



Rayat Shikshan Sanstha's

**Shri Sadguru Gangageer Maharaj Science, Gautam Arts and Sanjivani Commerce College, Kopargaon, Dist. Ahmednagar**

## **Course Outcomes Cos** **(Electronic Science)**

On successful completion of the course the students will be able to:

1. Get familiar with basic circuit elements and passive components
2. Understand DC circuit theorems and their use in circuit analysis
3. Understand the basics of conductors, insulators and semiconductor materials.
4. Handle the Oscilloscope, SIGNAL GENERATOR , DMM, electronic instruments and use it.
5. Familiar with concepts of digital electronics
6. Learn number systems and their representation
7. Develop in depth knowledge of scientific and technological aspects of electronics.
8. Understand various software used in electronic circuit design such as C++, MATLAB, Microcontroller, VERILOG, PSPICE etc.
9. Understand the basics of power electronics used in industries.
10. Familiar with basics of analog circuit design, Advanced digital circuit design, advanced communication systems, fiber optic communication, industrial automation.
11. Develop research culture through advanced knowledge about nanoelectronics.
12. Develop practical skills in programming of microcontroller systems and embedded systems.

The following program specific outcomes have been Science. identified for B.Sc Electronic

<b>PSO1</b>	Ability to apply knowledge of mathematics and science in solving electronics related problems
<b>PSO2</b>	Ability to design and conduct electronics experiments, as well as to analyze and interpret data
<b>PSO3</b>	Ability to design and manage electronic systems or processes that conforms to a given specification within ethical and economic constraints
<b>PSO4</b>	Ability to identify, formulate, solve and analyze the problems in various disciplines of electronics

<b>PSO5</b>	Ability to function as a member of a multidisciplinary team with sense of ethics, integrity and social responsibility
<b>PSO6</b>	Ability to communicate effectively in term of oral and written communication skills
<b>PSO7</b>	Recognize the need for, and be able to engage in lifelong learning
<b>PSO8</b>	Ability to use techniques, skills and modern technological/scientific/engineering software/tools for professional practices

**PSO-CO mapping**

Course title	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
Digital Design using Verilog		√	√	√				√
Microcontroller architecture and Programming		√	√	√				√
Analog circuit Design and applications	√	√	√	√				
Nanoelectronics				√	√			
Signals and Systems	√		√					
A. Optics and Fiber Optic Communication B. Electronic Product Design and Entrepreneurship			√	√	√			√
Practical Course I		√	√	√		√		√
Practical Course II		√	√	√		√		√
Practical Course III(Project)		√	√	√	√	√		√
SEC1: EDA Tools			√	√			√	√
SEC2: Internet of Things and applications		√	√				√	√
Modern Communication Systems	√	√	√		√			
Embedded System Design using Microcontrollers		√	√	√			√	√
Industrial Electronics		√	√	√			√	

Introduction to Electronics Manufacturing Processes			√		√		√	√
Process control systems	√		√				√	√
A. PLC SCADA B. Sensors and systems		√	√		√			√
Practical Course I		√	√	√		√		
Practical Course II		√	√	√		√		√
Practical Course III(Project)		√	√	√	√	√		√
Design and fabrication of PCB		√		√			√	√
Mobile application development			√	√			√	√

**SYBSc:**Basic principles of amplifiers and oscillators.

The working of various analog circuits.

Analog circuit design skills.

The knowledge of analog circuits in different applications.

K-maps in the design of combinational circuits.

The design principles of sequential circuits. The design and working of various data converters

The digital circuits in system interfacing and applications.

The block diagram of electronic instruments The working principles of frequently used instruments. Important technical specifications The operating procedure of instruments. Basics of communication systems and telephone system. Amplitude and Frequency Modulation. Basics of AM and FM Receivers. The digital communication system. Students understand:

**TYBSc:** Architecture of 8-bit microcontroller. How to use instruction set and addressing modes of microcontroller. How to develop assembly language programming skills.

Interface memory and I/O devices. The practical design aspects while using

Opamps The basic application circuits of Opamps The specifications and selection criterion for linear ICs Different special purpose ICs and their applications How to refer and understand data manuals. Crystal structure with reference to semiconductors The theory of metal-semiconductor and p-n junctions The characteristics of semiconductor devices Theoretical background of BJT and FETs Fundamentals of C language. How to develop algorithm/flowcharts for problem solving and writing programs. How to use functions, arrays, pointers and file handling in C language. Different types of algorithm. The principles of fiber optic communication system. How to measure different parameter of optical fibers. Essential optical components of Fiber Optic Communication. The applications of fiber optic communication systems. Use of 'C' language for programming the microcontrollers How to use Timers, Interrupts and Serial Communication in Microcontroller. How to apply the knowledge in real world applications Basics of power electronics and familiar with Power Electronic Devices, circuits and applications Power devices and protections of devices Various types of power circuits Applications of power

electronics Essential principles of Electromagnetics The principles of quantum mechanical aspects The basics of nanoelectronics. Features of MATLAB as a programming tool. To promote new teaching model that will help to develop programming skills and technique to solve mathematical problems.

### Physics

- ❖ Comprehend the pursuit of Physics, its history and methodology.
- ❖ Learn the importance of measurement and the methodology of using different measuring devices which is central to physics.
- ❖ Acquire engineering skills and practical knowledge, theoretical basis for doing experiments in related areas, which help the student in their everyday life.
- ❖ Gain basic knowledge for their higher studies.
- ❖ Foundation in optics and photonics is gained by this course and which which prepare the students for an intensive study of advanced topics at a later stage.
- ❖ The physical principles and applications of Electronics which is most necessary for a Physics student is understood by this course.
- ❖ Knowledge of various communication systems and its working is learned.
- ❖ The course creates concern among the students on energy conservation and environmental protection.

