situations.
		<ul style="list-style-type: none"> • Set up and perform one way and two way ANOVA
		<ul style="list-style-type: none"> • Sketch pdf and cdf of chi-square, t and F distribution
		<ul style="list-style-type: none"> • Solve problems based on beta, chi-square, t and F distribution.
		<ul style="list-style-type: none"> • Develop an ability to apply appropriate statistical methods to summarize and analyze data
	ST-240	<ul style="list-style-type: none"> • Understand methods of construction of index numbers.
		<ul style="list-style-type: none"> • Construct consumer price index number and wholesale price index number.
		<ul style="list-style-type: none"> • Know difference between weighted and unweighted index numbers.
		<ul style="list-style-type: none"> • Understand measures of fertility and mortality.
		<ul style="list-style-type: none"> • Compute various types of death, birth and reproduction rates.
T.Y.B.Sc.	ST-351: Distribution Theory –I	<ul style="list-style-type: none"> • Use Chebychev's inequality and WLLN to solve statistical problem.
		<ul style="list-style-type: none"> • Compute various events probability using Central Limit Theorem.
		<ul style="list-style-type: none"> • Apply hyper geometric and negative binomial distribution in real life situations
		<ul style="list-style-type: none"> • Apply truncated distribution in real life situations.
		<ul style="list-style-type: none"> • Obtain distributions of order statistic
		<ul style="list-style-type: none"> • Understand problem of estimation of parameter. .
	ST-352: Statistical Inference-I	<ul style="list-style-type: none"> • Distinguish between estimator and estimate.
		<ul style="list-style-type: none"> • Test whether estimator is unbiased or not, attains the Cramer-Rao lower bound or not.
		<ul style="list-style-type: none"> • Find efficiency of estimator relative to another estimator.
		<ul style="list-style-type: none"> • Test whether statistic is sufficient or not for unknown parameter.

		· Find estimator of unknown parameter using maximum likelihood estimation and method of moments.
	ST-353: Design of Experiments	1. Plan the experiment, obtain relevant information from it. 2. Understand basic principles of Design of Experiments. 3. Study Standard designs: CRD, RBD, LSD etc. 4. Identify real life situations where the above designs are useful. 5. Compare the various designs using the concept of efficiency.
	ST-354: Sampling Theory	· Obtain simple random sample with replacement and without replacement.. · Identify unbiased estimator of population mean and population mean square. · Derive variance of unbiased estimator in case of SRSWR and SRSWOR. · Determine sample size to conduct sample survey. · Compare various sampling methods. · Construct stratified random sample and systematic random sample in real life situations where these sampling are appropriate. · Apply ratio method of estimation and regression method of estimation.
	ST-355: Introduction to Regression Analysis	· Investigate the relationship between a variable of interest(the response) and the set of related predictor variables. · Formulate and fit the appropriate regression model to the given dataset. · Statistical data analysis using regression in various real-life situations. · Test the significance of regression parameters · Understand the concept of binary response variable, Logit transform, estimation of parameter, interpretation of parameters. · Compare AIC and BIC criteria for model selection in regression analysis.
	ST-356(A): Statistical Quality Control	· Construct, read and interpret control charts for variables and attributes. · Judge process capability. · Design and use sampling inspection plan. · Apply tools such as histogram, scatter diagram, cause and effect diagram etc. · Understand role of statistical methods in ISO. · Estimate percentage of defective product in a production process. · Compute Producer's risk, Consumer's risk, Average Outgoing Quality Limits etc.
	ST-350: Introduction to Python	· Create and run Python programs using required tools. · Understand and explain the results of given Python programs. · Use inbuilt data structures and modules in Python. · Solve statistical problems using Python.
	ST-357: Statistical Practical-I	· Fit negative binomial and truncated distributions.

		· Model sample from negative binomial distribution.
		· Estimate parameters of standard distributions.
		· Apply hyper geometric, negative binomial and truncated distributions.
	ST-358: Statistical Practical-II	· Analyze standard designs CRD, RBD and LSD using R.
		· Estimate missing observations and then analyze design.
		· Compare designs and analyze BIBD and factorial experiments.
		· Analyze factorial experiment with total and partial confounding.
	ST-359: Statistical Practical-III	· Obtain random samples using SRSWR, SRSWOR, Stratified and Systematic sampling.
		· Estimate population parameters.
		· Construct and interpret regression equations. Or Calculate transition probability matrix
		· Construct control charts and OC curves, AOQ curves etc. Or Identify types of classes of Markov Chains etc.
	<u>SEM VI</u>	· Use continuous uniform distribution in real life situations.
	ST-361: Distribution Theory -I	· Derive probability distributions of functions of uniform random variables.
		· Understand relation between normal distribution and lognormal distribution.
		· Apply lognormal and Weibull distribution in real life situations.
		· Identify situations where Cauchy and Laplace distribution is applicable.
		· Use multinomial and bivariate normal distribution in real life situations.
	ST-362: Statistical Inference-II	1. Construct simple statistical hypothesis and composite statistical hypothesis
		2. Determine probability of the error of first kind and second kind.
		3. Test simple hypothesis against the alternative hypothesis.
		4. Write critical regions and identify the one that has maximum power among all critical regions.
		5. Apply nonparametric and sequential tests where these tests are applicable.
		6. Find confidence interval for unknown parameter.
	ST-363: C Programming	· Create algorithm and flowchart to solve simple problems using C.
		· Understand procedural language, middle level language, higher level language, general language structure.
		· Design and implement programs that use loops.
		· Solve statistical computational problems using C program.
	ST-364: Elements of Clinical Trials	· Reduce the bias and variability involved during conduction of clinical trials.
		· Estimate the true therapeutic effect of the drug.
		· Analyse the outcomes of experiments using statistical methods
	ST-365: Optimizations Techniques	· Understand the basics of Linear Programming Problems.
		· Solve LPP by appropriate method such as graphical, simplex etc.

