

# Shri Shivaji Shikshan Prasarak Mandal's Loknete Ramdas Patil Dhumal Arts, Science and Commerce College, Rahuri <u>Program outcomes, program specific outcomes and course outcomes</u>

**2.6.1** – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the web link)

# **Department of Mathematics**

# AY 2019-20

Program	F.Y. B.Sc. Mathematics
Program Outcomes	<b>PO1:</b> Give the students a sufficient knowledge of fundamental principles, methods and a clear perception of in numerous power of mathematical ideas and tools and know how to use them by modelling, solving and interpreting.
	<b>PO2:</b> Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science and technology.
	<b>PO3:</b> Enhancing students' overall development and to equip them with mathematical modelling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.
	<b>PO4:</b> Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.
Program Specific Outcomes	<b>PSO1:</b> A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.
	<b>PSO2:</b> A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
	PSO3: A student should get adequate exposure to global and local

	concerns that explore them many aspects of Mathematical Sciences.
	<b>PSO4:</b> A student be able to apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
	<b>PSO5:</b> A student should be made aware of history of mathematics and hence of its past, present and future role as part of our culture.
Course Outcomes	MT-111: Algebra After completing the course, students will able to –
	1. Understand relation, equivalence relation and different types of function.
	2. Solve various problems on properties of integers and use the basic concepts of divisibility, congruence and their applications in basic algebra.
	3. Apply factor theorem, remainder theorem to solve problems on polynomials and by using given relations between roots he will find the roots of polynomials.
	4. Understand complex numbers and its properties.
	MT-112 Calculus-I
	After completing the course, students will able to –
	1. Identify algebraic and order properties of real numbers.
	2. Student will be able to decide convergence of the sequences.
	3. Identify and apply the function properties of real number system such as the completeness property.
	4. Verify the values of limit of a function at a point using the definition of a limit.
	MT-121 Geometry
	After completing the course, students will able to –
	1. Solve the problem of translation and rotational axes.
	2. Solve the problem related plane, distance between two planes and bisector planes.
	3. Solve the problems of lines in three dimension, planes, spheres, and how geometry is related to algebra by using their algebraic equations.
	MT- 122 Calculus-II
	1. Students will be familiar with the techniques of differentiation of function with real variables. Identify and apply the intermediate value theorem and Mean value theorem.
	3. Identify and apply in determinant forms in limit and Hospitals rule. Techniques of expansion of functions by using Taylors Series.

	4. Identify types of differential equations and solve differential equations such as Exact, homogeneous, non -homogeneous, and linear and Bernoulli differential equations etc.
Program	S. Y. B. Sc.
Program Outcomes	<b>PO1:</b> Give the students a sufficient knowledge of fundamental principles, methods and a clear perception of in numerous power of mathematical ideas and tools and know how to use them by modelling, solving and interpreting.
	<b>PO2:</b> Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.
	<b>PO3:</b> Enhancing student overall development and to equip them with mathematical modelling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.
	<b>PO4:</b> Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.
Program Specific Outcomes	<b>PSO1:</b> A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.
	<b>PSO2:</b> A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
	<b>PSO3:</b> A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.
	<b>PSO4:</b> A student be able to apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
	<b>PSO5:</b> A student should be made aware of history of mathematics and hence of its past, present and future role as part of our culture.
Course Outcomes	<b>MT 211:Multivariable Calculus-I</b> After completing the course, students will able to –
	1. Students learn analysis of multivariable functions, continuity, and differentiability.
	2. learn the concepts of multiple integrals and their Application to area and volumes
	MT212 (B): Laplace Transform and Fourier Series After completing this course student will be able to-
	1. Learn the methods and properties of Laplace transform and Inverse Laplace Transform, apply them to solve Linear Differential equations.

	<ol> <li>Apply the fundamental concepts of Fourier series, Fourier Sine series, Fourier Cosine series to find series representation of irrational numbers.</li> <li>MT 221: Linear Algebra After completing this course student will be able to-         <ol> <li>Use the concept of basis and dimension of vector spaces linear dependence and linear independence, to solve problems.</li> <li>Use the concept of inner product spaces to find norm of vectors, distance between vectors, and check the orthogonality of vectors, to find the orthogonal and orthonormal basis.</li> </ol> </li> <li>Apply the properties of linear transformations to linearity of</li> </ol>
	transformations, kernel and rank of linear transformations, inverse transformations to solve the problems of matrix transformations, change of basis.
	MT222(B):Numerical Analysis and It's Application
	After completing this course student will be able to-
	1. Understand different types of errors and Methods to evaluate it.
	2. Understand the methods to solve Algebraic and Transcendental Equations.
	3. Study discrete function and interpolate it by using numerical methods.
	4. Learn different numerical methods to solve differentiation and integration of discrete function.
	5. Learn different numerical methods to solve ordinary differential equations.
Program	T.Y. B.Sc. Mathematics
Program Outcomes	<ul> <li>PO1: Give the students a sufficient knowledge of fundamental principles, methods and a clear perception of in numerous power of mathematical ideas and tools and know how to use them by modelling, solving and interpreting.</li> <li>PO2: Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</li> <li>PO3: Enhancing students' overall development and to equip them with mathematical modelling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.</li> <li>PO4: Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.</li> </ul>
Program Specific Outcomes	<b>PSO1:</b> A student should be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.

	<ul> <li>PSO2: A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.</li> <li>PSO3: A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.</li> <li>PSO4: A student be able to apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.</li> <li>PSO5: A student should be made aware of history of mathematics and hence of its past, present and future role as part of our culture.</li> </ul>
Course Outcomes	<ul> <li>MT 331 :Metric Spaces After completing this course student will be able to -</li> <li>1. Learn the basic abstract ideas of analysis.</li> <li>2. Learn the basic ideas open sets, closed sets, limit point, isolated points, boundary points, and subspace and product metric spaces and apply them to study the nature of sets.</li> <li>3. Learn the theorems on completeness, compactness, and connectedness and use them to solve the problems. Identify the continuity of a function which is defined on metric spaces, at a given point and identify the set of points on which a function is continuous by using different theorems.</li> <li>MT 332: Real Analysis-I After completing the course, students will able to -</li> <li>Understand countable and uncountable sets, sequence and series of real numbers and their convergence and divergence.</li> <li>MT 334:Group Theory After completing the course, students will able to -</li> <li>1. Identify the various algebraic structures with their corresponding binary operations.</li> <li>2. Generalize the groups on the basis of their orders, elements, order of elements and group relations.</li> <li>3. Compare two groups of same orders on the basis of isomorphism Criteria.</li> <li>4. Compute the possible subgroups of given group of specific orders and will recognize them.</li> <li>MT 335:Ordinary Differential Equations After completing the course, students will able to -</li> <li>1. Formulate and model a LPP from a word problem and solve them graphically in 2 - D.</li> <li>2. Modify a primal problem and use the LPP to identify the new solution 3. Understand basic notions like feasibility, infeasibility, basic solutions, unbounded solutions etc.</li> <li>MT 337(F): Number Theory After completing the course, students will able to -</li> <li>1. Formulate and model a LPP from a word problem and solve them graphically in 2 - D.</li> <li>2. Modify a primal problem and use the LPP to identify the new solution 3. Understand basic notions like feasibility, infeasibility, basic solutions, unbou</li></ul>

MT 341:Complex Analysis After completing the course, students will able
to –
1. Solve problems on basic concepts of modulus, argument of a complex
number, DeMoiver's theorem and use them to find roots of an algebraic
equation.
2. Define continuity and differentiability for complex functions.
3. Prove the Cauchy -Riemann equations and apply them to complex
functions in order to determine whether a given continuous function is
complex differentiable.
4. Evaluate integrals along a path - directly from the definition and also via
the Fundamental Theorem of Contour Integration and Cauchy's Theorem.
5. Compute the Taylor and Laurent expansions of simple functions,
determining the nature of the singularities and calculating residues.
6. Prove the Cauchy Residue Theorem and use it to evaluate integrals.
MT 342:Real Analysis -II On satisfying the requirements of this course,
students will have the knowledge and skills to:
Know convergence of sequence and series of functions, Riemann integrals,
Improper integrals and its applications,
MT 344:Ring Theory After completing the course, students will able to –
1. Assess properties implied by the definitions of rings.
2. Use various canonical types of rings.
3. Analyse and demonstrate examples of ideals and quotient rings.
4. Use the concept of isomorphism and homomorphism for rings.
MT 345: Partial Differential Equations On satisfying the requirements of
this course, students will have the knowledge and skills to: Form the partial
differential equations and Solve the problems on Pfaffian differential
equations. Solve the problems on first order and higher degree partial
differential equations and its applications.
MT 347(A) : Optimization Techniques After completing this course
students will have the knowledge and skills to:
1. Solve the project management related problems by using the concepts of
CPM, PERT so as to find out the project completion time.
2. Fond the optimal solutions of Game theory problems, Optimal solution of
two person zero sum game, Solution of mixed strategy games, graphical
solution of games, and linear programming solution of game.
3. Solve the problems on Replacement policy after failure, how to process
the n jobs on two machines or three machines in minimum time so that the
machines remain idle for short time.
4. Solve the optimization unconstrained the optimization problems and
constrained optimization problems of multivariable functions.
MT 347(F): Computation Geometry After completing the course, students
will able to –
1. Design, analyse and develop algorithm and method for solving geometric
problems efficiently.
2. Assess theoretical and practical problems that involves geometry. 3.
Generalize basic notions of reflection, rotation, projection with real life
examples

## **Department of Physics**

### <u>AY 2019-20</u>

Program	F.Y. B.Sc. Physics
Program Outcomes	SEMISTER-I Course code and title: PHY-111 Mechanics and Properties of Matter The curriculum for the B. Sc. (Physics) programme is designed to cater to the requirement of Choice Based Credit System following the University Grants Commission (UGC) guidelines. In the proposed structure, due consideration is given to Core and Elective Courses (Discipline specific - Physics), along with Ability Enhancement (Compulsory and Skill based) Courses. Furthermore, continuous assessment is an integral part of the CBCS, which will facilitate systematic and thorough learning towards better understanding of the subject. The systematic and planned curricula from first year to the third year (comprised of six semesters) shall motivate the student for pursuing higher studies in Physics and inculcate enough skills for becoming an entrepreneur
Program Specific Outcomes	<ul> <li>PO1:To study the various types of motion and their classical Approaches</li> <li>PO2: understood Work Energy Relations</li> <li>PO3:to study Concept of viscous force and viscosity</li> <li>PO4:understanding Properties of Matter</li> </ul>
Program Outcomes	<ul> <li>Course code and title: PHY-112 Physics Principles and Applications</li> <li>On successful completion of this course students will be able to do the following:</li> <li>1. To understand the general structure of atom, spectrum of hydrogen atom</li> <li>.2. To understand the atomic excitation and LASER principles.</li> <li>3. To understand the bonding mechanism and its different types.</li> <li>4. To demonstrate an understanding of electromagnetic waves and its spectrum.</li> <li>5. Understand the types and sources of electromagnetic waves and applications.</li> <li>6. To demonstrate quantitative problem solving skills in all the topics covered</li> </ul>
Program Specific Outcomes	<ul> <li>PO1:To study the structure of atoms and their classical Approaches</li> <li>PO2: study of laser</li> <li>PO3:to study Concept of molecules</li> <li>PO4:understanding Properties of electromagnetic waves</li> <li>PO5:to study the applications of em waves</li> </ul>
Program Outcomes	Course code and title: PHY-113 Physics Laboratory 1A As per syllabus of university
Program Specific Outcomes	We take 8 experiments properly by using various instruments as per university of Pune.
Program Outcomes	SEMISTER-II Course code and title: PHY-121 Heat and ThermodynamicsTo foster scientific attitude, provide in-depth knowledge of scientific andtechnological concepts of Physics. To enrich knowledge through problem solving,minor/major projects, seminars, tutorials,review of research articles/papers, participation in scientific events, study visits,etc.To familiarize with recent scientific and technological developments.To create foundation for research and development in Physics.