### Mathematics

1. Recognize that mathematics permeates the world around us.
2. Appreciate the usefulness, power and beauty of mathematics.
3. Enjoy mathematics and develop patience and persistence when solving problems. 4. Understand and be able to use the language, symbols and notation of mathematics
4. Develop mathematical curiosity and use inductive and deductive reasoning when solving problems.
5. Become confident in using mathematics to analyse and solve problems both in school and in real-life situations.
6. Develop the knowledge, skills and attitudes necessary to pursue further studies in mathematics.
7. Develop abstract, logical and critical thinking and the ability to reflect critically upon their work and the work of others.
8. Develop a critical appreciation of the use
9. of information and communication technology in mathematics.
10. Appreciate the international dimension of mathematics and its multicultural and historical perspectives.
11. Definition and examples of vector space. Concepts of vector space & linear independence.
12. Basis and dimension of a vector space. Definition and example of linear transformation.
13. The inner product spaces. Concepts of Eigen values and Eigen vectors. Concepts of errors . Concept of fitting of polynomial The different types of operators. Definition and examples of limits & continuity.
14. Partial derivative and chain rule .

## BOTANY

- ✦ Get familiar with basics of ecological studies.
- ✦ Understanding of food chain, food web difference and importance
- ✦ To make sure the importance of botany in day to day life.
- ✦ The plant tissue culture expertise are required for advance biotechnological studies.
- ✦ The mushroom cultivation course will surely make candidate self-sustainable by knowing the commercial significance of plant studies.

## ZOOLOGY

- ❖ Get thorough knowledge about various animal sciences from primitive to highly evolved animal group highly evolved animal groups
- ❖ Become aware of applications of
- ❖ Zoology subject in various industries
- ❖ Become ready to be an entrepreneur
- ❖ Acquire skills related to laboratory as well as field based Studies
- ❖ Become aware about conservation and sustainable use of biodiversity 6. Get equipped for further studies in Zoology
- ❖ Understand the socio-economical challenges related to animal sciences 8. Acquire all skills for taking up and shaping a successful career in Zoology

## Chemistry

Chemistry	F.Y.B.Sc.	COs
<b>Paper I Physical &amp; Inorganic Chemistry</b>		Students master laws regarding states of matter, structure of atom, surface chemistry, Catalysis and thermodynamics. Students are also made aware of mole concept, derivations and periodic properties of the elements, depictions and problem solving, including the preliminary theories of bonding, oxidation and reduction.

<b>Paper II Organic &amp; Inorganic Chemistry</b>	Enable to understand fundamental concepts of organic and inorganic chemistry which govern the structure, bonding, properties, structural effects, acid-base theories, preparation methods, reactivity and stereochemistry of organic molecules. It also includes chemistry of S block element periodic trend and application.
<b>Paper III Practical chemistry</b>	Achieve the basic skills required for understanding the concepts, authenticating the basic laws and principles of chemistry & helps in the development of practical skills of the students. The practical syllabus includes preparation, qualitative and
<b>S.Y.B.Sc.</b>	qualitative analysis.
<b>CH211- Physical &amp; Analytical Chemistry</b>	Learn kinetics of chemical reactions, photochemical laws, distribution law and extraction process. Students are introduced to analytical chemistry in which they made aware of inorganic qualitative analysis and analysis of organic compounds (Qualitative & Quantitative). Along with it they also study error in quantitative analysis & ways to minimize them.
<b>CH212 -Organic &amp;Inorganic Chemistry</b>	Learn stereochemistry of different stereo isomers & organic reaction mechanism in which they study different types of reagents, reactions and their mechanisms. Students are introduced to metallurgy to understand chemical reactions and processes occurred in metallurgy. The corrosion & passivity is also included in the syllabus.

<b>CH221 Physical &amp; Analytical Chemistry</b>	Comprehend concepts of Helmholtz free energy & Gibbs free energy as well as free energy of chemical reactions & physical transformation. Students also study different modes of concentration, distillation of solutions of liquid in liquid, partially immiscible liquids & distillation of immiscible liquids. Students introduced to volumetric analysis wherein they study noninstrumental volumetric analysis which comprises with the study of various titrations, indicators used in it & some theoretical aspects related with titrations.
<b>Organic &amp; Inorganic Chemistry</b>	Understand various biomolecules, their role & structural aspects. Students also study different oxidizing and reducing reagents, their selectivity to different substrates, heterocycles, their preparation & reactions. Learn organometallic chemistry & use of organometallic compounds in synthesis of organic as well as inorganic compounds. They also study chemical know adverse effects of chemicals. toxicology to
<b>S. Y. B.Sc.</b>	
<b>Chemistry Practical course</b>	Ability to determine the rate constant of chemical reactions, heat of solution, heat of neutralization, critical solution temperature of partially miscible system & distribution coefficient. Students trained for quantitative analysis of different samples such as Na <sub>2</sub> CO <sub>3</sub> in washing soda, Aspirin in APC tablet, Aluminium in Alum, strength of H <sub>2</sub> O <sub>2</sub> , Copper in Brass & iodometric methods. Students are trained for organic & inorganic qualitative analysis. They are also trained for preparation of organic compounds & chromatographic techniques like TLC
<b>T. Y. B.Sc. Semester III</b>	

<b>CH-331 Physical Chemistry</b>	Learn methods to determine order of reaction, Arrhenius equation and graphical evaluation of energy of activation. Students are introducing principle and applications of rotational, vibrational, Raman and electronic spectroscopy. Students will get familiar with electrolytic conductance phase rule, phase diagram of one and two component systems.
<b>CH-332 Inorganic Chemistry</b>	Learn the principles of various theories of bonding like Sidgwick model, Werner's theory VBT, CFT, MOT. They are also made aware of the principles of isomerism, nomenclature and structures of inorganic complexes.
<b>CH 333 Organic Chemistry</b>	Learn fundamental concepts like acidity, basicity of organic molecules, electrophile, nucleophile and leaving groups. Students aware with stereochemistry of disubstituted cyclohexane. Students are able to understand mechanism of organic reaction. Arrow drawing concept which is important part of reaction mechanism is explained thoroughly in this course. Students are able to identify different types of organic reactions and also they can understand reactivity profile of organic molecules
<b>CH 334 Analytical Chemistry</b>	Learn quantitative and qualitative chemical analysis using the techniques like gravimetry, polarography, AAS, FES and
	spectrophotometer at the levels of macro, micro and trace analysis of metals and nonmetals from industrial and natural samples.