		· Write dual of primal problem
		· Solve LPP using its dual.
		· Solve assignment and transportation problem.
		· Construct network and analyze using CPM and PERT.
		· Apply Mont Carlo simulation method.
	ST-366(A): Official Statistics and Applied Statistics	· Understand about the agencies responsible for collection of data on official statistics and their important publications.
		· Understand and construct life tables.
		· Study statistics in psychology and education.
		· Understand the Demand and Supply analysis.
	ST-360: Data Analysis using SPSS	1. Apply SPSS software to compute descriptive statistics.
		2. Understand statistical hypothesis testing procedure using SPSS software.
		3. Write SPSS commands to analyze data.
	ST-367: Statistical Practical-IV	· Fit lognormal distribution.
		· Obtain model samples from Cauchy and Bivariate normal distributions.
		· Solve parametric and nonparametric testing problems
		· Construct confidence interval and SPRT.
		· Analyse the outcomes of experiments using statistical methods.
	ST-368: Statistical Practical-V	· Compute descriptive statistics using C
		· Fit binomial distribution and regression lines using C
	ST-369: Statistical Practical-VI (Project)	1. Collect real life data sets from various fields.
		2. Gain proficiency for real life data analysis.
		3. Work in team and communicate data analysis results to non-statistician

DEPARTMENT OF SOHAM YOGA AND NATUROPATHY

Class	Course	Outcomes (Student will be able to)
FYBA	YOG -111	• Students will be introduced to Yoga.
		• Students will be aware of the concept of Ashtanga Yoga.
		• Yama-Niyama will help to maintain social and family health
		• It will help in developing global human values and forming an ideal personality
	YOG 112	• Students will know the theoretical background of various Yogasanas
		• Students will develop interest in Yoga
		• It will help in the overall development of the students.
	YOG- 121	• It will help in developing moral values.
		• It will help to create a characteristic in students.
		• It will help in maintaining social and family health.
YOG - 122	• Students will get detailed information about Pranayama.	
	• Students will be able to do advanced yoga courses	
	• Physical and mental development of students will happen with the practice of pranayama	
	• Health awareness will be created.	
SYBA	YOG - 231	• Know the importance of yoga and naturopathy for Good Health -
		• The basic principles of Yoga, Philosophy and Naturopathy will be introduced.
	YOG -232	• Eligibility as Assistant Naturopath.
		• Self-employment opportunities will be available
	YOG -230	• Yoga- It will be useful to get self employment opportunities in the field of naturopathy.
		• Gain external healing skills in naturopathy.
	YOG - 241	• Eligibility as Assistant Yoga Teacher.
		• Personality and moral values will develop by yoga and naturopathy.
	YOG - 242	• Physical and mental abilities will be developed in terms of competitive examination
		• Emotional control techniques will be developed
• Moral values will develop.		
YOG - 240	• Moral values will be developing.	
	• Yoga teaching skills will be developed.	
	• Confidence will increase.	
TYBA	SE C- 1 YOG- 350 Diet & Health – I	1] The basics of diet will be introduced.
		2] Awareness about healthy living will be created.
		3] Guidance will be given on proper and Inappropriate diet and consequent immunity.
	DSE- 1 A YOG – 351 Introduction of Antaranga Yoga – I	1] Physical and mental abilities will be developed.
		2] Students will be introduced to various concepts of Antaranga yoga.
		3] Physical and mental stability and harmony will be established