Program Specific Outcomes	PO1:to understanding of Concept of thermodynamic
r rogram opcomo outcomos	<b>PO2:</b> study of Conversion of heat into work and it's converse
	<b>PO3:</b> understood of various engines.
	PO3: understood of various engines. PO4:to study Concept of heat & temperature
Program Outcomos	
Program Outcomes	Course code and title: PHY-122 Electricity and Magnetism
	On successful completion of this course students will be able to do the following:
	1.To understand the concept of the electric force, electric field and electric
	potential for stationary charges
	2) Able to calculate electrostatic field and potential of charge distributions using
	Coulomb's law and Gauss's law.
	3) To understand the dielectric phenomenon and effect of electric field on dielectric.
	4) To Study magnetic field for steady currents using Biot- Savart and Ampere's
	Circuital laws.
	5) To study magnetic materials and its properties.
	6) Demonstrate quantitative problem solving skills in all the topics covered.
Program Specific Outcomes	PO1:to study concept of electrostatics
r rogram opecine outcomes	PO1.to study concept of electrostatics PO2:to understood of dielectrics
	<b>PO3</b> :to study the concept of magnetism and their properties
	<b>PO3.</b> to study the concept of magnetism and their properties
	<b>o o</b>
Dragon Outcomes	PO5:To study the properties of magnetism
Program Outcomes	Course code and title: PHY-123 Physics Laboratory 1B
	As per syllabus of university
Program Specific Outcomes	we take 8 experiments properly As per syllabus of university by using various
_	instruments
Program	S.Y. B.Sc Physics
Program Outcomes	S.Y.B.Sc. (Physics) (Sem-III) PHY-231: Mathematical Methods in Physics-I
	Understand the complex algebra useful in physics courses.
	2. Understand the concept of partial differentiation.
	3. Understand the role of partial differential equations in physics.
	4. Understand vector algebra useful in mathematics and physics.
	5. Understand the concept of singular points of differential equations.
Program Specific Outcomes	POS1:- To study complex number in various forms
Program Specific Outcomes	<b>POS1</b> :- To study complex number in various forms <b>POS2</b> :- Detail study and solving the problem on partial differentiation
Program Specific Outcomes	POS2 :- Detail study and solving the problem on partial differentiation
Program Specific Outcomes	<b>POS2</b> :- Detail study and solving the problem on partial differentiation <b>POS3:-</b> to know how the physical quantity having magnitude and direction
Program Specific Outcomes	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential</li> </ul>
-	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential equation</li> </ul>
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	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential equation</li> <li>S.Y.B.Sc. (Physics) (Sem-III) PHY-232(B): Instrumentation</li> <li>1.Learning outcomes: After successful completion of this course,</li> <li>2. the student will be able to Understand the concept of measurement.</li> <li>3. Understand the performance of measuring instruments.</li> </ul>
Course Outcomes	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential equation</li> <li>S.Y.B.Sc. (Physics) (Sem-III) PHY-232(B): Instrumentation</li> <li>1.Learning outcomes: After successful completion of this course,</li> <li>2. the student will be able to Understand the concept of measurement.</li> <li>3. Understand the performance of measuring instruments.</li> <li>4. Design experiments using sensors.</li> </ul>
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Course Outcomes	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential equation</li> <li>S.Y.B.Sc. (Physics) (Sem-III) PHY-232(B): Instrumentation</li> <li>1.Learning outcomes: After successful completion of this course,</li> <li>2. the student will be able to Understand the concept of measurement.</li> <li>3. Understand the performance of measuring instruments.</li> <li>4. Design experiments using sensors.</li> <li>PO1:- understanding of static and dynamic characteristics of measurement</li> <li>PO2:- to basic knowing of transducer and its types</li> </ul>
Course Outcomes	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential equation</li> <li>S.Y.B.Sc. (Physics) (Sem-III) PHY-232(B): Instrumentation</li> <li>1.Learning outcomes: After successful completion of this course,</li> <li>2. the student will be able to Understand the concept of measurement.</li> <li>3. Understand the performance of measuring instruments.</li> <li>4. Design experiments using sensors.</li> <li>PO1:- understanding of static and dynamic characteristics of measurement</li> <li>PO2:- to basic knowing of transducer and its types</li> <li>PO3:- to basic knowing of Pressure and its types</li> </ul>
Course Outcomes Program Specific Outcomes	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential equation</li> <li>S.Y.B.Sc. (Physics) (Sem-III) PHY-232(B): Instrumentation</li> <li>1.Learning outcomes: After successful completion of this course,</li> <li>2. the student will be able to Understand the concept of measurement.</li> <li>3. Understand the performance of measuring instruments.</li> <li>4. Design experiments using sensors.</li> <li>PO1:- understanding of static and dynamic characteristics of measurement</li> <li>PO2:- to basic knowing of transducer and its types</li> <li>PO3:- to basic knowing of Pressure and its types</li> <li>PO4:- To study of signal conditioning and processing by using Op-amp</li> </ul>
Course Outcomes	<ul> <li>POS2 :- Detail study and solving the problem on partial differentiation</li> <li>POS3:- to know how the physical quantity having magnitude and direction</li> <li>POS4 :- understanding basic knowledge of order ,degree linearity of Differential equation</li> <li>S.Y.B.Sc. (Physics) (Sem-III) PHY-232(B): Instrumentation</li> <li>1.Learning outcomes: After successful completion of this course,</li> <li>2. the student will be able to Understand the concept of measurement.</li> <li>3. Understand the performance of measuring instruments.</li> <li>4. Design experiments using sensors.</li> <li>PO1:- understanding of static and dynamic characteristics of measurement</li> <li>PO2:- to basic knowing of transducer and its types</li> <li>PO3:- to basic knowing of Pressure and its types</li> </ul>

	instruments and equipment.1.
	1.Design experiments to test a hypothesis and/or determine the value of an
	unknown
	quantity
	2. Investigate the theoretical background of an experiment.
	3. Setup experimental equipment to implement an experimental approach
	4. Analyze the data, plot appropriate graphs and reach conclusions from data
	analysis
	5. Work in a group to plan, implement and report on a project/experiment.
	6. Keep a well-maintained and instructive laboratory logbook
Program Specific Outcomes	Minimum 10 experiment
	PO1.Circuit Theorems
	PO 2. Transistor Characteristics(Input and Output characteristics of CE
	Configuration)
	PO 3. Single Stage Transistor Amplifier
	PO 4. Study f Rectifiers (Half, Full Wave and Bridge) with different filters
	PO 5. I-V Characteristics of UJT/ UJT as Relaxation Oscillator
	<b>PO</b> 6. Zener as a Regulator (Line and Load Regulation)
	<b>PO</b> 7. Op-amp as inverting and non-inverting amplifier
	<b>PO</b> 8. Study of Wein Bridge / Phase Shift Oscillator using 741
	<b>PO</b> 9. Op-amp as an adder and subtractor
	<b>PO</b> 10. Study of logic gates and verification of de Morgan's theorems
	<b>PO</b> 11. To measure displacement using potentiometer/variable inductor/ variable
	capacitor
	<b>PO</b> 12. Use of CRO(AC/DC Voltage measurement, Frequency measurement)
	<b>PO</b> 13. To measure force using load cell
	<b>PO</b> 14. To measure pressure using elastic diaphragm(In Variable Capacitor /
	Bourdon Tube) 1
	<b>PO</b> 15. To measure magnetic field using Hall Probe for a system of ring magnets
	Using Computer
	PO16 Plotting of various trigonometric functions using spread sheet/any graphic
	software viz. Microsoft Excel, Origin: sinx, cosx, tanx,ex, e-x, logx, lnx, xn 2.
	Plotting of conic sections using spreadsheet /any graphic software viz. Microsoft
	Excel, Origin: circle, ellipse, parabola, hyperbola 3. Inverse, determinant of matrix,
	solution of linear equations using Microsoft Excel or Origin software
Course Outcomes	S.Y.B.Sc. (Physics) (Sem-IV) PHY-241: Oscillations, Waves and Sound
	1.To study underlying principles of oscillations and its scope in development. 2.To
	understand and solve the equations / graphical representations of motion for
	simple harmonic damped, forced oscillators and waves.
	3. To explain oscillations in terms of energy exchange with various practical
	applications.
	4.To solve numerical problems related to undamped, damped, forced oscillations
	and superposition of oscillations.
	5. To study characteristics of sound, decibel scales and applications.
Program Specific Outcomes	PO1: to understanding of linear S.H.M. and its solution.
	PO2: basic knowledge of Differential equation for damped harmonic oscillator and
	its solution, discussion of different cases.
	PO3: give the knowledge of forced oscillations- LCR series circuit.
	PO4 understanding the concept of waves ,its types and its solution.
	PO5: basic knowledge of sound Intensity, Loudness, Pitch, Quality and timbre.

Course Outcomes	S.Y.B.Sc. (Physics) (Sem-IV) PHY-242: Optics
Course Outcomes	1.On successful completion of this course the students will be able to Acquire the
	basic concept of wave optics.
	2.Describe how light can constructively and destructively interfere.
	3.Explain why a light beam spread out after passing through an aperture
	4.Summarize the polarization characteristics of electromagnetic wave
	5.Understand the operation of many modern optical devices that utilize wave
	optics
	6.Understand optical phenomenon such polarization, diffraction and interference in
	terms of the wave model
Program Specific Outcomes	PO1: understanding Geometrical optics and Lens aberrations
Program Specific Outcomes	
	<b>PO2:</b> to study Types of optical instruments: Simple Microscope, Compound
	Microscope
	PO3:to study interference and diffraction
0.01	PO4:understanding of polarization
Course Outcomes	S.Y.B.Sc. (Physics) (Sem-IV) PHY-243: Physics Laboratory-2B
	After completing this practical course students will be able to Use various
	instruments and equipment.
	Design experiments to test a hypothesis and/or determine the value of an
	unknown quantity.
	Investigate the theoretical background of an experiment.
	Setup experimental equipment to implement an experimental approach. Analyze
	the data, plot appropriate graphs and reach conclusions from data analysis.
	Work in a group to plan, implement and report on a project/experiment. Keep a
	well-maintained and instructive laboratory logbook.
Program Specific Outcomes	As per syllabus of university we take 10 experiments properly using various devices.
Course Outcomes	T.Y.B.Sc. (Physics) (Sem-III )
	As far as possible to promote:
	1) Physics Education through Master Texts: It helps in understanding the
	theoretical and mathematical development of the subject and to create interest in
	the subject.
	2) Physics Education through Experimentation: It helps in general to improve
	scientific attitude. So emphasis is given on the development of experimental skills,
	data analysis, calculations, and also on the limitations of the experimental method
	and data and, results obtained.
	3) Physics Education through Problem Solving: It helps in understanding the
	concepts of physics. It underline the strength of equations, formulae, graphs,
	mathematical tools to tackle the problems. So accordingly, we have introduced
	compulsory problem part in the question paper.
	4) Physics Education through History and Philosophy: It helps in understanding the
	conceptual development of the subject and thereby increase the interest in the
	subject. A topic on this is introduced in the Physics Course.
	5) Physics Education through Awareness of Misconceptions: It improves the
	scientific awareness among the students. A discussion on different subjects are
	encouraged.
	6) Physics Education through Proto-research: It creates interest in the subject and
	improves technological aspect. Accordingly, mini projects, hands-on activities,
	projects, models and demonstrations etc. is included in the syllabi.
	7) Physics Education through Qualitative Overview: It creates interest in the

	subject to continue to work in the field of colonge in general and physics in
	subject to continue to work in the field of science in general and physics in
	particular. Accordingly future directions and frontiers of the subject are included in
Deservers On estite Outservers	the syllabi.
Program Specific Outcomes	<b>PSO1:</b> A student should be able to recall basic facts about physics and should be
	able to display knowledge of conventions such as notations, terminology and
	recognize basic knowledge, state important facts resulting from their studies.
	<b>PSO2:</b> A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved.
	<b>PSO3:</b> A student should get adequate exposure to global and local concerns that
	explore them many aspects of physical Sciences.
	<b>PSO4:</b> A student be able to apply their skills and knowledge, that is, translate
	information presented verbally into mathematical form, select and use appropriate
	mathematical formulae or techniques in order to process the information and draw
	the relevant conclusion.
	<b>PSO5:</b> A student should be made aware of history of physics and hence of its
	past, present and future role as part of our culture.
Course Outcomes	PH331: Mathematical Methods in Physics II
	After completing this course student will be able to -
	1. Learn the basic abstract ideas of analysis.
	2. Learn the basic ideas of mathematical method in physics .
	3. Learn the theorems on completeness, compactness, and connectedness and
	use them to solve the problems. Identify the on metric spaces, using different
	theorems.
	PH332: Classical Electrodynamics
	After completing the course, students will able to –
	Understand the concept of electrostatics and magneto statics and electrodynamics.
	PH333: Classical Mechanics
	After completing the course, students will able to –
	1. Identify the various motion of particles
	2. Generalize the groups on the basis of their motions, laws and its applications.
	3. Compare the classical mechanics and quantum mechanics.
	PH334: Atomic and Molecular Physics
	After completing the course, students will able to –
	Understood the concept atoms and various structures of atoms.
	And solving the problems of regarding of atoms.
	PH335: Computational Physics
	After completing the course, students will able to –
	Understood the concept programs and various programs using 'c' and 'c++'. And
	solve by using algorithm , flow chart and outline of program.
	PH336: Elective: I:B: Elements of Materials Science
	After completing the course, students will able to –
	Study the concept of molecules, structure of atoms and how to make the
	molecules by combination of atoms.
	T.Y.B.Sc. (Physics) (Sem-IV)
	PH341: Solid State Physics
	After completing this course student will be able to - 1. Learn the basic idea of solid state physics.
	2. Learn the basic ideas of metal, non-metals and insulators
	3. Learn the theorems on molecular structures of bcc, fcc
	PH342: Quantum Mechanics
	. After completing this course student will be able to -
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1. Learn the basic knowledge of quantum mechanics.
2. Learn equation on time dependant and time independent.
3. Learn the theorems on quantum mechanics.
PH343: Thermodynamics and Statistical Physics
After completing the course, students will able to –
1. Understood the all concept heat and thermodynamics and statistics.
PH344: Nuclear Physics
After completing the course, students will able to –
1.study the basic concept of nuclear physics
2. Basic idea of the structure of nuclear physics.
3. Understood the application of nuclear fission and nuclear fusion.
PH345: Electronics II /Advanced Electronics
After completing the course, students will able to –
1. Study the basic concept of electronics.
2. Basic idea of the advanced electronics.
3. Understood the application of advanced electronic in various field.
PH346: Elective II: J: Lasers
After completing the course, students will able to –
1. Study the basic concept of laser.
2. Basic idea of the material types of laser.
3. Understood the application of lasers in different places.
PH347: Laboratory Course I
After completing this practical course students will be able to Use various
instruments and equipment.
Design experiments to test a hypothesis and/or determine the value of an
unknown quantity.
Investigate the theoretical background of an experiment.
Setup experimental equipment to implement an experimental approach. Analyze
the data, plot appropriate graphs and reach conclusions from data analysis.
Work in a group to plan, implement and report on a project/experiment. Keep a
well-maintained and instructive laboratory logbook
Phy348: Laboratory Course II
After completing this practical course students will be able to Use various
instruments and equipment.
Design experiments to test a hypothesis and/or determine the value of an
unknown quantity.
Investigate the theoretical background of an experiment.
PH349: Laboratory Course III (Project)
After completing this practical course students will be able to Use various
instruments and equipment.
Design experiments to test a hypothesis and/or determine the value of an
unknown quantity.
Investigate the theoretical and practical background of an experiment.