<b>CH-335 Industrial Chemistry</b>	Learn use of agrochemicals like pesticide, insecticides, fungicides, fertilizers and their environmental impact. It include the study of food industry makes them aware of food adulteration, storage and processing of food. This course provides opportunity to students in agrochemicals, food chemicals on industrial level. Students learn manufacturing the basic chemicals such as Ammonia, Sulphuric acid and Nitric acid. The syllabus include study of petrochemicals and eco- friendly fuels, where in students study processing of petrochemical fuels, properties of fuels and applications of fuels, non-conventional energy. Syllabus also includes study of cement and glass industry.
<b>CH-336 (D)</b>	Understand soil, air and water pollution. The Environmental and green Chemistry pollutants and their effect, sources and method to minimize or prevent the pollution. It also include principle of green Chemistry, new environmental methodology for synthesis, replace toxic concentrated chemical by less hazards
<b>T. Y. B.Sc. Semester IV</b>	alternative chemicals.
<b>CH-341 Physical Chemistry</b>	Understand applications of electrochemical Cells, Nuclear Chemistry, Crystal structure and Quantum Chemistry. Learn thermodynamics and EMF, Chemical cell with and without transference, application of EMF measurement such as pHdetermination, determination of solubility and solubility product
<b>CH- 342 Inorganic Chemistry</b>	Learn chemistry of f block elements (lanthanides and actinides), principles and applications of catalysis, organometallic chemistry and the principles and applications of metals, semiconductors and superconductors. It also includes the ionic solid and bioinorganic chemistry.

<b>CH -343 Organic Chemistry</b>	Learn carbanions and their reactions and new retro synthetic analysis concepts are explained to students. learn to differentiate organic compounds with the help of these spectroscopic techniques.
<b>CH 344 Analytical Chemistry</b>	Learn the techniques of separation, identification of purification using chromatographic techniques like TLC, GC, HPLC, electrophoresis etc. It also include nephelometry and turbidimetry analysis and solvent extraction. This knowledge enables them to be good analysis of Quality control chemist in various fields.
<b>CH-345 Industrial Chemistry</b>	Learn properties, ways to manufacture or process and application of different types of polymer, paints, pigments, dyes, soaps, detergents and cosmetics. It also includes theoretical aspects of manufacturing of sugar and fermentation industry. The syllabus further includes study of Pharmaceutical industry where students are introduced to general aspects of drug action, manufacturing of some drugs and its usage. In the last three topics we discuss problems caused by industry such as pollution and generation of waste and what are the ways which can prevent or minimize them.
<b>CH-336 (D) Environmental and green Chemistry</b>	Learn water treatment, effluent management, soil and solid waste management. It also include instrumental method in environmental analysis minimize the environmental pollution. Students are making aware of green house effect, Global warming, energy and renewable energy sources.
<b>CH- 347 Physical Chemistry Practical</b>	Become trained in the techniques such as pH metry, Conductometry, Potentiometry, Colorimetry, Spectrophotometry, Refractometry and G. M. Counter. They learn to use these techniques in order to understand various chemical reactions.
<b>CH- 348 Inorganic Chemistry Practical</b>	Become trained in the IQA of different mixtures of inorganic compounds, and the separation of the metal ions using chromatographic techniques and inorganic

	quantitative analysis using the techniques of gravimetry, volumetry, colorimetry.
<b>CH-349 Organic Chemistry Practical</b>	Achieve the basic skills required for understanding the reactivity of organic molecules and validating the basic principles. It helps in development of practical skills of the students & understanding the importance of chemical safety and also explains the factors affecting reaction outcomes and yields.
<b>M Sc. Organic Chemistry</b>	
<b>CH-110 Fundamentals of Physical Chemistry</b>	Learn the concept of Gibbs and Helmholtz energies, Chemical potential and Expressing Chemical equilibrium in terms of chemical potential. Elements of quantum chemistry, wave particle duality, uncertainty principle, wave function and its interpretation, well behaved functions, ortho normal functions, Schrodinger equation, particle in a box, degeneracy, quantum mechanical harmonic oscillator and quantum tunneling are introduced. Students are made aware of Chemical kinetics and reaction dynamics topics such as Reversible reactions, principle of microscopic reversibility, steady state approximation and elucidating mechanism using SSA. Arrhenius theory, enzyme catalysis and Michaelis-Menten mechanism.
<b>CH -130 Molecular Symmetry</b>	Ability to interpret the properties like Chemistry of Main group elements dipole moment, optical activity, and signals in IR and Raman spectroscopy. Students are also made to understand the properties of main group elements and their applications in fields like catalysis, industry, human metabolism and medicines etc. It also explains organometallic compounds of Si, Sn, Pb, Ga, As, Sb, Bi etc and their synthesis and reactions.
<b>CH-150 Basic Organic Chemistry</b>	Improve basic organic concepts

	<p>know stereochemistry of carbon compounds, how to write structure of molecules &amp; their reactivity. Student should aware about reaction mechanism.</p>
<p><b>CH-190 Safety in Chemical Laboratory and Good Laboratory Practices</b></p>	<p>Are aware of necessary guidelines of safety in chemical laboratory and good laboratory practice. Students get acquainted with different types of hazards at work place, use of personal protective.</p> <p>Are aware about types of fire extinguisher inventory management, storage and disposal material safety data sheets, Students should know how to handle first Aid as while working different chemicals are in contact with the skin, eyes and inhalation and ingestion.</p>
<p><b>CH-210 Fundamentals of Physical Chemistry II</b></p>	<p>learn basic elements of rotational, vibrational, raman and electronic spectroscopy. Nuclear and radiation Chemistry concepts are introduced.</p> <p>Get familiar with Chemical Bonding: Valence Bond theory, hybrid orbital, geometry and hybridization, Molecular Orbital Theory, linear variation method, Approximations underlying Huckel theory, bond order, Aromaticity, Applications of Huckel theory.</p>
<p><b>H- 230 Coordination and Bioinorganic Chemistry</b></p>	<p>Become aware of spectral and magnetic properties of d and f block elements, spectrophotometric analysis of metals like Cr, Mn, Ni and magnetic behavior of various complexes of f block elements in MRI and as TV phosphors.</p> <p>Made aware of a role of metal ion in biologically active compounds like Hb, Mb cytochromes and use of anticancer drugs i.e. platinum complexes.</p>
<p><b>CH-250 Synthetic Organic Chemistry &amp; Spectroscopy</b></p>	<p>Master various basic organic reactions with mechanism, reagent and ylides and various spectroscopic methods like UV, <sup>1</sup>H-NMR, <sup>13</sup>CNMR, IR, Mass spectrometry and their applications.</p>
<p><b>CH-290 General Chemistry-II :A) Modern Separation</b></p>	<p>Understand the importance and properties of mass spectrometry, gas chromatography and high performance liquid Methods and Hyphenated Techniques.</p>