	DSE- 1A YOG- 352 IacitcarP – III	1] Physical and mental health will be improved. 2] Internal forces will develop. 3] The technique of practicing various purifications techniques and postures in yoga will be developed.
	DSE- 2A YOG- 353 Yoga & Health	1] The principles of Yoga Shastra will be introduced. 2] The importance of yoga for health can be learned. 3] Health awareness will be created.
	DSE- 2A YOG- 354 arE tneicnA – agoY	1] The nature of yoga can be known on the basis of ancient texts. 2] Various yoga texts and various concepts of yoga in them will be studied. 3] Introducing the life of a sage-sage will increase the feeling of adopting a yogic lifestyle.
	GE- 1 YOG- 001 Yoga- Life Education – I	1] Students will be introduced to ethical values. 2] Physical and mental purity and holiness will be developed through moral values and yoga. 3] Awareness about social health will be created.
	GE- 1 YOG- 002 Life Education – II (Practical)	1] The science of yoga processes will be pure knowledge. 2] Awareness about physical and mental health will be created. 3] Yoga teaching skills will be developed.
	SEC- 2 YOG- 360 Diet & Health – II	1] There will be a brief introduction to various concepts of diet in naturopathy and Ayurveda. 2] Introduce modern unhealthy diet. 3] Introducing the concepts of routine and menstruation will create awareness about healthy living.
	DSE- 1B YOG- 361- II Introduction of Antaranga Yoga –	1] Awareness about of the importance of mental health. 2] Emotional maturity will create 3] Will be aware of the concepts in various texts of yoga.
	DSE- 1B YOG- 362 IacitcarP – VI	1] Physical and mental health will be improved. 2] Internal forces will develop. 3] Practicing Pranayama and Mudras will establish physical and mental stability and harmony
	DSE- 2B YOG- 363 agoY deilppA	1] Eligibility as Yoga Teacher and Assistant Yoga Teacher. 2] There will be physical and mental preparation for competitive exams. 3] The practice of yogic sleep will develop relaxation techniques.
	DSE- 2B YOG- 364 Yoga- Modern Era	1] Introduce the modern era in yoga and the yogic processes they have developed. 2] Various organizations working in the field of yoga will be introduced. 3] In modern yoga, one will be aware of the developments taking place in the field of yoga.
	GE- 2 YOG- 003 Ethical – Holistic Health & Yoga – I	1] Personal and social moral values will develop. 2] will introduce ethical values in various philosophies. 3] Awareness of social duty and ethics will be created.
	GE- 2 YOG- 004 Ethical – Holistic Health & Yoga – II (Practical)	1] will qualify as an assistant yoga teacher. 2] Personality and moral values will develop. 3] Yoga teaching skills will be developed.
MA-I	YOG 101	<ul style="list-style-type: none"> • Students will learn a scientific and technical introduction to yogic processes. • Students can be teach yoga in a scientific and technical manner in the society.

		<ul style="list-style-type: none"> • It will be physical, intellectual, mental, development of students and society..
	YOG 102	<ul style="list-style-type: none"> • It will be useful to study and practice advanced yogic processes. • Students will learn in-depth knowledge of yogic processes. • Students will study yogic processes with self-experience • Techniques for teaching yogic process will be developed.
	YOG 103	<ul style="list-style-type: none"> • Students will be introduced to various yogic texts. • Students will learn about different branches of yoga. • The personality of a person with a good character will come under the influence of the biography of the righteous.
	YOG 104	<ul style="list-style-type: none"> • Students will be aware of health concepts in various texts. • Students will get detailed information about diet. • Students will be aware of the usefulness of diet for health promotion.
	YOG 105	<ul style="list-style-type: none"> • 1 Students will be introduced to the human body from a yoga view. • There will be detailed information about the identity and function of various systems in the human body. • To use yogic processes on various ailments due to knowledge of physiology
	YOG 201	<ul style="list-style-type: none"> • 1 Advanced Yogic Practice will help students to develop holistically). • Physical, mental, intellectual, spiritual benefits will be obtained. • It will help in maintaining personal, family and social health.
	YOG 202	<ul style="list-style-type: none"> • Awareness about yoga will be created in various sections of the society). • Skills will be developed to teach the yogic process. • It will help in imparting scientific knowledge of yoga to the lower castes of the society.
	YOG 203	<ul style="list-style-type: none"> • 1 (Students will be introduced to yoga in various texts of Hatha Yoga. • Various principles in Patanjali Yoga Sutras will be useful for creating good character. • Students will become aware of difficult yoga practices in Hatha Yoga and their yoga teaching skills will be developed.
	YOG 204	<ul style="list-style-type: none"> • Students will be introduced to useful information for yoga education. • To get employment, student will get the skills of yoga education. • Self-employment opportunities and skills to create employment in the field of yoga will be developed.
	YOG 205	<ul style="list-style-type: none"> • Students will get information about yoga therapy method. • Skills will be developed to use yogic procedures for healing. • After getting information about the causes and symptoms of various ailments and yoga treatment, Can be used from a therapeutic view.
MA-II	YOG 301	<ul style="list-style-type: none"> • Physical and mental health will be improved. • It will develop inner strength. • Physical and mental stability and harmony will establish.
	YOG 302	<ul style="list-style-type: none"> • It will develop of inner strength.