# **Department Of Zoology**

# <u>FY 2019-20</u>

Program	F.Y. B.Sc. Zoology
Program Outcomes	1. PO1 - Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms
	2. PO2 – Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment
	3. PO3 – Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.
	4. PO4 – Understands the complex evolutionary processes and behaviour of animals
	5. PO5 – Correlates the physiological processes of animals and relationship of organ systems 6.
	PO6 – Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species 7.
	PO7 – Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, butterfly farming and vermicompost preparation.
	8. PO8 – Understands about various concepts of genetics and its importance in human health
	9. PO9 - Apply ethical principles and commit to professional ethics and responsibilities in delivering his duties
	10. PO10 – Apply the knowledge and understanding of Zoology to one's own life and work
Program Specific Outcomes	PSO1.To foster curiosity in the students for Zoology.
	PSO2.To create awareness amongst students for the basic and applied areas of Zoology.
	PSO3.To orient students about the importance of abiotic and biotic factors of environment and their conservation.
	PSO4.To provide an insight to the aspects of animal diversity.
	PSO5.To inculcate good laboratory practices in students and to train them about proper handling of lab instruments.
	PSO6. To understand the Animal diversity around us.
	PSO7. To understand the underlying principles of classification of animals.

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	PSO8. To understand the terminology needed in classification.
	PSO9. To understand the differences and similarities in the various aspects of classification.
	PSO10. To classify invertebrates and to be able to understand the possible group of the invertebrate observed in nature.
	PSO11. To understand our role as a caretaker and promoter of life.
	PSO 12. To understand the origin and advancement of higher vertebrates (tetrapoda).
	PSO 13. To understandgeneral characters of different groups of higher vertebrates.
	PSO 14. To classify vertebrates and to become able to understand the possible group of vertebrates observed in nature.
	PSO15. To understand different behaviours and adaptations in higher vertebrates
	PSO16. To understand affinities among different groups of higher vertebrates.
	PSO17. To provide thorough knowledge about various animal sciences from primitive to highly evolved animal groups.
	PSO 18. To make the students aware of applications of Zoology subject in various industries
Course Outcomes	COURSE TITLE: ANIMAL DIVERSITY –I & II
	.CO1. The student will be able to understand classify and identify the diversity of animals.
	CO 2. The student understands the importance of classification of animals and classifies them
	effectively using the six levels of classification.
	CO 3. The student knows his role in nature as a protector, preserver and promoter of life
	which he has achieved by learning, observing and understanding life.
	COURSE TITLE: ANIMAL ECOLOGY
	CO1. The learners will be able to identify and critically evaluate their own beliefs, values and
	actions in relation to professional and societal standards of ethics and its impact on ecosystem
	and biosphere due to the dynamics in population.

	issues and est on a
	issues and act on a
	lifestyle that conserves nature.
	CO3.The Learner understands and appreciates the diversity of ecosystems and applies
	beyond the syllabi to understand the local lifestyle and problems of the community.
	CO4.The learner will be able to link the intricacies of food chains, food webs and link it with
	human life for its betterment and for non-exploitation of the biotic and abiotic components.
	CO 5.The working in nature to save environment will help development of leadership skills
	to promote betterment of environment.
	COURSE TITLE: CELL BIOLOGY
	CO1. Learning outcomes for Cell Biology.
	CO2. The learner will understand the importance of cell as a structural and functional unit of life.
	CO3.The learner understands and compares between the prokaryotic and eukaryotic system
	and extrapolates the life to the aspect of development.
	CO4.The dynamism of bio membranes indicates the dynamism of life. Its working
	mechanism and precision are responsible for our performance in life.
	CO5.The cellular mechanisms and its functioning depends on endo- membranes and
	structures. They are best studied with microscopy.
	agricultural importance and Pest control practices.
Program	S. Y. B. Sc.
Program Outcomes	1. PO1 - Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms
	2. PO2 – Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment

3. PO3 – Apply the knowledge of silk worm rearing
4. PO4 – Understands the complex evolutionary processes and behaviour of animals
5. PO5 – Correlates the physiological processes of animals and relationship of organ systems 6.
PO6 – Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species 7.
PO7 – Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, butterfly farming and vermicompost preparation.
8. PO8 – Understands about various concepts of genetics and its importance in human health
9. PO9 - Apply ethical principles and commit to professional ethics and responsibilities in delivering his duties
10. PO10 – Understands concepts of fisheries, fishing tools and site selection
11PO11- Aqua culture systems, induced breeding techniques, post harvesting tecniques
12PO12 Understands about composition of blood, blood born diseases, autopsy and biopsy
13PO13 Types of immunity, antigens-antibodies and their properties

Programme specific	PSO1.To foster curiosity in the students for Zoology.
outcome	PSO2.To create awareness amongst students for the basic and applied areas of Zoology.
	PSO3.To orient students about the importance of abiotic and biotic factors of environment and their conservation.
	PSO4.To provide an insight to the aspects of animal diversity.
	PSO5.To inculcate good laboratory practices in students and to train them about proper handling of lab instruments.
	PSO6. To understand the Animal diversity around us.
	PSO7. To understand the underlying principles of classification of animals. PSO8. To understand the terminology needed in classification.
	PSO9. To understand the differences and similarities in the various aspects of classification.
	PSO10. To classify invertebrates and to be able to understand the possible group of the invertebrate observed in nature.
	PSO11. To understand our role as a caretaker and promoter of life.
	PSO 12. To understand the origin and advancement of higher vertebrates (tetrapoda).
	PSO 13. To understandgeneral characters of different groups of higher vertebrates.
	PSO 14. To classify vertebrates and to become able to understand the possible group of vertebrates observed in nature.
	PSO15. To understand different behaviours and adaptations in higher vertebrates
	PSO16. To understand affinities among different groups of higher vertebrates.
	PSO17. To provide thorough knowledge about various animal sciences from primitive to highly evolved animal groups.
	PSO 18. To make the students aware of applications of Zoology subject in various industries
Course outcome	ANIMAL DIVERSITY III & IV
	CO1. The students will be able to understand, classify and identify the diversity of higher
	vertebrates.
	CO2. The students will able to understand the complexity of higher vertebrates
	CO3. The students will be able to understand different life functions of

higher vertebrates.
CO4. The students will be able to understand the linkage among different groups of higher
vertebrates.
CO5. The student will become aware regarding his role and responsibility towards nature as a
protector, to understand his role as a trustee and conservator of life which he has achieved by
learning, observing and understanding life.
APPLIED ZOOLOGY I AND II
CO1. To understand the basic life cycle of the honeybees, beekeeping tools and equipments.
CO 2. To learnfor managing beehives for honey production and pollination.
CO 3. To understand the basic information about fishery, cultural and harvesting methods of
fishes.
CO 4. To understand fish preservation techniques.
CO 5. To understand the biology, varieties of silkworms and the basic techniques of silk
production and harvesting of cocoons.
CO 6. To learn the different silkworm species and their host plants.
CO 7. To study types of agricultural pests and Major insect pests of agricultural importance.
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CO 8. To study Pest control practices.
CO 9. The learner understands the basics about beekeeping tools, equipment, and managing
beehives.
CO10. The learner understands the basic information about fishery, cultural and harvesting
methods of fishes and fish preservation techniques.
CO11. The learner understands the biology, varieties of silkworms and the basic techniques
of silk production.
CO12. The learner understands the types of agricultural pests, Major insect

pests of

# **Department of Botany**

# <u>AY 2019-20</u>

Program	F.Y. B.Sc. Botany (Sem I)
Program Outcomes	<b>BO111 (Plant Life &amp; Utilization I):</b> Help to study knowledge of basic science, diversity of algae, fungi, lichen, bryophytes. studied life cycle patterns by dissecting plant specimen.
	<b>BO112 (Plant Morphology &amp; Anatomy):</b> Distinguishing knowledge of morphology, of inflorescence, floral parts, fruit types. Gives importance of anatomy in different branches of Botany.
	<b>BO113 (Practical based on BO111 &amp; BO112):</b> Encourage the curiosity about the practical knowledge of cryptogams (lower plants group) as well as industrial knowledge of Botany.
Program Specific Outcomes	<b>BO111 (Plant Life &amp; Utilization I):</b> Students able to understand the morphological and anatomical difference between the algae, fungi, lichen and bryophytes.
	<b>BO112 (Plant Morphology &amp; Anatomy):</b> Primary study of morphology & anatomy helps to understand the internal organizations of primary plant body of dicotyledons and monocotyledon root, stem & leaf
	<b>BO113 (Practical based on BO111 &amp; BO112):</b> It gives thoroughly knowledge of anatomical differentiation between dicotyledonous and monocotyledonous root, stem & leaf and industrial application and cultivation of oyster mushroom.
Program	F. Y. B. Sc. Botany (Sem II)
Program Outcomes	<ul> <li>BO121 (Plant Life &amp; Utilization II): Inculcate the knowledge of plant groups (higher cryptogams-Pteridophytes &amp; Phanerogams-Gymnosperms &amp; Angiosperms).</li> <li>BO122 (Principles of Plant Science): Enlightening the study of plant cell structure &amp; function as well as plant metabolic pathways through the study of Plant Physiology.</li> </ul>
	<b>BO123 (Practicals based on BO121 &amp; BO 122):</b> Incorporate the knowledge of classification system of Bentham & Hooker whereas study of life cycle of <i>Nephroleipis &amp; Cycas</i> . It helps to understand the economic importance of angiosperms as food, fodder & fibre.

Program Specific Outcomes	<b>BO121 (Plant Life &amp; Utilization II):</b> Students are able to understand the classification, reproduction, distribution, habit, habitat of plant groups. Students come to know the utilization & economic importance of Pteridophytes and Phanerogams like food, fodder, fibre, medicines, horticulture for the society.
	<ul> <li>BO122 (Principles of Plant Science): A student should get a understanding of Structure of DNA &amp; RNA types of chromosomes, their role in pant body in the form of genomic expressions.</li> <li>BO123 (Practicals based on BO121 &amp; BO 122): A student should get adequate exposure to identify mitotic and meiotic cell division, chlorophyll a and b estimation- how much amount of chlorophyll presents in different plant species.</li> </ul>
Program	S.Y. B.Sc. Botany (Sem-I)
Program Outcomes	<b>BO211(Taxonomy of Angiosperms &amp; Plant Community):</b> Know the introduction of taxonomy, systems of classifications, study of plant families.
	<b>BO212 (Plant Physiology):</b> Discussion of plant physiology and its relation to the various metabolic mechanisms inside the plant body such as, water absorption, transpiration, guttation, exudation, ascent of sap, nitrogen metabolism, seed dormancy & germination.
Program Specific Outcomes	<b>BO211(Taxonomy of Angiosperms &amp; Plant Community):</b> Gives knowledge of taxonomy of angiosperms.
Program	<ul><li>BO212 (Plant Physiology): Study of plant metabolic pathways.</li><li>S.Y. B.Sc. Botany (Sem-II)</li></ul>
Course Outcomes	<ul> <li>BO221(Plant Anatomy and Embryology): Study of plant internal morphology, structure of plant ovules, fertilization.</li> <li>BO222 (Plant Biotechnology): Theoretical knowledge of plant tissue culture and single cell protein will help to understand the methods and commercial importance of it.</li> </ul>
Program Specific Outcomes	<b>BO221(Plant Anatomy and Embryology):</b> It gives the detailed knowledge of reproduction method of flowering plants. <b>BO222 (Plant Biotechnology):</b> It creates the awareness of scope, importance and history of Biotechnology. Students will study the plant tissue culture techniques, single cell protein, genetic engineering, genomics & proteomics, bioremediation.
Program	T.Y. B.Sc. Botany (Sem-III)
Course Outcomes	<ul> <li>BO. 331 CRYPTOGAMIC BOTANY-</li> <li>CO-1. Study of cryptogams to understand their Diversity.</li> <li>CO-2. Know the systematics, morphology and structure of algae, fungi , bryophytes, and Pteredophytes.</li> <li>CO-3. Know life cycle pattern of cryptogams.</li> <li>CO-4. Know economic importance of cryptogams.</li> <li>CO-5.Know evolution of algae, fungi, bryophytes and Pteredophytes.</li> <li>BO.332 CELL &amp; MOLECULAR BIOLOGY</li> </ul>

	CO-1.Gain knowledge about cell and its function.
	CO-2.Learn the scope and importance of molecular biology.
	CO-3. Understand ultra structure of cell wall, plasma membrane and
	cell organelles
	CO-4. Understand the biochemistry of cell.
	CO-5. Understand the biochemical nature of nucleic acid and their
	role in living systems.
	BO. 333 GENETICS AND EVOLUTION
	CO-1.Understand the Mendelian and neo Mendelian genetics. CO-2
	Know about interaction of genes, multiple alleles and linkage and
	crossing over. CO-3. Know about sex linked inheritance,
	chromosomal aberrations. CO-4. Know the evolutionary sequence of
	various groups of plants.
	<b>BO.334 SPERMATOPHYTIC AND PALAEOBOTANY</b>
	CO-1. Systematic study of gymnosperms and angiosperms.
	CO-2.Understand the morphological and reproductive character of
	spermatophytic plants.
	CO-3.Understand economic importance of gymnosperms and
	angiosperms.
	CO-4.Understand the diversity among spermatophyte.
	CO-5.To bring investigation of palaeobotanical study in India.
	CO-6.Know, scope and application of Palaeobotany.
	CO-5.Know types of fossils, geological time scale.
	BO.335 HORTICULTURE & FLORICULTURE
	CO-1.Understand economic importance of plant and plant product.
	CO-2. Know the methods of plant propagation.
	CO-3.Understand the group & importance of floriculture
	CO-4.Understand the scope & importance of floriculture.
	CO-5.Understand the methods of cultivation of different flowering
	plants.
	<b>B0.336 COMPUTATIONAL BOTANY</b>
	CO-1.Understand the scope & importance of biostatistics.
	CO-2.Understand the scope and some basic commonly used terms
	like sampling, data, dispersion, population, central tendency etc.
	CO-3.Knowledge to apply statistical analysis to biological data for
	testing different hypothesis
Program	T.Y. B.Sc. Botany (Sem-IV)
Course Outcomes	BO. 341 PLANT PHYSIOLOGY & BIOCHEMISTRY.
	CO-1.Know scope and importance of plant physiology.
	CO-2Understand plant & water relation.
	CO-3.Understand process of photosynthesis, C3, C4, CAM
	pathways.
	CO-4.Understand the process of respiration, growth and
	developmental process in plant.
	CO-5.Understand the biochemistry of cell.
	CO-6.Understand the different biochemical reaction of biomolecules
	in plant cell.
	<b>BO. 342 PLANT ECOLOGY AND BIODIVERSITY</b> .
	CO-1.Know the biotic and abiotic components of ecosystem.
	CO-2.Food chain & food web in ecosystem.
	CO-3.Understand diversity among various groups of plant kingdom.