	Get familiar with concept of analytical chemistry like data handling and spreadsheets, Sampling, Standardization and calibration, Separation by precipitation, distillation, extraction and ion exchange chromatography.
<b>CH-107 Physical Chemistry</b>	trained to use the techniques such as pH metry, Conductometry, Potentiometry, Colorimetry, Spectrophotometry, Refractometry and G. M. Counter. Can work as quality control chemist in various labs and such organizations.
<b>CH -127 Inorganic Chemistry Practical</b>	Get the knowledge of basic preparation of various solutions, synthesis of various inorganic complexes and their characterization Becometrained for handling of natural materials and their quantitative analysis which involves disintegration, separation and individual estimations.
<b>CH- 247 Organic Chemistry Practical</b>	Become aware of different organic techniques like purification, crystallization, distillation, TLC, M.P./B.P develop scientific views, organic synthesis and also give knowledge of separation of ternary organic mixtures get knowledge of chemistry software likes, MOPAC, ISIS draw, Chemdraw office.
<b>M.Sc. –II Semester III</b>	
<b>CHO-350 Organic reaction mechanism</b>	learn and understand the basic concept in reaction mechanism. Understand the role of recent reagent, catalyst in mechanism of reaction. Improve the thinking ability of the students towards reaction mechanism.
<b>CHO-351 Spectroscopic Methods in Structure Determination</b>	learn the basic of spectroscopic methods like UV, <sup>1</sup> H-NMR, <sup>13</sup> C-NMR, IR, Mass spectrometry and their application Understand structure determination of known and unknown organic molecules by using spectroscopic data.

<b>CHO-352 Organic Stereochemistry</b>	Understand the stereochemistry of organic reactions Learn stereochemistry of alicyclic rings, fused, bridge and caged rings
	Get ability to predict stereochemistry of organic compounds
<b>CH-353 Photochemistry, pericyclic Reactions and Heterocyclic Chemistry</b>	Improve their imagination power Understand synthesis of different heterocyclic derivatives. Master fundamental and theoretical understanding of heterocyclic chemistry
<b>Semester IV</b>	
<b>CHO-450 Chemistry of Natural products</b>	Learn the different pathways of synthesis of natural products it also helps stereochemistry and structure determination of some natural products Develop the synthetic strategies to prepare different important natural compounds in the laboratory Master multistep synthesis of coumarins, flavonoids, isoflavonoids and terpenoids.
<b>CHO-451 Advanced Synthetic Organic Chemistry</b>	Develop students' ideas in organic synthesis
<b>Carbohydrate and Chiro Approach, Chiral Drugs and Medicinal chemistry</b>	Become aware of the chemistry of biomolecules and basic concept of retrosynthetic strategy and synthesis of chiral drugs Understands pharmacokinetics and pharmacodynamics of the drugs and drug targets.
<b>CHO-453 Designing organic Synthesis and Asymmetric Synthesis.</b>	know the use of Cram rule, Felkin-Anh rule, Cram chelate model, use of chiral auxiliary and chiral reagents in organic synthesis Ability to predict the chiral products in organic synthesis Understand the designing of organic synthesis
<b>M.Sc. -II</b>	
<b>CHO-347 Single stage preparations</b>	Develop the skilled practical hand of the students in laboratory.

<b>CHO-447 Two stage Preparations</b>	Master multistep synthesis of organic compounds and heterocycles Improve the techniques like workup of reactions, purification, TLC , M.P / B.P etc. Improve practical skill and practice of micro scale preparation.
<b>CHO-448 Green Chemistry</b>	Become aware of roll of green chemistry in organic synthesis.green chemistry
<b>Ph.D.</b>	Develops the sense of curiosity and courage to question the existing information and knowledge Learn to exercise imagination and innovative ideas.

## English

Program and Course	Course Outcomes
<b>F.Y. B. A. Compulsory English</b>	Get familiarized with excellent pieces of prose and poetry in English and will be realized the beauty and communicative power of English Understand native cultural experiences and situations and develop humane values and social awareness Acquire overall linguistic competence and communicative skills

<p><b>English General</b></p>	<p>Understand the basics of literature and language  Get familiarized with different types of literatures in English, the literary devices and terms  Understand the literary merit, beauty and creative use of language  Become aware of the technical aspects and their practical usage  Get prepared to go for detailed study and understanding of literature  Get integrated view about language and literature in them</p>
<p><b>F. Y. B. Com. Compulsory English</b></p>	<p>a) Realize the beauty and communicative power of English  b) Understand the importance and utility of English language  c) Get overall linguistic competence and communicative skills</p>
<p><b>S. Y. B. A. Compulsory English</b></p>	<p>a) Get competence for self-learning  b) Realize the beauty and communicative power of English  c) Develop interest in reading literary pieces  d) Acquire overall linguistic competence and communicative skills</p>
<p><b>English General G2</b></p>	<p>a) Understand the basics of short story, one of the literary forms  b) Get familiarized with different types of short stories in English  c) Perceive the literary merit, beauty and creative use of language  d) Become aware of the technical aspects and their practical usage</p>