		<ul style="list-style-type: none"> • Structural and functional knowledge of human body will be developed.
		<ul style="list-style-type: none"> • Leadership will develop.
		<ul style="list-style-type: none"> • Skill as a Motivational Speaker will develop.
		<ul style="list-style-type: none"> • Self-control techniques will be developed.
	YOG 303	<ul style="list-style-type: none"> • Useful for accepting real knowledge.
		<ul style="list-style-type: none"> • With the development of moral values, the view of life will be positive.
	YOG 304	<ul style="list-style-type: none"> • Awareness about physical health will be created.
		<ul style="list-style-type: none"> • It will gain knowledge of healthy lifestyle.
		<ul style="list-style-type: none"> • It will useful for recovery without medicine.
		<ul style="list-style-type: none"> • Adopt a healthy diet.
	YOG 305	<ul style="list-style-type: none"> • Researcher attitude will increase.
		<ul style="list-style-type: none"> • Will be aware of social problems.
		<ul style="list-style-type: none"> • Yoga, philosophy and naturopathy etc. can be proved from a scientific point of view.
	YOG 401	<ul style="list-style-type: none"> • It will be useful for the parasympathetic nervous system to become active.
		<ul style="list-style-type: none"> • It will be useful for physical and mental growth and .
		<ul style="list-style-type: none"> • The physical and mental harmony required for the competitive examination will be established.
	YOG 402 A	<ul style="list-style-type: none"> • Useful for solving various social problems through yoga.
		<ul style="list-style-type: none"> • Creative attitude will be developed.
		<ul style="list-style-type: none"> • Real experience of research can be taken.
		<ul style="list-style-type: none"> • Yoga, philosophy, naturopathy will be useful to prove scientifically.
	YOG 402 B	<ul style="list-style-type: none"> • Leadership, writing skills will be developed.
		<ul style="list-style-type: none"> • Time management skills will be developed.
		<ul style="list-style-type: none"> • Contemplation, thinking ability will be developed and study skills will be developed.
	YOG 403	<ul style="list-style-type: none"> • Ancient concepts of vitality will be introduced.
		<ul style="list-style-type: none"> • Spiritual outlook will develop.
		<ul style="list-style-type: none"> • Eligibility for Motivational Speaker and Life Coach.
	YOG 404	<ul style="list-style-type: none"> • Awareness of the importance of mental health.
		<ul style="list-style-type: none"> • Awareness of stress management techniques.
		<ul style="list-style-type: none"> • Emotional maturity will be created.
	YOG 405	<ul style="list-style-type: none"> • Knowledge will be developed to use alternative therapies to modern medicine.
		<ul style="list-style-type: none"> • Yoga for Health - Know the importance of naturopathy.
		<ul style="list-style-type: none"> • Health can be maintained and improve through alternative therapies.

DEPARTMENT OF ZOOLOGY

Class	Course	Outcomes (Student will be able to)
FYB Sc	ZOO-111	<ul style="list-style-type: none"> • Understand the evolution, history of phylum.

		<ul style="list-style-type: none"> • Understand about the Non Chordate animals.
		<ul style="list-style-type: none"> • To study the external as well as internal characters of non chordates.
		<ul style="list-style-type: none"> • To study the distinguishing characters of non chordates.
		<ul style="list-style-type: none"> • Understand the economical importance of Molluscs.
	ZOO-112	<ul style="list-style-type: none"> • Understand the Scope of cell biology, because cell is the basic unit of life.
		<ul style="list-style-type: none"> • Understand the Main distinguishing characters between plant cell and animal cell.
		<ul style="list-style-type: none"> • To study and understand the whole cell organelles with their structure and function.
		<ul style="list-style-type: none"> • Understand the cell cycle and know the importance of various cells in body of organisms.
		<ul style="list-style-type: none"> • Understand the various applications of cells by using cell biology like study of various types of tumour.
	ZOO - 113 Practical	<ul style="list-style-type: none"> • Understand the external characters and water vascular system in sea star .
		<ul style="list-style-type: none"> • Understand the locomotion in protozoa and Modification of foot in molluscs.
		<ul style="list-style-type: none"> • To understand the viruses like chikungunya, Swine flu, tetanus.
		<ul style="list-style-type: none"> • To aware the students for virus carrying vectors, like Aedes, culex and anopheles.
		<ul style="list-style-type: none"> • To understand the various diseases diagnostic methods.
	ZOO-121	<ul style="list-style-type: none"> • Understand the phylum Chordate.
		<ul style="list-style-type: none"> • Understand the basic concepts about chordates.
		<ul style="list-style-type: none"> • Understand the external morphology and sexual dimorphism in chordates.
		<ul style="list-style-type: none"> • Study and understand the various systems, adaptation and dentition in Mammals.
	ZOO - 122	<ul style="list-style-type: none"> • Understand Mendel's laws
		<ul style="list-style-type: none"> • Describe structural organization of prokaryotic & eukaryotic DNA
		<ul style="list-style-type: none"> • Describe prokaryotic replication.
		<ul style="list-style-type: none"> • Explain fine structure of gene.
		<ul style="list-style-type: none"> • Describe prokaryotic transcription.
		<ul style="list-style-type: none"> • Describe prokaryotic translation.
		<ul style="list-style-type: none"> • Explain mutations and mutagens.
	ZOO - 123 Practical	<ul style="list-style-type: none"> • Understand the external characters and water vascular system in sea star .
		<ul style="list-style-type: none"> • Understand the locomotion in protozoa and Modification of foot in molluscs.
		<ul style="list-style-type: none"> • To understand the viruses like chikungunya, Swine flu, tetanus.
		<ul style="list-style-type: none"> • To aware the students for virus carrying vectors, like Aedes, culex and anopheles.
		<ul style="list-style-type: none"> • To understand the various diseases diagnostic methods.
S. Y. B. Sc.	ZOO-231	<ul style="list-style-type: none"> • Learner can differentiate morphological features of the invertebrates.
		<ul style="list-style-type: none"> • Learner can classify an invertebrate
		<ul style="list-style-type: none"> • Learn aspects of the internal body organization using relevant conventions, terminology.
		<ul style="list-style-type: none"> • Identifies, describes and evaluates the social and economic importance Invertebrate
		<ul style="list-style-type: none"> • Develop an understanding of the role of taxonomy in identification of Invertebrate.
	ZOO-232	<ul style="list-style-type: none"> • Understand the method of disease diagnosis.