CO-4.Understand plant community & ecological adaptation in plants.
CO-5. Scope, importance and management of biodiversity.
BO. 343 PLANT PATHOLOGY.
CO-1.Understand scope and importance of plant pathology.
CO-2.Know disease cycle and disease development.
CO-3.Know the effect of plant diseases on economy of crops.
CO-4.Know the methods of studying plant diseases.
CO-5. They can identify the plant diseases like bacterial, nematodal,
and fungal.
CO-6.Know the disease forecasting.
CO-7.Know the prevention and control measures of plant diseases.
<b>BO. 344 MEDICAL AND ECONOMIC BOTANY</b>
CO-1.Understand scope and importance of pharmacognosy.
CO-2.Know the cultivation, collection, processing & importance of
various herbal drugs.
CO-3.Understand the scope of economic botany.
CO-4.Know the botanical resources like non wood forest products.
CO-5.Understand the concept of Ayurvedic pharmacy.
BO. 345 PLANT BIOTECHNOLOGY
CO-1.Understand the fundamental of recombinant DNA technology.
CO-2.Understand tissue culture techniques.
CO-3.Role of microbes in agriculture, medicine & industry.
CO-4.Know the fermentation technology.
CO-5.Understand the concept of bioinformatics, genomics &
proteomics.
CO-6.Understand technical germplasm & cryopreservation.
BO. 346 PLANT BREEDING & SEED TECHNOLOGY.
CO-1.Understand the scope & importance of plant breeding.
CO-2.Know the technique of production of new superior crop
varieties.
CO-3.Know the about heterosis, hybrid vigor etc.
CO-4.Know the process of hybrid variety, development & their
release.
CO-5.Know about seed germination, processing, production etc.

### **DEPARTMENT F CHEMISTRY**

## Program Outcome B.Sc. (Chemistry)

	PO-1. Demonstrate, solve and an understanding of major concepts in alldisciplines of chemistry.
	PO-2. To understand basic facts and concepts in Chemistry while retaining the exciting aspects of Chemistry so as to develop interest in the study of chemistry asa discipline.
	PO-3. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of chemical reactions.
Programme Outcomes	PO-4. To develop the ability to apply the principles of Chemistry PO-5. Find out the green route for chemical reaction for sustainabledevelopment.

## Programme Specific Outcomes B.Sc. (Chemistry)

	PSO-1. To appreciate the achievements in Chemistry and to know the role of Chemistry in nature and in society
	PSO-2. To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions.
	PSO-3. To develop problem solving skills.
	PSO-4. Use modern chemical tools, Models, Chem-draw, Charts and Equipments.
Programme Specific	PSO-5. Know structure-activity relationship.
Outcomes	PSO-6. To be familiarised with the emerging areas of Chemistry and their applications in various spheres of Chemical sciences and to apprise the students

## Course Outcome B.Sc. Chemistry T.Y.B.Sc. Semester-III

Course	<b>Outcomes</b> After completion of these courses students should be able to;
CH-331 Physical Chemistry	<ul> <li>CO-1. Write an expression for rate constant k and half-life period for third order reaction</li> <li>CO-2. Solve the numerical problems based on k, E<sub>a</sub> and A.</li> <li>CO-3 To know the cell constant, types of electrolyte.</li> <li>CO-4.To understands the term refractive index, specific volume, molar volume, and molar refraction, dipole moment, M.I. and spectra of molecule. Derive the expression for rotational spectra for the transition from J to J+1</li> <li>CO-5. Know the meaning of phase, component, and degree of freedom for one and two component system.</li> </ul>

	chemistry
	CO-3. Calculation of charge on complex ion and oxidation number.
	CO-4. Familiar with IUPAC name of coordination compound.CO-5.
	Know the various types of isomerism in coordination
	compounds.CO-6. Know the need of concept of hybridization.
	CO-1. Define organic acids and bases.
	CO-2. Distinguish between geometrical and optical isomerism.
CII 222 Organia	CO-3. Discuss kinetics, mechanism and stereochemistry of SN1 and
CH-333 Organic	SN2reactions.
Chemistry	CO-4. Compare between E1 and E2 reactions.
	CO-5. Understand the evidences, reactivity and mechanism of
	various elimination and substitution reactions.
	CO-1. Know the different terms related with gravimetric analysis.
	CO-2. To understand different TGA techniques.
CH-334 Analytical	CO-3. To study emr and its interaction with matter.
Chemistry	CO-4. To understand different voltametric techniques.
	CO-5. To know the concept of AAS.
	CO-6. To understand emission spectra by FES.
	CO-1. Know the various industrial aspects.
	CO-2. Classify various insecticides, fungicides, pesticides.
CH-335 Industrial	CO-3. Study the food deterioration factors and their control.
Chemistry	CO-4. Understand Non-starch polysaccharides-cellulose-occurrence.
	CO-5. Study the various operations involved in the manufacture and
	compositions of cement, Glass.
CH-332 Inorganic	CO-1. Know the theories of covalent bond formation.
Chemistry	CO-2. Know the meaning of various terms involved in co-ordination

CH-336-B Polymer ChemistryCO-4 Various methods of nomenclature. CO-5 Difference between natural synthetic, organic and inorganic polymers. CO-6 Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight. Mechanisms of polymerization. Polymerization techniques. CO-7 Importance of silicone polymers. Derivatives of cellulose polymers& their applications. Ingredients added to polymer fillers. CO-8 Polymer reactions and applications. Polymer reactions and their effect on physical and chemical properties. CO-9 Advantages of polymer reactions to change their properties.	Polymer	<ul> <li>CO-5 Difference between natural synthetic, organic and inorganic polymers.</li> <li>CO-6 Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight. Mechanisms of polymerization.</li> <li>Polymerization techniques.</li> <li>CO-7 Importance of silicone polymers. Derivatives of cellulose polymers&amp; their applications. Ingredients added to polymer fillers.</li> <li>CO-8 Polymer reactions and applications. Polymer reactions and their effect on physical and chemical properties.</li> </ul>
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### Semester-IV

Course	<b>Outcomes</b> After completion of these courses students should be able to;
CH-341 Physical Chemistry	CO-1.Understand Mechanics of system of particles. CO-2.Know the concept of electrode, cell reaction, types of electrode. CO-3.Solve the cell reaction and calculate Ecell, pH. CO-4. Calculate wavelength,angle, interplanar spacing.

	CO-5.Understand De-Broglie hypothesis and Uncertainty
	principle
	CO-6. Derive Schrodinger's time dependent and independent
	equations
	CO-1 Understand the behaviour of f-block elements.
	CO-2. Know the band theory of metal.
CH-342 Inorganic	CO-3. Understand the nature of solid.
Chemistry	CO-4. Define catalysis and various terms involved in it.
	CO-5. Understand biological role of inorganic ions and
	compounds.
	CO-1.To study UV, IR and NMR spectroscopy.
	CO-2. Discuss different types of rearrangement reactions.
	CO-3. Determine structure of compound by spectroscopic
CH-343 Organic	methods.
Chemistry	CO-4. Understand the difference between carbocation and
	carbanion.
	CO-5.To study alkaloids, Ephedrine, citral molecule with their
	properties and application.
	CO-1. Know the different analytical techniques.
	CO-2. To understand different types of separation techniques.
	CO-3. To study principle, construction and working of GC and
CH-344 Analytical	HPLC.
Chemistry	CO-4. To give an extended knowledge about chromatographic
	techniques used for separation of amino acids.
	CO-5. Discuss the problem based on distribution coefficient and
	extraction techniques.
	CO-1. Know the classification of pharmaceutical drugs, their
	nomenclature, application and synthesis.
	CO-2. To study the waste management.
CH-345 Industrial	CO-3. To understand the classification and uses of dyes, paints
Chemistry	and pigments.
	CO-4. To study the different types of soap products.
	CO-5. To know importance of sugar industry.
	CO-6. To study the basics of polymer nomenclature.
	CO- 1 Polymer degradation, Chemical and geometric structures
	of polymers.
	CO-2 Important polymers like PVC, polystyrene, polyvinyl
	alcohol, Teflon, Resins, nylon, epoxypolymer, Uses &
СН-346-В	properties of polymers.
Polymer	CO- 3 Role of polymer industry in the economy. , Advantages of
Chemistry	polymers, Some industrially important polymers polymer
	processing?
	CO-4 Different polymer processing techniques. Polymer testing
	and analysis, Properties of polymers &testing., Various fiber
	spinning techniques, Reinforcement & compounding of polymers.
	CO-1. To find the rate constant of reaction k and relative strength.
CH-347 Physical	CO-2. Study the energy of activation for second order reaction.
Chemistry practical.	CO-3. To find order of reaction.
Chemistry practical.	CO-4. Find out the acidity, Basicity and PKa value on pH meter.
	CO-5. To find unknown concentration of solution by colorimeter.
	CO-6. To determine pH of various buffer solution by
	potentiometer.

CH-348 Inorganic Chemistry Practical" s	<ul> <li>CO-1. Study the gravimetric and volumetric estimations.</li> <li>CO-2. Preparation of inorganic complexes</li> <li>CO-3. To study qualitative analysis of binary mixture with removal of borate and phosphate radical.</li> <li>CO-4. To understand the separation of ions by the chromatographic techniques</li> </ul>
CH-349 Organic Chemistry Practical" s	<ul> <li>CO-1. Perform the Binary mixtures.</li> <li>CO-2. Preparation of organic compounds, their purifications and run</li> <li>TLC.</li> <li>CO-3. Determination of physical constant: Melting point, Boiling point.</li> <li>CO-4. Different separation techniques.</li> </ul>

### S.Y.B.Sc. Semester-I

	0.4
Course	Outcomes
Course	After completion of these courses students should be able to;
	CO-1. Concept of kinetics, terms used, rate laws, types of order
	CO-2. Know Types of photochemical reactions and photophysical
CH-211 Physical	process
and	CO-3 Distribution law and nature of solute in solution state
	CO-4. Chemical analysis and its applications
Analytical	CO-5. Meaning of error and terms related to expression &
Chemistry	estimation of errors
	CO-6 Method of detection of Basic and acidic radicals
	CO-7 Classification of compounds with different functional groups
	CO-1 Draw the structure of boat and chair configuration its energy
	and stability of cyclohexane
	CO-2 Define and classify heterocyclic compounds and their
CH-212 Organic	reactions and preparations
and Inorganic	CO-3 Differentiate between ore and minerals.
Chemistry	CO-4 electrolysis of alumina and its refining, their alloys and
	application
	CO-5 understand Metallurgy of Iron and Steel
	CO-6 Methods of prevention of metal from corrosion.

### Semester-II

Course	<b>Outcomes</b> After completion of these courses students should be able to;
CH-221 Physical and Analytical Chemistry	CO-1. Chemical and physical equilibrium CO-2. Ideal and non ideal solutions and laws governing these solutions CO-3. Meaning of equivalent weight, molecular weight, normality, molality, primary and secondary standards.

	CO-4. Types and role of indicators.
	CO-5.
	CO-6.
	CO-1Concept of different reagents used in the one type of
	conversion.
	CO-2. Write and complete various reactions of heterocyclic
	compounds.
CH-222 Organic and	CO-3. role of biochemistry in the day to day life
Inorganic	CO-4. Write cyclic structure of glucose in Fischer, Haworth and
Chemistry	chair form
Chemistry	CO-5. position of d-block elements in periodic table.
	CO-5 organometallic chemistry
	CO-6 To define acids and bases according to Arrhenius theory
	Lowery- Bronsted concept, Lewis concept.
	CO-7 To know toxic chemical in the environment.
	CO-1. Correlate the theory and experiments and understand their
	importance
CH-223 Practical Course in Chemistry	CO-2. Perform the complete chemical analysis of the given
	organic compound
	CO-3. Verify theoretical principles experimentally
	CO-4. Perform all the activities in the laboratory with neatness
	and cleanness.
	CO-5. Acquire skill of crystallisation, record correct m. p. / b. p.