<b>English Special P. I</b>	<ul style="list-style-type: none"> <li>a) Get acquainted with the terminology in Drama Criticism (i.e. the terms used in Critical Analysis and Appreciation of Drama)</li> <li>b) Understand few sample masterpieces of English Drama from different parts of the world</li> <li>c) Acquire ability to appreciate and analyze drama independently</li> </ul>
<b>English Special P. II</b>	<ul style="list-style-type: none"> <li>a) Understand the terminology in poetry criticism (i.e. the terms used in critical analysis and appreciation of poems)</li> <li>b) Understand a few sample masterpieces of English poetry</li> <li>c) Acquire ability to read, appreciate and critically evaluate the poetry independently</li> </ul>
<b>T. Y. B. A. English Compulsory</b>	<ul style="list-style-type: none"> <li>a) Get introduced to the best uses of language in literature.</li> <li>b) Get familiarized with the communicative power of English</li> <li>c) Become competent users of English in real life situations</li> <li>d) Develop overall personality by improving their communicative and soft skills</li> </ul>
<b>English General</b>	<ul style="list-style-type: none"> <li>a) Understand some of the best samples of Indian English Poetry</li> <li>b) Understand how Indian English poetry expresses the ethos and culture of India</li> <li>c) Become aware of creative uses of language in Indian English Poetry</li> <li>d) Comprehend some advanced areas of language study</li> </ul>
	<ul style="list-style-type: none"> <li>a) Acquire integrated view about language and literature</li> </ul>

<b>English Special III</b>	<ul style="list-style-type: none"> <li>a) Understand the basics of novel as a literary form</li> <li>b) Get Knowledge of the historical development and nature of novel</li> <li>c) Become aware of different types and aspects of novel</li> <li>d) Develop literary sensibility and sense of cultural diversity</li> </ul>
<b>English Special IV</b>	<ul style="list-style-type: none"> <li>a.) Understand the basics of literary criticism</li> <li>b) Comprehend the nature and historical development of criticism</li> <li>c) Get familiar with the significant critical approaches and terms</li> <li>d) Ability to interpret literary works in the light of the critical approaches</li> </ul>
<b>M. A. Part I English Literature from 1550-1798</b>	<ul style="list-style-type: none"> <li>a) Get introduced to major movements and figures of English Literature</li> <li>b) Develop literary sensibility and emotional response to the literary texts and implant sense of appreciation of literary texts</li> <li>c) Understand the artistic and innovative use of language employed by the writers</li> <li>d) Enhanced literary and linguistic competence</li> </ul>
<b>English Literature from 1798-2000</b>	<ul style="list-style-type: none"> <li>a) Grasp major movements and figures of English Literature</li> <li>b) Get literary sensibility for appreciation and also get exposed to artistic and innovative use of language by writers and to various world views</li> <li>c) Enhanced literary and linguistic competence</li> </ul>
<b>Contemporary Studies in English Language</b>	<ul style="list-style-type: none"> <li>a) Understand the basic tools essential for systematic study of language</li> <li>b) Get acquainted with the basic concepts and issues in linguistics</li> <li>c) Get introduced to various sub-disciplines</li> </ul>

	<p>of linguistics</p> <p>d) Acquire ability to apply the acquired linguistic skills in real life situations</p>
<b>Literary Criticism and Theory</b>	<p>a) Get introduced to the nature, function and relevance of literary criticism and theory</p> <p>b) Acquire knowledge of various important critical approaches and their tenets</p> <p>c) Get ability to deal with highly intellectual and radical content and thereby develop their logical thinking and analytical ability</p> <p>d) Become sensible and competent for practical application of critical approach to literary texts</p>
<b>M. A. Part II Indian Writing in English (Core Paper)</b>	<p>a) Understand major movements and figures of Indian Literature in English through the study of selected literary texts</p> <p>2) Acquire literary sensibility and learn to respond emotionally to the literary texts</p> <p>3) Master the artistic and innovative use of language employed by the writers</p> <p>4) Acquire literary and linguistic competence</p>
<b>English Language and Literature Teaching</b>	<p>a) Get acquainted with different theoretical and practical aspects of language and literature teaching.</p> <p>b) Understand different approaches, methods and techniques of teaching English language and literature.</p> <p>c) Become sensitized to the major issues in ELLT in the Indian context</p>
<b>Drama in English</b>	<p>a) Master major movements related to drama, works and dramatists</p> <p>b) Acquire literary sensibility for appreciation and get exposed to artistic and innovative use of language by writers and to various worldviews</p> <p>c) Acquire literary and linguistic competence</p>
<b>Research Methodology</b>	<p>a) Get introduced to the concept of research</p>

	<p>b) Understand the stages of research</p> <p>c) Understand the procedures involved in research</p> <p>d) Become sensitized to the requirements of cohesion and coherence in continuous composition.</p> <p>e) Understand the significance of systematic planning and execution of research activity. f) Master the use of various tools and techniques of research.</p>
<b>History</b>	
<b>FYBA History General Paper-1 (G1)</b>	<p>1. Learn innovative study techniques in the study of History of Maratha to make it value based, conceptual and thought provocative.</p> <p>2. Understand the importance of past in exploration of present context.</p> <p>4. Understand the Socio –economic, cultural and political background of 17th century Maharashtra.</p> <p>5. Acquire the spirit of healthy Nationalism &amp; Secularism among the student.</p>
<b>SYBA History General Paper-II (G2)</b>	<p>1. Students get knowledge of History of freedom movement of India, aims, objectives, problems and progress of Independent India.</p> <p>2. Understand the processes of rise of modern India.</p> <p>3. Get acquainted with fundamental aspects of Modern Indian History.</p> <p>4. Understand the basic concepts/ concerns/ frame work of Indian History</p>
<b>SYBA History Special Paper-I (S1)</b>	<p>1. Survey the sources of History of medieval India.</p> <p>2. Understand the social, economic, religious bases of medieval India.</p> <p>3. Study medieval Indian art &amp; architecture.</p>