		<ul style="list-style-type: none"> • Explain the method of screening.
		<ul style="list-style-type: none"> • Learn various diagnostic techniques.
	ZOO-233: Practical	<ul style="list-style-type: none"> • Understand external and internal anatomy and morphology.
		<ul style="list-style-type: none"> • To develop laboratory skills in the students regarding identification and classification of Invertebrate
		<ul style="list-style-type: none"> • Learn to Identify, describes and evaluates the social and economic importance Invertebrate
		<ul style="list-style-type: none"> • Understand the method of disease diagnosis.
		<ul style="list-style-type: none"> • Explain the method of screening.
		<ul style="list-style-type: none"> • Learn various diagnostic techniques
	ZOO-230	<ul style="list-style-type: none"> • Learner would understand the concepts of parasitism and its relationship in the environment
		<ul style="list-style-type: none"> • Learner would understand the life cycle of specific parasites, the symptoms of the disease and its treatment
	ZOO-241	<ul style="list-style-type: none"> • Curiosity will be ignited in the mind of learners, to know more about the fascinating world of animals which would enhance their interest and love for the subject of Zoology.
		<ul style="list-style-type: none"> • Study and understand various system adaptations in higher Chordates
		<ul style="list-style-type: none"> • To provide thorough knowledge about various animal sciences from primitive to highly evolved animal groups
		<ul style="list-style-type: none"> • To make the students aware about conservation and sustainable use of biodiversity
	ZOO-242	<ul style="list-style-type: none"> • Understands concepts of Vermiculture, Poultry and Pearl Culture
		<ul style="list-style-type: none"> • Learn the basic principles involved in the culture and breeding of common Vermiculture, Poultry and Pearl Culture
		<ul style="list-style-type: none"> • Enable to co-op with market and self-employment
	ZOO-243: Practical	<ul style="list-style-type: none"> • Curiosity will be ignited in the mind of learners, to know more about the fascinating world of animals which would enhance their interest and love for the subject of Zoology.
		<ul style="list-style-type: none"> • Study and understand various system adaptations in higher Chordates
		<ul style="list-style-type: none"> • To provide thorough knowledge about various animal sciences from primitive to highly evolved animal groups
		<ul style="list-style-type: none"> • To make the students aware about conservation and sustainable use of biodiversity
		<ul style="list-style-type: none"> • Understands concepts of Vermiculture, Poultry and Pearl Culture
		<ul style="list-style-type: none"> • Learn the basic principles involved in the culture and breeding of common Vermiculture, Poultry and Pearl Culture
		<ul style="list-style-type: none"> • Enable to co-op with market and self-employment
	ZOO-240	<ul style="list-style-type: none"> • Understand bee biology and behaviour: Types of Bees, Life cycle
		<ul style="list-style-type: none"> • Handle beekeeping systems and beekeeping equipment: Bee Keeping Systems/Hives, Installation of Hives, Tools
		<ul style="list-style-type: none"> • Beehive Management: Colony Management etc
		<ul style="list-style-type: none"> • Manage insects, diseases and nuisances in beehive:
		<ul style="list-style-type: none"> • Harvest, process and market the produce: Honey and other by products, Method of Harvesting, time of harvesting, tools and equipment required, Processing of products, marketing etc