#### F.Y.B.Sc. Annual Pattern

Course	Outcomes
Course	After completion of these courses students should be able to;
	CO-1. to solve problems regarding van der Waal's and Critical constant and regarding P-V-T relations
Chem. Paper I- Physical and	CO-2. Theoretical basis of adsorption phenomena is integrated
Inorganic	CO-3 to solve problems based on GMV relationship.
Chemistry	CO-4. Student lnows about atomic structure chemical thermodynamics
	CO-5. Concept of hybridization and differentiation with overlap
	CO-1 knows the structure, bonding, properties and
	reactivities of organic molecules such as covalent character,
Chem. Paper II-	hybridization, bond
Organic and	angles, bond energies, bond polarities and shapes of molecules.
Inorganic	CO-2Structural effects and their applications in determining strength
Chemistry	of acids and bases.
	CO-3The common and IUPAC names of alkanes, alkenes, alkynes and homocyclic, polycyclic aromatic hydrocarbons
	CO-4Skeleton of long form of periodic table
	CO-5 Structure, nomenclature, preparation and reactions of organic compounds.
	CO-6 Concept of isomerism, types of isomers and representation of organic molecules.
	CO-7 Concept of oxyanions, different than mineral acids, oxyacids of phosphorous & sulphur

## **Programme Outcomes: M. Sc Organic Chemistry**

Department	After successful completion of two year degree program in chemistry a student
of Chemistry	should be able to;
Programme	PO-1. Determine molecular structure by using UV, IR and NMR.
Outcomes	PO-2. To give students a comprehensive understanding of the principles of
	Chemistry
	PO-3. Improve the Skill of student in organic research area.
	PO-4. To gain the skill to design and carry out scientific experiments and interpret the data.
	PO-5. Study of Asymmetric synthesis.
	PO-6. Determine the aromaticity of different compounds.
	. To be able to define and resolve new problems in Chemistry and participate in
	the future development of Chemistry.

## Program Specific Outcome M.Sc. (Organic Chemistry)

PSO1	To develop the post graduate department on the modern lines of education and training levels.
PSO2	To impart the advanced practical and theoretical knowledge to the students and develop the scientific skills among them to be useful in the concerned field.
PSO3	To trained students and make them eligible for accessing integrated multidimensional fields.
POS4	Anticipation of new/upcoming areas in academics as well as in technology.

	O Course	Outcome M.Sc.
u (OrganicChemistry)Sem I		
	t c	CO-1. The course aims to provide fundamental understanding of physical chemistry.
1	o m e s CHP-110 Fundamentals of Physical Chemistry-I S c	CO-2 Students learn the concept of Gibbs and Helmholtz energies, Chemical potential and Expressing Chemical equilibrium in terms of chemical potential.
		CO-3 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.
		CO-4. 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.
2	O r g	CO-1. This is made to understand the symmetry and group theory and use this knowledge to interpret the properties like dipole moment, optical activity, and signals in IR and Raman spectroscopy.
	a CHI-130 Molecular Symmetry & n Chemistry of p-block i elements	CO-2. 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.
	c C	CO-3. It also explains organometallic compounds of Si, Sn, Pb, Ga, As, Sb, Bietc and their synthesis and reactions.
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3	CHO-150 Basic Organic Chemistry	<ul> <li>CO-1. This course helps to improve basic organicconcepts.</li> <li>CO-2. The Purpose of the course is to aware thestudents for basic organic chemistry.</li> <li>CO-3. The main intension of the course is that to knowstereochemistry of carbon compounds, how towrite structure of molecules &amp; their reactivity.</li> <li>CO-4. Student should aware about</li> </ul>
4	CHA-190 Safety in Chemical Laboratory and Good Laboratory Practices	<ul> <li>cO-4. Student should aware about reactionmechanism.</li> <li>CO-1. The Students are made aware of necessary guidelines of safety in chemical laboratory and goodlaboratory practice.</li> <li>CO-2. Students get acquainted with different types of hazards at work place, use of personal protective.</li> <li>CO-3 Students also aware about types of fire extinguisher inventory management, storage anddisposal material safety data sheets.</li> </ul>
5	CHP-210 Fundamentals of Physical Chemistry II	<ul> <li>CO-1. The course aims to provide understanding ofphysical chemistry;</li> <li>CO-2 In this course fundamentals of molecular spectroscopy are introduced.</li> <li>Students learn basicelements of rotational, vibrational, raman and electronic spectroscopy.</li> <li>CO-3. Nuclear and radiation Chemistry concepts areintroduced. Students get familiar with Chemical Bonding</li> </ul>
6	CHI- 230 Coordination and Bioinorganic Chemistry	CO-1. Students are made 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 blockelements in MRI and as TV phosphors. CO-2 Students are also made aware of a role of metalion in biologically active compounds like Hb, Mb CO-3 It explains biochemistry of Na, K, Ca, with respect to Na/K pumps.

7	CHO-250 Synthetic Organic Chemistry & Spectroscopy	CO-1. The main aim of this course is to study with various basic organic reactions with mechanism, reagent and ylides .CO-2 This course also covers with the basic introduction to various spectroscopic methods like UV, <sup>1</sup> H-NMR, <sup>13</sup> C- NMR, IR, Mass spectrometry and their applications.
8	CHA-290 General Chemistry	CO-1 The basicpurpose of this course is to understand the importance and properties of mass spectrometry, gas chromatography and high performance liquid Chromatography. CO-2 Students also familiar with concept of analytical chemistry like data handling and spreadsheets, Sampling, Standardization and calibration. CO-3 Separation by precipitation, distillation, extraction and ion exchange chromatography.
9	CHP-107 Practical Course (Physical Chemistry)	CO-1 Students are trained to use the techniques such as pH metry, Conductometry, Potentiometry, Colorimetry, Spectrophotometry, Refractometry and G. M. Counter. CO-2 These techniques will enable them to work asquality control chemist in various labs and such organizations.
10	CHI-147 Practical Course (Inorganic Chemistry)	CO-1 Students are given the knowledge of basic preparation of various solutions, synthesis of various inorganic complexes and their characterization. CO-2 The students are trained for handling of natural materials and their quantitative analysis which involves disintegration, separation and individual estimations. CO-3 They are given hands on training to handle various equipments like spectrophotometer, flame photometer, Condutometer etc.
11	CHO-247 Practical Course (Organic Chemistry)	<ul> <li>CO-1 This course makes the students to aware of different organic techniques like purification, crystallization, distillation, TLC, M.P./B.P. this course develops scientific views, organic synthesis and also give knowledge of separation of ternary organic mixtures.</li> <li>CO-2 Studentgets Knowledge of chemistry software likes, MOPAC, ISIS draw, Chemdraw office.</li> </ul>

# **Department of Electronics**

# <u>AY 2019-20</u>

Program	F.Y. B.Sc. Electronics
Program Outcomes	<ul> <li>Objective Paper I: Paper I: EL- 111: Basics of Applied Electronics</li> <li>1. To understand importance of Electronics in day today life</li> <li>2. To understand basics of electronic circuits</li> <li>3. To make the students learn through problem solving</li> <li>4. To understand few electronic</li> </ul>
Program Specific Outcomes	After completion of this course student will be able: <b>Pos1</b> To identify different parameters/functions/specifications of components used in electronic circuits <b>Pos2</b> . To solve problems based on network theorems. <b>Pos3</b> . To perform simulations using simulator for analyzing network performance
Program Outcomes	Paper I: EL-121: Fundamentals of Digital Electronics         1. To know about different number systems and codes         2. To understand logic gates and truth tables         3. To understand combinational logical circuits         4. To understand sequential logical circuits         5. To encourage the students for making use of simulation software for testing and building the circuits before experimentation.
Program Specific Outcomes	<ul> <li>After completion of this course student will be able</li> <li>Pos1. To solve problems based on inter conversion of number systems</li> <li>Pos 2. To reduce the expression using Boolean theorems</li> <li>Pos 3. To reduce expressions using K maps in SOP and POS forms</li> <li>Pos 4. To understand how to use flip flops to build modulus counter</li> <li>Pos 5 To familiarize with applications of counters like ring counter or event Counter</li> </ul>
Program Outcomes	<ul> <li>Paper II EL- 122: Analog and Digital Device applications</li> <li>important facts resulting from their studies.</li> <li>To know basics of operational amplifier</li> <li>2. To compare performance parameters of op-amp ICs available in market</li> <li>3. To understand basic application circuits of op-amp.</li> <li>4. To basics of timer IC 555 and its applications</li> <li>5. To understand data converters and their performance parameters</li> </ul>
Course Outcomes	<ul> <li>After completion of this course student will be able</li> <li>Pos1. To compare different opamps as per specifications or performance parameters</li> <li>Pos2. To understand op-amp circuits and its usefulness in different applications</li> <li>Pos 3. To know operating principle of IC 555 in different configurations</li> <li>Pos4. To understand different types of DAC and their performance parameters</li> </ul>

	<b>Pos 5</b> . To study different types of ADC and their performance parameters
Program Outcomes	EL- 113: ELECTRONICS LAB IA
	1. To teach students how to draw different symbols and circuit diagrams
	2. To develop skill of circuit connections
	3. To familiarize the student with different components and devices used in the
	laboratory and the device Manuals
	4. To familiarize students with laboratory instruments like Ammeter, voltmeter,
	DMM, Signal Generator, Function Generator, CRO and tools like cutter,
	stripper etc.
	5. To train them to design and analyze the circuits for specific purpose
	6. To teach the students how to analyze the results and calculate performance
	parameters
Program Spacific Outcomos	7. To motivate them to work on different mini projects
Program Specific Outcomes	After completion of this course student will be able 1. To identify different components and devices as well as their types
	2. To understand basic parameters associated with each device
	3. To know operation of different instruments used in the laboratory
	4. To connect circuit and do required performance analysis
	5. To compare simulated and actual results of given particular experiment
Program	S.Y. B.Sc. Electronics
Program Outcomes	EL-231: Paper – I: Communication Electronics
	This course provides basic knowledge of analog (continous wave) and digital
	communication systems . After study through lectures and assignment, student will
	be able to
	1:- Understand different blocks in communication systems, types of noise in
	communication systems and its different parameters
	2:- Understand need of modulation, modulation process and amplitude modulation
	and demodulation methods
	3:- Analyse generation of FM Modulation and demodulation methods and
	comparison between amplitude and frequency modulation <b>4</b> :- Identify different radio receivers and their performance parameters.
	4 Identity different radio receivers and their performance parameters.
Program Specific Outcomes	POS1:- Solve problems based on AM and FM performance parameters
	POS2 :- Compare pulse modulation techniques such as PAM, PPM, PWM and
	compare TDM and FDM techniques used in communication
	<b>PoS3:-</b> Understand need of sampling and sampling theorem as well as know
	about performance parameters of digital communication
	<b>POS4</b> :- Analyze difference between ASK, FSK , PSK as well as PCM and its
Course Outcomes	applications EL-232: Paper- II: Digital Circuit Design
	This course provides basic knowledge about systematic methodology of designing
	digital systems. After study through lectures and assignment, student will be able
	to
Program Specific Outcomes	PO1:- Distinguish between different logic families based on their performance
	parameters
	PO2:- Analyze basic combinational logic circuits for simple applications
	PO3:- Design combinational logic circuits using K maps for identified
	applications
	PO4:- Design Sequential logic circuits using state diagram, excitation table for

	identified applications CO5 Understand and compare different types of ADC
	and their performance parameters using data sheets/manuals CO6
	Understand and compare different types of DAC and their performance
	parameters using data sheets/manuals
Course Outcomes	EL-241: Paper - I: Analog Circuit Design Semester IV
	This course provides basic knowledge about systematic methodology of designing analog systems. After study through lectures and assignment, student will be able
Program Specific Outcomes	PO1:- Design single/multistage amplifier using transistor and analyze their frequency response base on gain-bandwidth product due to coupling
	/bypass capacitors <b>PO2:-</b> Classify and compare different power amplifiers
	PO3:- Understand and design push pull amplifier and need of heat sinks
	<b>PO4</b> :- Distinguish between Op-amp Feedback circuits based on their configurations
	<b>PO5:-</b> Analyze the effect of negative and positive feedback on characteristics of Op-amp
	<b>PO6:-</b> Understand and analyze the need of positive feedback in oscillator circuits <b>PO7:-</b> Design , develop and build circuits for identified applications
Course Outcomes	EL-242: Paper II: Microcontroller and Python Programming
	Semester IV
	This course introduces students with microcontroller using Arduino as well as
	develops programming ability using python language . After study through lectures
	and assignment, student will be able to
Program Specific Outcomes	<b>PO1</b> :Identify the features and architectural details of Microcontroller
<b>J</b>	(arduiono)
	PO2:-Write code/program using open source programming
	language(ardiuno) for basic identified applications
	<b>PO3</b> :- Understand programming basics of python programming language <b>PO4</b> Understand special features of python programming language such
	as importing modules, directory, tupules
	<b>PO5:-</b> Design, build and implement applications using ardiuno and python
Course Outcomes	Practical Course
	Laboratory requirements: Instruments
	1. Power Supply(single and dual)
	2. Signal Generator and function generators
	3. CRO
	4. Digital multi-meters
	. Communication training kits/breadboards/tag boards Software
	requirements
	1. Arduino 10.0 programming enviornment and add on hardware modules
	2. Python 3.0 and above Guidelines for conducting practical: As the practical in
	each semester is of 2 credits i.e.duration of 4 hours and 20 minutes. General
	guidelines for teachers to engage the students are as follows
Program Specific Outcomes	1. Utilization of allotted time for hardware practicals a. Understanding the
	purpose of performing particular expt b. Understanding the knowhow of the
	expt such as circuit diagram, connections, performing the expt, analyzing and
	verifying the results, plotting the graphs, interpretation of results c. Expt can
	be performed on breadboard/circuit boards/tag boards d. Getting familier

<ul> <li>with datasheets for ICs or components e. excontinuous assessment activity(Viva etc.) g softwares like proteus,pSpice etc h. Project Poster presentation/project documentation</li> <li>2. Utilization of allotted time for software a. Understand the software (Arduino and python) : its features and f b. Self learning through small programs *f c. Understand step by step procedure to excert d. Understand interfacing of various modu e. Exploring different features of Python p. f. Learning algorithms and flowchart g. Building different application programs th. Project like/skill development activity</li> </ul>	g. Simulation of experiment using t like /skill development activity i. e experiment facilities for through understanding tecute the program ules to Arduino programming
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# **Department Of Computer Science**(2019-20)

## PROGRAM OUTCOMES: B. Sc. Computer Science

Department of Computer	After successful completion of three year degree program in
Science	Computer Science a student should be able to;
	*
Program Outcomes	PO-1 To develop problem solving abilities using a computer
	PO-2 To build the necessary skill set and analytical abilities for
	developing computer based solutions for real life problems.
	PO-3 To imbibe quality software development practices.
	PO-4 To create awareness about process and product standards
	PO-5 To train students in professional skills related to Software
	Industry.
	PO-6 To prepare necessary knowledge base for research and
	development in Computer Science
	PO-7 To help students build-up a successful career in Computer
	Science
Program Specific	PSO 1: Demonstrate understanding of the principles and working
Outcomes	of the hardware and software aspects of computer systems.
	PSO-2 Design, implements, test, and evaluate a computer system,
	component, or algorithm to meet desired needs and to solve a
	computational problem.
	PSO-3 To Enhance skills and adapt new computing technologies
	for attaining professional excellence and carrying research.
Co	urse Outcomes B.Sc. Computer Science
	Semester I and II
Course	Outcomes
CS-111	CO-1 To introduce the foundations of computing, programming
Problem Solving using	and problem- solving using computers.
Computer and	CO-2 To develop the ability to analyze a problem and devise an
<b>'C'</b> Programming	algorithm to solve it.
	CO-3 To formulate algorithms, pseudocodes and flowcharts for
	arithmetic and logical problems
	CO-4 To understand structured programming approach.
	co i to inderstand structured programming approach.