<b>TYBA History General Paper III (G3)</b>	<ol style="list-style-type: none"> <li>1. Get knowledge of Modern World and also acquainted with the Socio- economic &amp; Political developments in other countries.</li> <li>2. Get familiarized with political history of Modern World.</li> <li>3. Get acquainted with the main developments in the Contemporary World (Understand the important development in the 20th century World.)</li> </ol>
	<ol style="list-style-type: none"> <li>4. Understand the economic transition in World during the 20th Century.</li> </ol>
<b>TYBA History Special Paper III (S3)</b>	<ol style="list-style-type: none"> <li>1. Understand how history is studied, written and understood.</li> <li>2. Understand the meaning of Evolution of Historiography.</li> <li>3. Get acquainted with the Various Views and approaches to Historiography.</li> </ol>
<b>History of Asia in 20<sup>th</sup> Century (1914-1992) (3179)</b>	<ol style="list-style-type: none"> <li>1. Get familiarized with political history of Asia.</li> <li>2. Unerstand the economic transition in Asia during 20th Centuries.</li> <li>3. Understand the important developments in the 20th century Asia in a thematic approach.</li> <li>4. Get ability to cope with the challenges of globalization.</li> </ol>
<b>MA Part 1: History and its theory</b>	<ol style="list-style-type: none"> <li>1. Understand history and its forces in a better way</li> <li>2. Gets ability to interrogate existing paradigms and challenge</li> <li>3. Understand research in terms of formulating hypotheses and develop broad frames of interaction with other social sciences and attain certain level of interdisciplinary approach.</li> </ol>
<b>Evolution of ideas and institutions in ancient India</b>	<ol style="list-style-type: none"> <li>1. Understand of the social, economic and institutional bases of ancient India.</li> <li>2. Understand ancient Indian history is crucial to understand Indian history as a whole.</li> </ol>

Maratha polity	<ol style="list-style-type: none"> <li>1. Get acquainted with the administrative system of the Marathas in an analytical way</li> <li>2. Get acquainted with the nature of Maratha polity.</li> <li>3. Understand basic components of the Maratha administrative structure, Maratha polity.</li> </ol>
Social background of Dalit movement in Maharashtra	<ol style="list-style-type: none"> <li>1. Get acquainted with a relatively neglected part of social history and the history of the oppressed.</li> <li>2. Understand various concepts.</li> <li>3. Get knowledge of the caste system and evil practices like untouchability and its rigidification in ancient and medieval times.</li> </ol>
<p>History and its practice ii</p> <p>Evolution of ideas and</p> <p>Nature of Dalit Movement in Maharashtra ii</p> <p>M.A Part II: Debates in Indian History</p>	<p>4. Understand the earlier forms of protest by Buddhism, Jainism and later by Bhakti movement, in the medieval period especially in Maharashtra.</p> <p>1. Understand history and its forces and learn to interrogate existing paradigms and challenge the outdated.</p> <p>1. Understand the nature of medieval Indian institutions in medieval society, economy, state formations, and the India main religious currents of the time</p> <p>2. Understand the nature of society and the problems of the challenge to that society, through colonialism, at a later stage Socio-Economic History</p> <p>1. The purpose of the course is to study of the Marathas socio-economic history of the Marathas in an analytical way.</p> <p>2 To acquaint the student with the components of social structure and their functions</p> <p>3. To understand the relationship between religion, caste, customs, traditions, class in 17th and 18<sup>th</sup> century Maratha Society .</p> <p>4 .To enable the student to understand aspects of economic life, to trace the determinants of changes in social and economic life.</p> <p>1 The paper intends to provide an understanding of the changing position of Dalit at conceptual and practical level of social transformation, from 19th century till today.</p> <p>2 This paper also lays emphasis on Ambedkarian Movement, which marks an evolutionary phase in Dalit emancipation. 3 It highlights the constitutional rights for safeguarding the interests of the oppressed 4 It takes into account Dalit literature, which provides space for understanding of Dalit consciousness and adds new dimensions in understanding ‘Dalit</p> <p>1. Get acquainted to some of the issues that have been debated by historians</p> <p>2. Get knowledge of some perspectives with reference to Indian history.</p>

<p><b>Economic History of Modern India</b></p>	<ol style="list-style-type: none"> <li>1. Get acquainted with structural and conceptual changes in Indian economy after coming of the British.</li> <li>2. Become aware of the exploitative nature of the British rule.</li> <li>3. Understand the process of internalization by Indians of new economic Ideas, principle an practices .</li> </ol>
<p><b>Maharashtra in the 19<sup>th</sup> Century</b></p>	<ol style="list-style-type: none"> <li>1. Learn the history of modern Maharashtra from an analytical perspective.</li> <li>2. Understand the dialectical relationship between continuity and change in Maharashtra.</li> <li>3. Get knowledge of the ideas, institutions, forces and movements that contributed to the structural changes in Maharashtra.</li> <li>4. Get acquainted with various interpretative perspectives and ability to articulate their own ideas and views leading to orientation for research.</li> <li>5. Get introduced to regional history within abroad national framework.</li> </ol>
<p><b>British Administrative policies in india. (1765-1892)</b></p>	<ol style="list-style-type: none"> <li>1. Understand various aspects of British Policies in India( 1765-1892)</li> <li>2. Understand British law policy and administration system.</li> </ol>
<p><b>History of modern India ( 1857-1971)</b></p>	<ol style="list-style-type: none"> <li>1. Understand the history of modern India (1857-1971) from an analytical perspective.</li> <li>2. Become aware of the multi dimensionality of modern India .</li> <li>3. Understand the ideas, institutions forces and movements that contributed to the shaping Indian modernity .</li> </ol>
<p><b>World After world war II (1945-2000)</b></p>	<ol style="list-style-type: none"> <li>1. Get acquainted with post world war II Scenario</li> <li>2. Understand contemporary world from the historical perspective. <ol style="list-style-type: none"> <li>1. Understand the history of modern Maharashtra with an analytical perspective and also the ideas, institutions forces and</li> </ol> </li> </ol>
<p><b>The History of Maharashtra 20<sup>th</sup> century</b></p>	<ol style="list-style-type: none"> <li>1. Understand the history of Maharashtra . movements in 20</li> </ol>
<p><b>Maharashtra 20<sup>th</sup> century</b></p>	<ol style="list-style-type: none"> <li>2. Get introduced the students to the regional history within a brod national frame work .</li> </ol>
<p><b>History of Modern India (1857-1971)</b></p>	<ol style="list-style-type: none"> <li>1. Understand the history of ‘Modern India’ (1857-1971) from an analytical perspective;</li> <li>2. Get awared of the multi-dimensionality of Modern India.</li> <li>3. Understand the forces and movements that contributed to the shaping of Indian modernity</li> <li>4. Learn to articulate own ideas and views leading to research orientation.</li> </ol>