TYBSc	TYBSc SEC ZOO-350 Public Health and Hygiene	Learn about healthy dietary habits would be inculcated in the life style of learners in order to prevent risk of developing health hazards in eating habits.
		Get familiarized with various aspects of environmental risks and hazards
		Acquire knowledge regarding epidemiology, prevention, control and management of diseases of public health importance.
		Learn about diagnosis of various diseases and methods to prevent them.
	DSC ZOO-351 Reproductive Biology	Understand the functioning of male and female reproductive systems
		Particularly in humans.
		Learn about the Immunological techniques
		Learn the stages of female reproductive cycle
	DSC ZOO-352 Immunology	Differentiate between innate and adaptive immunity.
		Understood structure and function of lymphoid organs.
		Learn about interaction between antigen and antibody.
		Understood structure and function of the different antibody classes.
		Know basic properties of cytokines and cytokines.
		Acquire knowledge about structure and function of MHC molecules and their role in antigen presentation.
		Understood the complement system and its role in the immune system. Immunological techniques
	DSC ZOO-353 Mammalian Histology	Enrich themselves with histology of different tissues.
		Know the gross anatomical structure of different organ Systems in Mammals.
		Learn the architecture of integrative histology.
	DSC ZOO-354 Animal Biotechnology	Acquire knowledge about animal cell, animal cell culture media components and their role in cell growth and tissue culture techniques.
		Come to know genetically engineered products for human and animal welfare.
		Understand Developing embryo
		Understand applications of hybridoma technique and functions of antibodies.
	DSC ZOO-355 Applied Zoology-II	Understand the science of Fishery, Lac culture and Goatary.
		Know types of fishes and types of goat.
		Learn about care of different animals
	DSC ZOO-356 (A) Insect Vector and Diseases	Understand the general features of insects
		Learn about causes, symptoms and preventive measures of diseases caused by pathogen.
		Understand the life cycle of major insect vector and parasites.
	DSC ZOO-356 (B) Bioinformatics	Understand the basic concepts of Bioinformatics and its significance
		Apply their knowledge of generations, types of computers and programming languages

		Understand the process of sequence alignment methods using web resources
		Appreciate the tools used in proteomics and genomics with their significance
	SEC ZOO-360 Sericulture	Develop an expert manpower to handle the own sericulture Units / entrepreneurship / Corporate sector units. Provide gainful employment, economic development. Improve the quality of life of the people in rural area.
	SEC ZOO-361 Study of Leech and Calotes	Understand the systematic position, habit and habitat of Leech and Calotes Acquire the knowledge about the invertebrates and vertebrate animal type. Understand the structural and functional anatomy details in Leech and Calotes
	SEC ZOO-362 Developmental biology of vertebrates	Understood the process of development of animals, teratogenesis, its molecular basis and causes. Understood the process of gamete to genesis and development of frog. Know implantation, physiology of placenta and knowledge about metamorphosis and the process of Programmed cell death, aging and senescence
	SEC ZOO-363 Biochemistry	Understand the importance of biochemistry Understand a deeper insight in to the fundamentals of biochemistry. Understand the importance of biological macromolecules Understand the students in understanding the classification, functions and application aspects of biomolecular
	SEC ZOO-364 Micro technique	Study cell tissue structure, histology of tissues and details of morphology of animals. Understand applications and scope of Micro technique. Understand Cell tissue structure, histology of tissues and details of morphology of animals. The learner will get Job opportunities in Health institutes, Hospitals and Pathological labs.
	TYBSc SEC ZOO-365 Animal physiology	Know various physiological organ- systems and their importance to the integrative functions of the human body. Describe interactions between different organ systems (homeostasis). Know the anatomy of different physiological systems and their specific functions.
	SEC ZOO-366 (A) Research Methodology	Understand some basic concepts of research and its methodologies. Know writing of dissertations, project proposals, project reports, research papers. Understand intellectual Property Rights – Biopiracy, Understand Copyrights, patent and traditional knowledge and plagiarism
	SEC ZOO-366 (B) Aquatic	Understand the importance of aquatic biomes.