	CO-5 To develop the basic concepts and terminology of
	programming in general.
	CO-6 To implement algorithms in the 'C' language.
	CO-7 To test, debug and execute programs.
CS-112	CO-1 To understand the fundamental concepts of database.
Database Management	CO-2 To understand user requirements and frame it in datamodel.
Systems	CO-3 To understand creations, manipulation and querying of data
	in databases.
CS-113	CO-1 To understand the program development life cycle.
Practical course	CO-2 Solve simple computational problems using modular design
based on CS101 and	and basic features of the 'C' language.
CS102	CO-3 Understand basic database management operations.
	CO-4 Design E-R Model for given requirements and convert the
	same into database tables.
CS-121	CO-1 To study advanced concepts of programming using the 'C'
Advanced 'C'	language.
Programming	CO-2 To understand code organization with complex data types
	and structures.
	CO-3 To work with files.
CS-122	CO-1 To teach fundamental concepts of RDBMS (PL/PgSQL)
<b>Relational Database</b>	CO-2 To teach database management operations
Management Systems	CO-3 Be familiar with the basic issues of transaction processing
	and concurrency control
	CO-4 To teach data security and its importance
CS-123	CO-1 To solve real world computational problems.
Practical course	CO-2 To perform operations on relational database management
based on CS201 and	systems.
CS202	
Co	urse Outcomes B.Sc. Computer Science
	Semester III and IV
Course	Outcomes
CS- 211	CO-1 To learn the systematic way of solving problem
Data Structures using 'C'	CO-2 To understand the different methods of organizing large
	amount of data
	CO-3 To efficiently implement the different data structure
	CO-4 To efficiently implement solutions for specific problems
CS- 212	CO-1 To teach fundamental concepts of RDBMS (PL/PgSQL)
<b>Relational Database</b>	CO-2 To teach principles of databases
Management System	CO-3 To teach database management operations
	CO-4 To teach data security and its importance
	CO-5 To teach client server architecture
CS- 221	CO-1 Acquire an understanding of basic object oriented concepts
<b>Object Oriented Concepts</b>	and the issues involved in effective class design
using C++	CO-2 Write C++ programs that use object oriented concepts such
_	as information hiding, constructors, destructors, inheritance etc.
CS- 222	CO-1 To teach basics of System Analysis and Design.
Software Engineering	CO-2 To teach principles of Software Engineering
	CO-3 To teach various process models used in practice
	CO-4 To know about the system engineering and requirement
	engineering To build analysis model
CS 223	CO-1 Design and implement Data structures and related
Data structures Practicals and C++ Practicals	algorithms CO-2 Understand several ways of solving the same problem.

CS 222	CO 1 Understanding the second compared with a second stand
CS 223	CO-1 Understanding the use of cursors, triggers, views and stored
Database Practicals &	procedures
Mini Project using	CO-2 Understanding the steps of system analysis and design
Software Engineering	CO-3 Understanding Data requirements for a specific problem
technique s	domain
	CO-4 Designing Data base as per the Data requirements
	CO-5 Designing queries as per the functional requirements
Co	urse Outcomes B.Sc. Computer Science
Course	Semester V and VI Outcomes
CS-331	CO-1 To understand the design structure of a simple editor.
Systems Programming	CO-2 To understand the design structure of Assembler and macro
Systems i rogramming	processor for a hypothetical simulated computer.
	CO-3 To understand the working of linkers and loaders and other
	development utilities.
	CO-4 To understand Complexity of Operating system as a
	software
CS-332	CO-1 To have an understanding of finite state and pushdown
Theoretical Computer	automata.
Science	CO-2 To have a knowledge of regular languages and context free
Science	languages.
	CO-3 To know the relation between regular language, context
	free language and corresponding recognizers.
	CO-4 To study the Turing machine and classes of problems.
CS-333	CO-1 Understand different types of networks, various topologies
Computer Networks -I	and application of networks.
	CO-2 Understand types of addresses, data communication.
	CO-3 Understand the concept of networking models, protocols,
	functionality of each layer.
	CO-4 Learn basic networking hardware and tools.
CS-334	CO-1 Learn Core-PHP, Server Side Scripting Language
Internet Programming I	CO-2 Learn PHP-Database handling.
CS-335	CO-1 To learn Object Oriented Programming language
Programming in Java-I	CO-2 To handle abnormal termination of a program using
	exception handling
	CO-3 To create flat files
	CO-4 To design User Interface using Swing and AWT
CS-336	CO-1 Understanding importance of Object Orientation in
<b>Object Oriented</b>	Software engineering
Software Engineering	CO-2 Understand the components of Unified Modeling Language
	CO-3 Understand techniques and diagrams related to structural
	modeling
	CO-4 Understand techniques and diagrams related to behavioral
	modeling
	CO-5 Understand techniques of Object Oriented analysis, design
	and testing
Co	urse Outcomes B.Sc. Computer Science
	Semester V
Course	Outcomes
CS-341	CO-1 To understand design issues related to process management
<b>Operating Systems</b>	and various related algorithms
	CO 2 To understand design issues related to memory
	CO-2 To understand design issues related to memory management and various related algorithms

	CO-3 To understand design issues related to File management and
	6
<u> </u>	various related algorithms
CS-342	CO-1 To understand design issues of a lexical analyzer and use of
<b>Compiler Construction</b>	Lex tool
	CO-2 To understand design issues of a parser and use of Yacc
	tool
	CO-3 To understand issues related to memory allocation
	CO-4 To understand and design code generation schemes
CS-343	CO-1 Basic networking concepts.
Computer Networks -II	CO-2 Understand wired and wireless networks, its types,
	functionality of layer.
	CO-3 Understand importance of network security and
	cryptography.
CS-344	CO-1 Learn different technologies used at client Side Scripting
Internet Programming II	Language
	CO-2 Learn XML,CSS and XML parsers.
	CO-3 One PHP framework for effective design of web
	application.
	CO-4 Learn JavaScript to program the behavior of web pages.
	CO-5 Learn AJAX to make our application more dynamic.
CS-345	CO-1 To learn database programming using Java
Programming in Java-II	CO-2 To study web development concept using Servlet and JSP
	CO-3 To develop a game application using multithreading
	CO-4 To learn socket programming concept
CS-346	CO-1 Computer programming skills in C programming language
Computer Graphics	CO-2 Basic understanding of use of data structures
	CO-3 Basic Mathematical concepts related to matrices and
	geometry.
CS-347	CO-1. Design and implement System programs with minimal
Lab Course I	features to understand their complexity.
System Programming &	CO-2. Design and implement simulations of operating system
Operating System	level procedures.
	CO-3 Understand the process of designing and implementing
	System programs and operating system components.
CS-348	CO-1. Implement core Java programs to solve simple problems
Lab Course II	CO-2. Implement Client and Server end Java programs
Programming in Java	
CS-349	CO-1 Implement Simple PHP programs to solve simple problems
Lab Course III	CO-2 Understand the process of designing and implementing
Programming in	Webapplications, using PHP.
PHP & Project	() couppiloutons, using i in .

# **Department of Economics**

# <u>AY 2019-20</u>

Program	F.Y. B.A
Program Outcomes	The programmes under Arts faculty are broadly categorized into Languages and Social Sciences.
	PO:1- Specific, measurable statements of what graduating / existing students should know, be able to do , believe or value after completing the program.
	PO:2- Depends on the program mission statements.
	PO:3- Students summarize Language acquisition theory and research. PO:4- Students evaluate pedagogical materials. PO:5- Students build the multidimensional personality and able to correlate Languages with social sciences.
	PO:6- Demonstrate proficiency in a range of techniques and media.
	PO:7- Communication: Demonstrate familiarity with and ability to analyze both verbally and in writing issues and forms of contemporary art with a clear understanding of historical precedents.
	PO:8- Critical Thinking: Demonstrate the ability to articulate an insightful response and analysis of a work of art in order to participate in discussions and studio critiques.
Program Specific Outcomes	Economics
	PSO1.To familiarize the students with the recent developments in the Indian Economy
	PSO2To provide the students with the background of the Indian Economy with focus on contemporary issues like economic environment.
	PSO3 To help the students to prepare for varied competitive examinations PSO4. To enable students to understand and comprehend the current business scenario, agricultural scenario and other sartorial growth in the Indian context. To make the student aware of the developments such as MSMEs, Digital Economy, E-Banking, BPO & KPO, etc. Programme Outcome:
Course Outcomes	COURSE TITLE: INTRODUCTION TO -Indian Economic Environment–I & II
	CO1. Ability to develop an understanding of the economic environment and the factors affectingeconomic environment.
	CO2. Ability to develop awareness on the various new developments in the different sectors of aeconomy – agriculture, industry, services, banking,

	etc.
	CO3 Ability to compare and contrast Indian Economy with other world economies.
	CO4 At the end of the course, the student should be able discuss and debate on the various issues and challenges facing the Indian Economic Environment.
	FYBA sem I INDIAN ECONOMICS INVIRONMENT-1
	1. Understand role of agriculture, industrial sector in Indian economy.
	2. Understand nature, Basic Characteristics and Major issues of Indian economy
	3. Understand population & economic development
	sem II:
	INDIAN ECONOMICS INVIRONMENT-2
	1. Understand Poverty and Unemployment Concepts and their trends in Indian economy
	2. Understand Salient Features of Economy of Maharashtra
	3. Understand Regional Imbalance Causes & Preventive Measures.
Program	S. Y. B.A
Program Outcomes	S. Y. B.A 1. Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and for the benefit of national and the global economy
	1. Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and
	1. Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and for the benefit of national and the global economy         2. Problem analysis: recognize formulate and study the problems of various sectors of the Indian economy, regional economy and the global economy with the help of the economic ways of thinking, theories,
	<ol> <li>Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and for the benefit of national and the global economy</li> <li>Problem analysis: recognize formulate and study the problems of various sectors of the Indian economy, regional economy and the global economy with the help of the economic ways of thinking, theories, concepts and laws</li> <li>Design/development of solutions: Design policies and solutions for the</li> </ol>
	<ol> <li>Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and for the benefit of national and the global economy</li> <li>Problem analysis: recognize formulate and study the problems of various sectors of the Indian economy, regional economy and the global economy with the help of the economic ways of thinking, theories, concepts and laws</li> <li>Design/development of solutions: Design policies and solutions for the economic problems of India and the global economy at large.</li> <li>Modern tool usage: Create, select, and apply appropriate techniques,</li> </ol>
	<ol> <li>Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and for the benefit of national and the global economy</li> <li>Problem analysis: recognize formulate and study the problems of various sectors of the Indian economy, regional economy and the global economy with the help of the economic ways of thinking, theories, concepts and laws</li> <li>Design/development of solutions: Design policies and solutions for the economic problems of India and the global economy at large.</li> <li>Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern IT tools for economic analysis</li> <li>The student and society: Apply the knowledge of economic concepts, laws and theories, for a better economic environment for the society at</li> </ol>

Program Specific Outcomes	1. Understand process of credit creation by commercial banks
6	2. Understand Quantity theory of money.
	3. Understand concept of Revenues and cost of Production.
	4. Understand the Indian capital market
Course Outcomes	SUBJECT - MODERN BANKING G2
	1. 1. Create the awareness among the students of Financial System.
	2. Understand commercial banking system in India
	3. Understand working & operation of RBI
	4. Understand new development in Indian financial system
	5. Understand cooperative and rural banking in India
	6. Understand non banking financial institutions & financial services in India
	7. Understand the Indian money market
	8. Understand the Indian capital market
	9. Able to understand international aspects of the Indian financial system
	Subject2: Micro Economics (S1)
	1. Student is expected to understand the behavior of an economic agent, namely, a consumer,
	a producer, a factor owner and the price fluctuation in a market.
	2. To understand nature and scope of economics, the theory of consumer behavior, analysis
	of production function and equilibrium of a producer, the price formation in different markets
	structures and the equilibrium of a firm and Industry.
	3. Understand concept of Revenues and cost of Production.
	4. Understand concept of Revenues and cost of Production.
	5. Understand Linear & Non- Linear functional relationship
	6. Understand price determination
	of factors (Rant, wages, interest and Profit.)
	7. Understand meaning of social welfare function.
	Subject3 - Macro Economics (S2)
	1. Understand macro economic analysis
	2. Understand of national income
	3. Understand classical & Keynesian theories of output and employment