	Intellectual History of the Modern West	<ol style="list-style-type: none"> <li>1. Understand a prerequisite for understanding the concepts that are used in history, both of west Europe and India.</li> <li>2. Get acquainted with the intellectual activity that played an important role in shaping events; the transition from medieval to modern times.</li> </ol>
	World after World War II (1945-2000)	<ol style="list-style-type: none"> <li>1. Get acquainted with the post-World War II scenario</li> <li>2. Understand contemporary world from the historical perspective.</li> </ol>
	History of Maharashtra in the 20th Century	<ol style="list-style-type: none"> <li>1. Understand the history of modern Maharashtra with an analytical perspective and also the ideas, institutions, forces and movements in 20th century Maharashtra. 2. Get introduced to the regional history within a broad national framework.</li> </ol>

## Marathi

<b>FYBA Marathi General Paper-1 (G1)</b>	<ol style="list-style-type: none"> <li>1. Get introduced to Marathi literature, language and culture.</li> <li>2. Create interest in Marathi literature.</li> <li>3. Develop the literary taste</li> <li>4. Get ability to appreciate literature.</li> <li>5. Connect literature to real life experience.</li> <li>6. Understand various branches and movements of Marathi literature.</li> <li>7. Develop linguistic skills to meet the requirements in the age of globalization.</li> </ol>
<b>SYBA Marathi General Paper-2 (G2)</b>	<ol style="list-style-type: none"> <li>1. Get introduced to standard writing practices.</li> <li>2. Develop the skill of translation.</li> <li>3. Understand aspects of Biography and Autobiography.</li> <li>4. Develop ability to appreciate and evaluate selected Biographies and Autobiographies in modern Marathi literature.</li> </ol>

<b>SYBA Marathi Special Paper-1 (S1)</b> <b>Marathi Sahityatil Vividh Sahityaprakar</b>	<ol style="list-style-type: none"> <li>1. Get basic knowledge of Marathi literature.</li> <li>2. Get introduced to literary classics of different historical periods.</li> <li>3. Create and cultivate taste in Marathi literature.</li> <li>4. Understand to analyze, evaluate and appreciate literary texts.</li> <li>5. Develop ability for in-depth study of literature.</li> </ol>
<b>SYBA Marathi Special Paper-2 (S2)</b>	<ol style="list-style-type: none"> <li>1. Understand the history of Marathi literature.</li> <li>2. Get the concept of literary history Clarified.</li> <li>3. Get introduced to the nature, source and types of Marathi literature from 1818 to 1960.</li> <li>4. Get acquainted to the major Marathi writers and their works from 1818 to 1960.</li> </ol>
<b>TYBA Marathi General Paper-3 (G3)</b>	<ol style="list-style-type: none"> <li>1. Get acquainted to various movements in Modern Marathi literature.</li> <li>2. Generate interest in modern Marathi literature</li> <li>3. Get introduced to media.</li> <li>4. Develop skill in preparing materials for media including Newspaper, Radio and TV.</li> </ol>
<b>TYBA Marathi Special Paper-3 (S3)</b>	<ol style="list-style-type: none"> <li>1. Understand the nature and function of literature.</li> <li>2. Understand the nature of the process of literary creation and the concept of literary genus.</li> <li>3. Acquire ability to analyze the process of literary appreciation.</li> <li>4. Get acknowledged to some fundamental concepts in literary appreciation.</li> </ol>
<b>TYBA Marathi Special Paper-4 (S4)</b>	<ol style="list-style-type: none"> <li>1. Understand the original development of Marathi language in the light of linguistic theories.</li> <li>2. Understand the evolution of Marathi language.</li> <li>3. Get acquainted to the basic features of Marathi language.</li> <li>4. Get introduced to historical and descriptive linguistics.</li> </ol>

<b>MA Marathi Part I and II</b>	<ol style="list-style-type: none"> <li>1. Acquire writing skills for newspaper and media</li> <li>2. Master the skills of Marathi language</li> <li>3. Understand the importance of media in society</li> <li>4. Increase understanding of literature and critical theories</li> <li>5. Comprehend the concepts in criticism</li> <li>6. Become familiar with value added concepts in criticism</li> <li>7. Understand the tradition of critics and criticism in Marathi Literature</li> <li>8. Enrich critical aptitude</li> <li>9. Awared about nature and scope of interdisciplinary research</li> <li>10. Understand the tradition of researchers in Marathi literature</li> <li>11. Comprehend the relation between the creative writer and his age</li> <li>12. Understand the contribution of various creative artists</li> </ol> <p>Comprehend the nature of folk literature and its types</p> <ol style="list-style-type: none"> <li>13.</li> </ol>
<b>Hindi</b>	
<b>FYBA Hindi General Paper-1 (G1)</b>	<ol style="list-style-type: none"> <li>1. Get familiarized to basic writing in Hindi.</li> <li>2. Generate interest in Hindi literature.</li> <li>3. Get familiarized various types of literature</li> </ol>
<b>SYBA Hindi General Paper-2 (G2)</b>	<ol style="list-style-type: none"> <li>1. Acquire ability to appreciate stories, poems and plays in Hindi.</li> <li>2. Understand various genres in Hindi literature.</li> <li>3. Get acquainted with the socio-political contexts of various Hindi writers.</li> <li>4. Understand nationalistic values through the study of Hindi literature.</li> </ol>
<b>TYBA Hindi General Paper-III (G-3)</b>	<ol style="list-style-type: none"> <li>1. Get acquainted with literary critical terminology used in Hindi language.</li> </ol> <p>Augment translation skill of various types of texts from different languages. 3. Acquire skills of drafting official and scientific documents in Hindi.</p>