	Biology	
		Understand physico-chemical characteristic of water.
		Understand the basic information on the importance of environment
DEPARTMENT OF POLITICAL SCIENCE		
Class	Course	Outcomes (Student will be able to)
FYBA	POL111	1.Student Can aware their rights and duties. 2.Understand the political ways of thinking.
	POL121	1.. Student Can aware their rights and duties 2.Understand the political ways of thinking
	POL112	1.Students can Understand political process of Indian Federation . 2.Students can make sense of the political reality that surrounds them.
	POL122	1.Students can Understand political process of Indian Federation . 2.Students can make sense of the political reality that surrounds them.
SYBA	POL231	1.This Course creates political base of students. 2.Students can understand different political thoughts and ideology.
	POL232	1.To understand the concept of Rights, Liberty, Equality and Justice. 2.To learn the political obligation, Resistance and Civil disobedience. 3.To understand the concept of political change.
	POL230	1.Students can understand the election process of India. 2.Students will aware all component of electoral system of India.
	POL241	1.This Course creates political base of students. Students can understand the Political Ideology and its utility in Society. 2.Students can make sense of the political environment that surrounds them 3.Students can understand different political thoughts and ideology.
	POL242	To understand the concept of Rights, Liberty, Equality and Justice. To learn the political obligation, Resistance and Civil disobedience. To understand the concept of political change.
	POL240	Students can understand the election process of India. Students will aware all component of electoral system of India.
TYBA	DSE POL351	1.Student will be aware of the movements in the state of Maharashtra. 2.How important is the contribution of Satyashodhak movement, Dalit movement, Adivasi movement and Samyukta Maharashtra movement etc. for the formation of Maharashtra state. Students will know this.
	DSE POL352	1.Student can understand and correlate the current affairs with Theories of international Relations 2. Student will be able to understanding the nature of international relations between countries.
	DSE POL 353	1. Students will become aware of the various concepts and theories of public administration, the importance of public administration and its problems.
	DSE POL354	1.Tracing the evolution of Comparative Politics as a discipline.

		2. Investigating the nature and scope of Comparative Politics.
		3. Analyzing the approaches and models of comparison: systems analysis; structural functionalism; and institutional approach.
	SEC POL350	1. This Course creates ability to practically use of this act.
		2. Students can make sense of the political environment that surrounds them
	GE POL.001	1. This Course creates awareness of administration to the students.
		2. Students can understand various aspect of Indian Administration
	GE POL.002	1. Tracing the evolution of Indian political thought from ancient india to modern India.
		2. Students will be introduced to the basic ideas of Shanti parva & Koutilya, Raja Ram Mohan Roy, Dadabhai Nauroji, & Lokmanya tilak.
	DSE POL 361	1. Students will be aware of the movements in the state of Maharashtra.
		2. Students will understand the importance of the past, present and future of the peasant movement, labor movement, women's movement and environmental movement.
	DSE POL.362	Student will learn how India's foreign policy keeps changing but continuing with basic values, principles and know about india's position in international cooperation.
	DSE POL.363	Student can define and find out the problems and error in indian administrative system.
	DSE POL.364	1. Students will get information about various concepts studied in comparative politics.
		2. Students will know how the concepts presented in various political sstems are applicable and not applicable.
	SEC POL.360	1. Students can understand the importance and application of local self Government in India.
		2. Students will aware all component and aspects of Local Self Government of India.
	GE POL.003	1. This Course creates awareness of administration to the students.
	GE POL.004	1. Tracing the evolution of modern Indian political thought.
		2. Students will be introduced to the basic ideas of Mahatma Gandhi, Pandit Nehru, Dr. Ambedkar and MN Roy.
MA I	POL101	1. Students can understand the importance of ideology. They also understand the role played by political ideologies in contempory politics.
	POL102	1. Students will understand why we study the subject and how current scholarship is informed by what preceded it, students to identify and .conceptualize the major issues in the twenty first century world politics
	POL103	Students will understand political discourse in the twentieth century and beyond.
	POL104	The course expects students to understand the different methods of election study. They can conduct the election survey Independently.
	POL105(DSE1)	1. Student can understand the complex structure of Indian Society. They can relate the thinking of Dr. Babasaheb Ambedkar to Contemporary problems.
	POL105(DSE2)	1. Students can understand the ideological variations across parties, their relationship with social movements and the social bases of parties.

		2.This course aims to understand the Different political Ideologies and to make student aware about their Importance in Politics.
	POL201	1.Students can understand the importance of ideology. They also understand the role played by political ideologies in contemporary politics.
	POL202	1.Students will understand why we study the subject and how current scholarship is informed by what preceded it, students to identify and conceptualize the major issues in the twenty first century world politics.
	POL203	Students can understand and decipher the diverse and often contesting ways in which the ideas of nationalism, democracy and social transformation were discussed in pre and post-independence India.
	POL204 (DSE2)	Student can understand the complex structure of Indian Society. They can relate the thinking of Dr. Babasaheb Ambedkar to Contemporary problems.
	POL204 (DSE2)	1.Students can understand the ideological variations across parties, their relationship with social movements and the social bases of parties.
		2.This course aims to understand the Different political Ideologies and to make student aware about their Importance in Politics.
	POL105	1.Students will understand political discourse in the social context.
MAII	POL301	understand the process of research methods in political science including characteristics of research methodology, research design, data collection, study methods, questionnaire , schedule, sampling technique, research writing.
	POL302	Students can understand the importance of Administration.
	POL303	To understand the political framework of India, constitutional process, social , political , economical determinants, centre-state relations and emerging trends in Indian politics.
	POL304	Student will learn how Media influenced politics. He also learn to make short films.
	POL DSE 305	Student can comprehensively understand the political process of India.
	POL401	To understand the process of research methods in political science including characteristics of research methodology, research design, data collection, study methods, questionnaire, schedule, sampling technique, research writing.
	POL402	Students can define and find out the problems and error in indian administrative system.
	POL403	To understand the political framework of Maharashtra, constitutional process, social, political, economical determinants, centre-state relations and emerging trends in Maharashtra politics.
	POL404	Student can comprehensively understand the political process of sates in India.
	POL405	Student will learn how India's foreign policy keeps changing but continuing with basic values and principles