	4. Understand consumption & Investment function
	5. Understand process of credit creation by commercial banks
	5. Understand Quantity theory of money.
	6. Understand various macroeconomic problems.
	7. Understand various macroeconomic policies
Program	T.Y. B.A. ECONOMICS
Program Outcomes	1. Technical knowledge: use various tools for economic analysis and apply knowledge of the Micro and Macro approach for the personal benefit and for the benefit of national and the global economy
	2. Problem analysis: recognize formulate and study the problems of various sectors of the Indian economy, regional economy and the global economy with the help of the economic ways of thinking, theories, concepts and laws
	3. Design/development of solutions: Design policies and solutions for the economic problems of India and the global economy at large.
	4. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern IT tools for economic analysis
	5. The student and society: Apply the knowledge of economic concepts, laws and theories, for a better economic environment for the society at large.
	6. Environment and sustainability: develop an economic way of thinking leading to the economic growth, protecting environment with sustainable development
	7. Communication: Communicate effectively on the economic activities with the community and the society through the acquiring knowledge of the national and the global economy

## Department Of History

### 2019-2020

Program	F.Y.B.A
PROGRAM OUTCOMES	Subject1: Early India: From Prehistory To Yhe Age Of The Mauryas Sem-2-Early India : Post Mauryan Age To The Rashrakutas
COURSE OUTCOMES	The course intends to provide and understanding of the social, economic, religious and institutional bases of ancient india
PROGRAM	S.Y.B.A.
COURSE	Subject1: Ancient India
OUTCOMES	The course intends to provide and understanding of the social, economic, religious and institutional bases of ancient india
	Subject2: Medieval India
	The course intends to provide and understanding of the social, economic, religious and institutional bases of Medieval india
	Subject3: Modern India
	The course intends to provide and understanding of the social, economic, religious and institutional bases of Modern india
PROGRAM	T.Y.B.A.
COURSE	Subject1: Introduction To History
OUTCOMES	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
	Subject2: History Of Asia In 20 <sup>th</sup> Century(1914-1992)
	To provide students with an overall view and broad perspective different movements connected with nationalist aspiration in the region of asia in general
	To empoer students to cipe with the challenges of globalization
	Subject3: History Of World In 20th Century
	Understand the important developments in the 20 <sup>th</sup> century world
	To empoer students to cipe with the challenges of globalization
PROGRAM	M.A PART-I-II
	Subject1: History And Its Method
	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
	Subject1:Histori: Theory And Method

	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
COURSE	Subject2: Intellectual History Of Modern World
OUTCOMES	To help the student situate and interpret the cultural manifestation across historical memory which have contributed to the creation of the geopolitical region of modern
	Subject4:Maratha Polity
	The Course Is Study The Administrative System Of The Marathas In An Nalytical Way To Acquaint The Student With The Nature Of Maratha Polity
	Subject5: Approaches To History
	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
	Subject6: Ideas And Institutions In Medieval India
	The course intends to provide and understanding of the social, economic, religious and institutional bases of Medieval india
	Subject7: Socia- Economic History Of The Mahathas
	To Study Socia- Economic History Of The Mahathas In An Analytical Way

#### 2019-2020

Program	F.Y.B.A
PROGRAM OUTCOMES	Subject1: Early India: From Prehistory To Yhe Age Of The Mauryas Sem-2-Early India : Post Mauryan Age To The Rashrakutas
COURSE OUTCOMES	The course intends to provide and understanding of the social,economic, religious and institutional bases of ancient india
PROGRAM	S.Y.B.A
COURSE OUTCOMES	<ul> <li>Subject1: Ancient India</li> <li>The course intends to provide and understanding of the social,economic , religious and institutional bases of ancient india</li> <li>Subject2: Medieval India</li> <li>The course intends to provide and understanding of the social,economic , religious and institutional bases of Medieval india</li> <li>Subject3: Modern India</li> <li>The course intends to provide and understanding of the social,economic , religious and institutional bases of Medieval india</li> </ul>

PROGRAM	T.Y.B.A.
COURSE OUTCOMES	Subject1: Introduction To History
	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
	Subject2: History Of Asia In 20 <sup>th</sup> Century(1914-1992)
	To provide students with an overall view and broad perspective different movements connected with nationalist aspiration in the region of asia in general
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	Subject3: History Of World In 20 <sup>th</sup> Century
	Understand the important developments in the 20 <sup>th</sup> century world
	To empoer students to cipe with the challenges of globalization
PROGRAM	M.A PART-I-II
	Subject1: History And Its Method
	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
	Subject1:Histori: Theory And Method
	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
COURSE	Subject2: Intellectual History Of Modern World
OUTCOMES	To help the student situate and interpret the cultural manifestation across historical memory which have contributed to the creation of the geopolitical region of modern
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	Subject5: Approaches To History
	Help In Developing Critique, Help Research In Terms Of Formulatiing Hypotheses
	Subject6: Ideas And Institutions In Medieval India
	The course intends to provide and understanding of the social, economic, religious and institutional bases of Medieval india
	Subject7: Socia- Economic History Of The Mahathas
	To Study Socia- Economic History Of The Mahathas In An Analytical Way

# **Department of English**

# 2019-20

## COURSE OUTCOMES: B. A. English

PROGRAM	F.Y.B.A Compulsory English
PROGRAM	1. To acquire the students with the basics of the subject of English.
OUTCOMES	
PROGRAM	1. The students know the nature of the subject in comparison to the
SPECIFIC	secondary level.
OUTCOMES	
COURSE	1.The students get more knowledge of structure and language
OUTCOMES	2. They have the literary sense and comprehension of the subject
PROGRAM	F. Y. B. A. Optional English
COURSE	1. To prepare the students with basic skills in language.
OUTCOMES	2. To prepare the students with the basics of phonology.
	3. To prepare the students for vocabulary and basic Grammar.
PROGRAM	S. Y. B.A. Compulsory English
PROGRAM	1. To develop the skills of the students in English Language.
OUTCOMES	2. To prepare the students with vocabulary and Grammar.
COURSE	1. The students get more knowledge of structure and semantics.
OUTCOMES	2. The students have the literary sense and comprehension of the subject.

PROGRAM	S. Y. B.A. Optional English (G2)	
PROGRAM	1. To acquaints the students with Literature and Language.	
OUTCOMES	2. To broaden the scope of the studies in English with different forms of literature.	
	3. To enrich vocabulary through learning literature.	
COURSE	1. The students know the forms of literature and language	
OUTCOMES	2. The students get know the literary values.	
	3. The students know well how to study Language and Literature.	
PROGRAM	S. Y. B.A. English (S1)	
PROGRAM	1. To acquaints the students with the forms of Drama	
OUTCOMES	2. To broaden the scope of the studies in dramatic Poetry with the basics in Drama.	
	3. To apply the literary values in practical life.	
COURSE	1. The students know the Drama as a form of Literature	
OUTCOMES	2. The students know Human life at the Universal Level	
	3. The students can analyze the literary forms	
PROGRAM	S. Y. B.A. English (S2)	
PROGRAM	1. To acquaints the students with the Lyrical Poetry.	
OUTCOMES	<b>2.</b> To broaden the scope of the studies in Lyrical Poetry with the basics in verse.	
	<b>3.</b> To develop the sense of humanity with the study of poetry.	

	<b>4.</b> To apply the literary values in practical life.	
COURSE	1. The students know the Poetry as a form of Literature.	
OUTCOMES	2. The students know Human life at the Universal Level.	
	3. The students also understand the various forms of poetry.	
	4. The students can analyze poetry as a form of literature.	
PROGRAM	T. Y. B.A. Compulsory English	
PROGRAM	1. To develop the skills of the students in English communication skills.	
OUTCOMES	2. To prepare the students with vocabulary and Grammar.	
	4. To develop soft communication skills in English.	
COURSE	1. The students know the skills of communication in English.	
OUTCOMES	2. The students know the different between prose and poetry.	
	3. The students have the literary sense and comprehension of the subject.	
PROGRAM	T. Y. B.A. Optional English (G3)	
PROGRAM	1. To continue the knowledge of the students with literature and Language on the	
OUTCOMES	basis of G1and G2.	
	2. To broaden the scope of the studies in English with the poetry of particular	
	country in English.	
	3. To enrich vocabulary through learning literature.	
COLID CE	4. To get in acquaintance with structure of English.	
COURSE	1. The students know literature of particular country.	
OUTCOMES	2. The students know cultural background of the country.	
	3. The students also know about structure of English.	
	4. The students are ready for some jobs in any field of the society.	
	5. The students also prepare with vigor for competitive exams.	
PROGRAM	T. Y. B.A. English Special (S3)	
PROGRAM	1. To acquaints the students with the novel as form of literature.	
OUTCOMES	2. To broaden the scope of the studies in narrative Poetry with the basics in novel.	
OUTCOMES	3. To develop the sense of humanity with the study of novel.	
COURSE	1. The students know the novel as a form of Literature	
OUTCOMES	2. The students know Human life at the Universal Level	
OUTCOMES	3. The students also know about the different streaks of human life.	
	4. The students can analyze the novel as a form of literature.	
PROGRAM	T. Y. B.A. English Special (S-IV)	
PROGRAM	<b>1.</b> To acquaintance the students with the nature of literary criticism.	
OUTCOMES	2. To broaden the scope of critical studies in literature.	
	<b>3.</b> To get in acquaintance with fine arts and poetry.	
	4 To get know different social trends through literary criticism.	
COURSE	1. The students know how to criticize literature.	
OUTCOMES	2. The students know the Human complexities.	
	3. The students also know about the different streaks of human life	

## COURSE OUTCOMES: M. A. English

### Paper-1: English Literature from 1550- 1798

PROGRAM	Paper-1: English Literature from 1550- 1798
PROGRAM OUTCOMES	<ol> <li>To introduce students to major movements and figure of English literature through the study of selected literary texts.</li> <li>To create literary sensibility and emotional response to the literary text and implant sense of appreciation of literary texts.</li> <li>To expose student to the artistic and innovative use of language employment by</li> </ol>

	the writers.
	4. To instill values and develop human concern in student through exposure to
	literary texts.
	5. To enhance literary and linguistic competence of student.
COURSE	1. The students know the scope of literary theory and the entire picture about
OUTCOMES	literature.
	2. The students can think about human life with universal attitude.
	3. The students are ready for any competitive exam.
	4. The student can join educational field for teaching or research.
PROGRAM	Paper- II: English Literature From: 1798-to the present
PROGRAM	1. To introduce students to major movements and figures of English literature
OUTCOMES	through study of selected literary texts.
OUTCOMES	2. To create literary sensibility for appreciation in students and expose them to
	artistic and innovative use of language by writers and to various worldviews.
	3. To instill values and develop human concern in students through exposure to
	literary texts.
	4. To enhance literary and linguistic competence of students.
COURSE	1. The students know the scope of literary theory and the entire picture about
	literature.
OUTCOMES	
	2. The students can think about human life with universal attitude.
	3. The students are ready for any competitive exam.
	4. The student can join educational field for teaching or research.
PROGRAM	Paper-III: Contemporary Studies in English Language
PROGRAM	1. To introduce student to the basic tools essential for systematic study of language.
OUTCOMES	2. To acquaint student with the basic concept and issues in linguistic.
OUTCOMLS	3. To introduce them into theoretical perspective and enable them to apply the
	acquired Linguistic skills in real life situation.
	4. To initiate them to various sub-disciplines of linguistic.
COURSE	1. The students know the English language phonological .morphological and
	syntactical perspectives.
OUTCOMES	2. The students can join any field for job.
	3. The students can go with knowledge in the teaching field.
PROGRAM	Paper IV: Literary Criticism and Theory
PROGRAM	1. To introduce students to the nature, function and relevance of literary criticism
	•
OUTCOMES	and theory.
	2. To introduce them to various important critical approaches and their tenets.
	3. To encourage them to deal with highly intellectual and radical content and
	thereby develop their logical thinking and analytical ability.
	4. To develop sensibility and competence in them for practical application of critical approach to literary
COURSE	1. The students know the social issues with critical attitude.
OUTCOMES	2. The students know complex human nature.
OUTCOMES	3. The student's attitude is humane.
	J. The student s attitude is numane.