<b>Political Science</b>		
<b>FYBA G-I Indian Government And Politics</b>		<ol style="list-style-type: none"> <li>1. Understand the political processes and the actual functioning of the political system</li> <li>2. Get acquainted to the political structure both Constitutional and Administrative.</li> <li>3. Understand local influences that derive from social stratification of castes and jatis, from language, religion, ethic and economic determinants and its impact on the political processes.</li> </ol>
<b>SYBA G – 2 Political Theory &amp; Concepts</b>		<ol style="list-style-type: none"> <li>1. Understand the concepts, ideas and theories in political theory.</li> <li>2. Comprehend the evolution and usage of concepts, ideas and theories with reference to individual thinkers both historically and analytically.</li> <li>3. Understand different ideological standpoints with regard to various concepts and theories</li> <li>4. Get acquainted to the continuing relevance of concepts today and also how an idea and theory of yesterday gains prominence in contemporary political theory.</li> </ol>
<b>TYBA G-3 local Self Government in Maharashtra</b>		<ol style="list-style-type: none"> <li>1. Get introduced to the structure of Local Self Government of Maharashtra.</li> <li>2. Become aware of the various Local Self Institutions, their functions, compositions and importance.</li> <li>3. Recognize the role of Local Government and Local Leadership in development.</li> </ol>
<b>Geography</b>		
<b>F. Y. B. A.</b>	<b>Elements of Geomorphology (G-1)</b>	<ol style="list-style-type: none"> <li>1. Understand the basic concepts in Geomorphology</li> <li>2. Comprehend latest concept in Geomorphology</li> <li>3. Get acquainted with the utility and application of Geomorphology in different regions and environment.</li> <li>4. Get awareness of the need of protection</li> </ol>
<b>S. Y. B. A</b>		and conservation of different landforms

<b>Elements of Climatology and Oceanography (G2)</b>	1. Understand the basic principles and concepts in Climatology and Oceanography.
	2. Get acquainted with the applications of Climatology and Oceanography in different areas and environment. 3. Get awareness of the Planet Earth
<b>Tourism Geography (S-1)</b>	1. Understand basic concepts of Geography & Tourism 2. Comprehend the utility and application of Tourism 3. Understand the interrelationship between tourism and employment generation opportunities. 4. Understand the impact of tourism on Physical and Human Environments.
<b>FUNDAMENTALS OF GEOGRAPHICAL ANALYSIS</b>	1. Learn to use various Projections and Cartographic Techniques. 2. Get acquainted with basic of Statistical data. 3. Understand the principles of surveying, its importance and utility in the geographical study.
<b>Techniques of Spatial Analysis (S-4)</b>	1. Acquire the Knowledge of Toposheet reading / interpretation. 2. Become familiar with the weather instruments and their applications in Geographical phenomenon. 3. Get acquainted with IMD weather maps and also gain the knowledge of weather map reading / interpretation. 4. Become trained in elementary statistics as an essential part of geography. 5. Awareness about GIS

<b>Regional Geography of India (G-3)</b>	<ol style="list-style-type: none"> <li>1. Understand geography of our Nation.</li> <li>2. Comprehend the magnitude of problems and Prospects at National level.</li> <li>3. Understand the inter relationship between the subject and the society.</li> <li>4. Understand the recent trends in regional studies.</li> </ol>
<b>Agricultural Geography (S-3)</b>	<ol style="list-style-type: none"> <li>1. Realize Agricultural activities and its relation with Geography.</li> <li>2. Comprehend new modern technical methods and their applications in Agricultural activities.</li> <li>3. Acquire ability to apply previous knowledge in Problems and Prospects in agriculture</li> </ol>
<b>Economics</b>	
<b>FYBA (G1) Indian Economy Problem and Prospects</b>	<ol style="list-style-type: none"> <li>1. Become aware about the Economy</li> <li>2. Get knowledge about Population of India.</li> <li>3. Understand Problem of Poverty and unemployment.</li> </ol>
<b>SYBA (G2) Modern Banking (2158)</b>	<ol style="list-style-type: none"> <li>1. Understand Modern Banking System.</li> <li>2. Realize how monetary forces operate through a multitude of channels- market, non-market, institutions and among others, the state.</li> <li>3. Understand New Technology in Banking</li> </ol>

<b>F.Y. B.Com. Business Economics (Micro)</b>	<ol style="list-style-type: none"> <li>1. Comprehend concepts in basic micro economic and inculcate an analytical approach to the subject matter.</li> <li>2. Realize the relevance and use of various economic theories.</li> <li>3. Learn to apply economic reasoning to problems of business.</li> </ol>
<b>S.Y.B.Com. Business Economics</b>	<ol style="list-style-type: none"> <li>1. Comprehend the behavior of the economy as a whole.</li> <li>2. Understand the relationship among broad aggregates.</li> <li>3. Learn apply economic reasoning to problems of the economy.</li> </ol>
<b>T.Y. B.Com. Indian &amp; Global Economic Development</b>	<ol style="list-style-type: none"> <li>1. Understand a new approach to the study of the Indian Economy.</li> <li>2. Ability to analyze the present status of</li> </ol>
	the Indian Economy. <ol style="list-style-type: none"> <li>3. Understand the process of integration of the Indian Economy with other economies of the world.</li> </ol> Get acquainted with the emerging issues in policies of India's foreign trade. <ol style="list-style-type: none"> <li>4.</li> </ol>
<b>Psychology</b>	
<b>FYBA G1: General Psychology</b>	<ol style="list-style-type: none"> <li>1. Understand the basic principles of psychology.</li> <li>2. Comprehend the historical trends in psychology, major concepts, theoretical Perspectives and empirical findings.</li> <li>3. Get an overview of the applications of psychology.</li> <li>5. Understand the importance of better mental health in life.</li> </ol>

<p><b>SYBA G2: Social Psychology</b></p>	<ol style="list-style-type: none"> <li>1. Understand the basic concepts, methods and theories in social Psychology</li> <li>2. Comprehend the process of attitude formation.</li> <li>3. Realize the nature, causes and prevention of aggression</li> <li>4. Understand the causes and consequences of group behavior.</li> </ol>
<p><b>TYBA G3: Industrial and Organizational Psychology</b></p>	<ol style="list-style-type: none"> <li>1. Comprehend the emergence of Industrial and Organizational Psychology.</li> <li>2. Get acquainted with the work done in Industrial and Organizational Psychology.</li> <li>3. Understand the significance of training, performance appraisal, leadership models.</li> <li>4. Realize the importance of Engineering Psychology.</li> </ol>
<p style="text-align: center;"><b>BBA</b></p>	<p>Get familiar with basics of Financial Accounting and e-commerce.</p> <ol style="list-style-type: none"> <li>1. Acquire programming languages like C,C++,VB. Net, Java.</li> <li>2. Understand the importance of computers in day to day life using different soft-wares.</li> <li>4. Acquire professional skills to get good jobs in software industries.</li> </ol>