DEPARTMENT OF VISUAL ARTS

(VISUAL ARTS - PAINTING)

Class	Course	Outcomes (Student will be able to)
FYBVAP	BVAP 111	Use etymological approach to improve their vocabulary. Use grammar effectively.


	BVAP 112	At the end of the course, the students will know about the different culture and the art related to it
	BVAP 113	At the end of the course, the students will be able to Draw figure and in proportion • expressively and in proportion
	BVAP 114	To encourage students to learn about the light and shadow ,and reflections
	BVAP 115	To encourage students to try a different form using foam x sheet , mdf sheet , wood ,etc
	BVAP 121	Build vocabulary using etymological approach. use grammar effectively.
	BVAP 122	At the end of the course, the students will know about the different culture and the art related to it
	BVAP 123	At the end of the course, the students will be able to. Draw figure and in proportion expressively and in proportion
	BVAP 124	To encourage students to learn about the light and shadow ,and reflections
	BVAP 125	To help students study objects thoroughly
SYBVAP	BVAP 231	Will have understood the importance of English Vocabulary. Will have acquired essential vocabulary. will have enhanced grammatical accuracy. will be able to use grammatically correct sentences
	BVAP 232	At the end of the course, the students will know about the different culture and the art related to it
	BVAP 233	Understand and analyze the relevant research in advertising and marketing communication.
	BVAP 234	To encourage students to learn about the light and shadow ,and reflections
	BVAP 235	At the end of the course, the students will know about the different culture and the art related to it/ will have enhanced imagination accuracy
	BVAP 236	At the end of the course, the students will know about the different culture and the art related to it
	BVAP 241	Will have developed the ability to use grammatically correct sentences. will have improved linguistic competence.
	BVAP 242	At the end of the course, the students will know about the different culture and the art related to it
	BVAP 243	Understand and analyze the relevant research in advertising and marketing communication.
	BVAP 244	To encourage students to learn about the light and shadow ,and reflections
	BVAP 245	At the end of the course, the students will know about the different culture and the art related to it
	BVAP 246	To help students study objects thoroughly

DEPARTMENT OF VISUAL ARTS

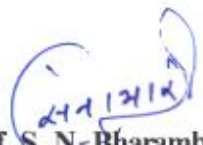
(VISUAL ARTS - SCULPTURE)

Class	Course	Outcomes (Student will be able to)
FYBVAS	BVAS 111	Use etymological approach to improve their vocabulary.
	BVAS 112	At the end of the course, the students will know about the history of Indian art famous Indian artist
	BVAS 113	To encourage students to learn about the proportional value of a figure
	BVAS 114	To encourage students to learn about the light and shadow ,and reflections
	BVAS 115	To encourage students to learn about the proportional value of a figure
	BVAS 121	Build vocabulary using etymological approach

	BVAS 122	At the end of the course, the students will know about the different culture and the art related to it
	BVAS 123	At the end of the course, the students will be able to. Draw figure and in proportion expressively and in proportion
	BVAS 124	To encourage students to learn about the light and shadow, and reflections
	BVAS 125	To encourage students to learn about the proportional value of a figure
SYBVAS	BVAS 231	Will have understood the importance of English Vocabulary. Will have acquired essential vocabulary.
	BVAS 232	To encourage students to learn about the proportional value of a figure
	BVAS 233	At the end of the course, the students will know about the history of Indian art famous Indian artist
	BVAS 234	To encourage students to learn about the light and shadow, and reflections
	BVAS 235	To encourage students to learn about the proportional value of a figure
	BVAS 236	At the end of the course, the students will know about the different culture and the art related to it
	BVAS 241	Will have developed the ability to use grammatically correct sentences. will have improved linguistic competence.
	BVAS 242	To encourage students to learn about the proportional value of a figure
	BVAS 243	At the end of the course, the students will know about the history of Indian art famous Indian artist
	BVAS 244	To encourage students to learn about the light and shadow, and reflections
	BVAS 245	To encourage students to learn about the proportional value of a figure
	BVAS 246	To encourage students to learn about the proportional value of a figure


 (Dr. K. P. Narkhede)
 IQAC Coordinator
 Co-ordinator, IQAC
 M.J. College, Jalgaon




 (Prof. S. N. Bharambe)
 Principal and IQAC Chairperson
PRINCIPAL
 M.J. College, Jalgaon
 (Autonomous)