# COURSE OUTCOMES: M. A. English

### M.A.II PART

PROGRAM	Paper: I -Indian Writing in English
PROGRAM OUTCOMES	<ol> <li>To introduce students to major movements and figure of Indian literature in English.</li> <li>To create literary sensibility and emotional response to the literary text and implant sense of appreciation of literary texts.</li> <li>To expose student to the artistic and innovative use of language employment by</li> </ol>

	<ul><li>the writers.</li><li>4. To instill values and develop human concern in student through exposure to literary texts.</li><li>5. To enhance literary and linguistic competence of student.</li></ul>
COURSE OUTCOMES	<ol> <li>To introduce students to major movements and figure of Indian literature in English.</li> <li>To create literary sensibility and emotional response to the literary text and implant sense of appreciation of literary texts.</li> <li>To expose student to the artistic and innovative use of language employment by the Writers.</li> <li>To instill values and develop human concern in student through exposure to literary texts.</li> <li>To enhance literary and linguistic competence of student.</li> </ol>
PROGRAM	Paper: II-Applied Linguistics
PROGRAM	1. To acquaint the students with different theoretical and practical aspect of
OUTCOMES	<ul><li>language and Literature Teaching.</li><li>2. To acquaint them with different approaches, methods and techniques of teaching English Language and Literature.</li><li>3. To sensitize the students to the major issues in ELLT in the Indian context.</li></ul>
COURSE	1. The students acquaints with the method of teaching.
OUTCOMES	<ol> <li>The students acquaints with the language.</li> <li>The students know the teaching of language skills and Testing.</li> </ol>
	<ol> <li>The students know the teaching of language skins and resting.</li> <li>The students know the instructional material and classroom issues.</li> </ol>

PROGRAM	Paper: III-Indian Literatures in English Translations
PROGRAM OUTCOMES	<ol> <li>To introduce students to major movements related to Indian literatures and English translations.</li> <li>To create literary sensibility for appreciation in students and expose them to artistic and innovative use of Language by writers and to various world views.</li> <li>To instill values and develop human concern in student through exposure to literary texts.</li> <li>To enhance literary and linguistic competence of student.</li> </ol>
COURSE OUTCOMES	<ol> <li>The students know the literatures and English translations.</li> <li>The students can think about the human psychology.</li> <li>To expose student to the artistic and innovative use of language employment by the writers.</li> <li>The students know Human life at the Universal Level</li> <li>The students also know about the different streaks of human life.</li> </ol>
PROGRAM	Paper: IV American Literature.
PROGRAM OUTCOMES	<ol> <li>To introduce students to the major literary movements in America, literary works and writers through selected texts.</li> <li>To enhance the literary sensibility of students by exposing them to the American writers of various times.</li> <li>To instill values and develop human concern in student through exposure to literary texts.</li> <li>To enhance literary and linguistic competence of students.</li> </ol>
COURSE OUTCOMES	<ol> <li>The students know the literary movements of America and its history.</li> <li>The students know the cultural aspect of America through literary works.</li> <li>The students acquaints with the history of America.</li> <li>The students acquaints with literary and linguistic competency.</li> </ol>

### Department of Hindi

Program	B.A.
Program specific Outcomes	.1हिंदी भाषा का व्यवस्थित और यथोचित ज्ञान .2भावात्मक और सौदर्यात्मकविकास .3निवेदक और सूत्र संचालक .4प्रकाशकसावददाता,संपादक,
	F.Y.B.A. Sem-I, वैकल्पिक हिंदी प्रश्नपत्र -1A
Course Outcomes Subjectwise	1.छात्रो को गद्य एवं पद्य के रचनाकारो का परिचय देना  2. छात्रो में राष्ट्रभाषा हिंदी का प्रचार-प्रसार कारना
	F.Y.B.A. Sem-II, वैकल्पिक हिंदी प्रश्नपत्र -1A
Course Outcomes Subjectwise	1.छात्रो को गद्य एवं पद्य के रचनाकारो का परिचय देना  2. छात्रो में राष्ट्रभाषा हिंदी का प्रचार-प्रसार कारना
	S.Y.B.A. (G2) काव्य एवं ,कहानी) (लेखन
Course Outcomes Subjectwise	1.हिंदी भाषा के व्यावहारिक क्षेत्रो से परिचित करना  2. छात्रो को हिंदी शब्द-युग्म का ज्ञान करना
	S.Y.B.A. (S1) हिंदी विशेष1- हिंदी ) (भाषा का विकास
Course Outcomes Subjectwise	1.छात्रो को भाषा की परिभाषा,विशेषताएँ

	तथा भाषा के विविध रूपों की जानकारी देना
	2. भाषा विज्ञान के अन्य विज्ञानो से
	सबंध विशद करना ।
	S.Y.B.A. (S2) हिंदी विशेषनाटक ,उपन्यास) 2-
	(तथा मध्ययुगीन हिंदी काव्य
Course Outcomes Subjectwise	1.मध्ययुगीन संत एवं भक्तो के काव्य से
	छात्रो को परिचित करना
	2. हिंदी उपन्यास एवं नाटक के विविध
	मानदंडो के आधार पर छात्रो में समीक्षण की
	क्षमता निर्माण करना
	.Y.B.A.(G3) हिंदी सामान्यसृजन संदर्भ ) 3-
	(आत्मकथांश:और मै
Course Outcomes Subjectwise	1.छात्रो को हिंदी आत्मकथा विधा का परिचय
	करना
	2 कानों में आंगेनी में दिनी में अनवान काने
	2.छात्रो में अंग्रेजी से हिंदी में अनुवाद करने की कला को विकसित कराना
	יאו אימו או וטאויזת איזיסון
	T.Y.B.A.(S3) हिंदी विशेषआदिकाल से ) 3-
	(आध्निक काल तक
Course Outcomes Subjectwice	<ol> <li>हिंदी साहित्य के इतिहास के माध्यम साहित्य</li> </ol>
Course Outcomes Subjectwise	और युग जीवन का संबध विशद करना।
	2. हिंदी साहित्य के इतिहास कालखंडो और
	पृष्ठभूमि का परिचय करना
	.Y.B.A.(S4) हिंदी विशेष-4(काव्यशास्र)
	ו ו.ש.ה.ושדו ופעו ועזוא-אואושועאווא)

Course Outcomes Subjectwise	1.छात्रो को रस का स्वरूप,अंग,एवं भेदो का परिचय देना  2. छात्रो को अलंकार,छंदो का परिचय देना

Program	M.A.
Program specific Outcomes	अनुसंधान के क्षेत्र में अनुसंधान दाता के रूप में अवसर  अनुवाद के रूप में अनुवादक के रूप में अवसर  उसाहित्य के क्षेत्र में अवसर  राष्ट्रीयकृत बैकसरकारी कार्यालय में राजभाषा , अधिकारी
	1. मध्ययुगीन काव्य
Course Outcomes Subjectwise	1.छात्रो को मध्ययुगीन कविओं से परिचित कारांना  2. हिंदी भाषा के प्रचार प्रसार के लिये प्रोत्साहित करना
	2.कथा साहित्य
Course Outcomes Subjectwise	1.छात्रो को हिंदी के कथा साहित्य से परिचित करना

	2.छात्रो में राष्ट्रभाषा हिंदी का प्रचार-प्रसार कारना
	भारतीय 3काव्यशास्र
Course Outcomes Subjectwise	1. छात्रो को रस का स्वरूप,अंग,एवं भेदो का परिचय देना
	2. छात्रो को अलंकार,छंदो का परिचय देना।
	4 हिंदी पत्रकारिता
Course Outcomes Subjectwise	1. रोजगार परकदृष्टी का विकास करना  2. पत्रकारिता का कौशल विकसित करना
	5 कथेतर गद्य साहित्य
Course Outcomes Subjectwise	1.गद्य विधा की जानकारी देना
	6 शोध प्रविधि
Course Outcomes Subjectwise	1.शोध दृष्टी का विकास करना
	2.शोध प्रक्रिया एवं शोध प्रबंध लेखन कौशल विकसित करना
	पाश्च्यात्य काव्यशास्र
Course Outcomes Subjectwise	1.छात्रो को रस का स्वरूप,अंग,एवं भेदो का परिचय देना

	2. छात्रो को अलंकार,छंदो का परिचय देना
	8 हिंदी उपन्यास
Course Outcomes Subjectwise	1.छात्रो को उपन्यास विधा का परिचय देना   2.छात्रो को उपन्यास के प्रति जागृत कारना
	9 आधुनिक काव्य (महाकाव्य तथा खंडकाव्य)
Course Outcomes Subjectwise	1.छात्रो को महाकाव्य और खंडकाव्य के तत्व और उसकी जानकारी देणा
	10 भाषा विज्ञान
Course Outcomes Subjectwise	1.छात्रो को भाषा की परिभाषा,विशेषताएँ तथा भाषा के विविध रूपो की जानकारी देना  2. भाषाज्ञान के अन्य विज्ञानो से सबंध विशद करना
	11 हिंदी साहित्य का इतिहास (आदिकाल,भाक्तीकाल,रीतीकाल)
Course Outcomes Subjectwise	1.हिंदी साहित्य के इतिहास के माध्यम साहित्य और युग जीवन का संबध विशद करना  2. हिंदी साहित्य के इतिहास कालखंडो और पृष्ठभूमि का परिचय करना

	12. जनसंचार माध्यम और हिंदी
Course Outcomes Subjectwise	<ol> <li>छात्रो को जनासंचार मध्योमो में हिंदी का योगदान बताना।</li> </ol>
	13.आधुनिक काव्य -2 (विशेष कवि कुवर नारायण तथा नई कविता)
Course Outcomes Subjectwise	1. नई काव्य और कुवर नारायण की जानकारी देना
	14. हिंदी भाषा का ऐतिहासिक विकास
Course Outcomes Subjectwise	.1छात्रो को भाषा की परिभाषाविशेषताएँ , विविध रूपो की जानकारी तथा भाषा के  देना .2भाषाज्ञान के अन्य विज्ञानो से सबंध विशद करना
	15. हिंदी साहित्य का इतिहास (आधुनिक काल)
Course Outcomes Subjectwise	1.हिंदी साहित्य के इतिहास के माध्यम साहित्य और युग जीवन का संबध विशद करना  2. हिंदी साहित्य के इतिहास कालखंडो और पृष्ठभूमि का परिचय करना
	16. अनुसंधान प्रक्रिया स्वरूप और क्षेत्र
Course Outcomes Subjectwise	1.शोध दृष्टी का विकास करना  .2 शोध प्रक्रिया एवं शोध प्रबंध लेखन कौशल विकसित करना

	After Successful completion of three year degree progree program in Marathi a students should be able to
Programme	1.साहित्या संबंधी -मराठी साहित्यासंबंशी रुची निर्माण होते.
Outcomes	2.विशिष्ट कालखंडाच्या पार्श्वभूमीवर साहित्यामागील प्रेरणा प्रवृत्तीचे ज्ञान करून घेणे.
	3.विविध प्रकारची लेखनकौशल्ये विकसित करणे
	4.साहित्याभ्यासातून जीवनविषयक समज विकसित करण्यास मदत होते
	5.आस्वाद घेण्याची डोळस क्षमता विकसित करणे.
	6.जागतिकिकरणाच्या विविध क्षेत्रांना सामोरे जाण्यासाठी भाषिक क्षमता विकसित करण्यास मदत होते.
	7.व्यक्तिमत्व विकास करण्यास मदत होते.
Programme specific Outcomes	1.समीक्षा करण्याची क्षमता विकसित होते.
	2. विद्यार्थ्याच्या वाङमयीन अभिरुचीचा विकास होतो.
	3.मराठी साहित्यातील भिन्न भिन्न साहित्य प्रवाह आणि लक्षात घेण्यास मदत होते.
	4. विविध लेखनकौशल्ये विकसित करणे.
	5.वाङमयीन व्यवहार आणि जीवन व्यवहारांचे स्वरुप समजून घेणे.
C	ourse Outcomes B.A. Marathi
Course	Outcomes
FYBA Marathi Sem. I	
Marathi CC-1A	1.मराठी भाषा आणि मराठी साहित्य ,मराठी संस्कृती यांचे अध्ययन करण्यास मदत
मराठी साहित्य कथा आणि भाषिक कौशल्य विकास	होते.
	2.साहित्यभ्यासातून जीवनविषयक समज विकसित होण्यास मदत होते.
	3.कथा या साहित्यप्रकाराची ओळख,होऊन प्रकार ,स्वरुप विकास व वाटचाल लक्षात येते
	4.भाषिक कौशल्य विकास होण्यास मदत होते.
Marathi CC-1A	1.एकांकिका या साहित्य प्रकाराची ओळख होते.
मराठी साहित्य एकांकिका आणि भाषिक कौशल्य	2.एकांकिका या साहित्यप्रकाराचे स्वरुप,प्रकार, आणि वाटचाल याची माहिती होते.
विकास	3.मराठीतील निवडक एकांकिकांचे आकलन आस्वाद आणि मूल्यमापन होण्यास मदत

## Programme Outcomes BA Marathi 2019-20

	होते.
	4.भाषिक कौशल्य विकास करताना जीवनविषयक दृष्टी निर्माण होते.
FYBCom Mara	thi Sem. I
Marathi 117 AEC भाषा ,साहित्य आणि कौशल्य	1.विविध क्षेत्रातील भाषा व्यवहाराचे स्वरुप समजून घेण्यास मदत होते.
विकास	2.विविध क्षेत्रातील मराठी भाषेच्या वापराची कौशल्ये विकसित करण्यासाठी मदत होते.
	3.विविध क्षेत्रातील कर्तृतत्ववान व्यक्तिीच्या कार्याची व विचाराची ओळख करुन घेणे.
	4.विद्यार्थ्यांमद्ये नैतिक ,व्यावसायीक व वैचारिक मूल्यांची जोपासना करणे.
Marathi 117 AEC भाषा अणि कौशल्येविकास	1.विविध क्षेत्रातील प्रशासकीय भाषा व्यवहाराचे स्वरुप समजून घेण्यास मदत होते.
	2.विविध क्षेत्रातील मराठी भाषेच्या वापराची कौशल्ये विकसित करण्यासाठी मदत होते.
	3. विविध लेखन प्रकारांचा अभ्यास व प्रत्यक्ष लेखनाची कौशल्य वापरण्यास सक्षमता प्राप्त होते.
	hi (Annual Pattern)
Marathi- 2024	1.शुध्द लेखनाची ओळख होते.
सामान्यस्तर -पेपर क्र .2	2.पारिभाषिक संज्ञांची ओळख होते.
आधुनिक मराठी साहित्य आणि उपयोजित मराठी	3. चरित्र आत्मचरित्र या साहित्यप्रकाराच्या तात्विक घटकांचे ज्ञान करुन घेण्यास मदत होते.
	4.चरित्र या वाङमय प्रकाराचे आकलन आस्वद आणि मूल्यमापन  करण्याची क्षमता विद्यार्थ्यांमध्ये निर्माण होते.
Marathi- 2025	1.मराठी साहित्याविषयी अभिरुची तयार होते.
विशेष स्तर पेपर क्र. 1	2.साहित्यकृतीचे आकलन आस्वाद आणि मूल्यमापन करण्याची दृष्टी निर्माण होते.
मराठी साहित्यातील विविध साहित्य प्रकार -	3. साहित्याचा सूक्ष्म पातळीवर अभ्यास करण्याची विकसित करता येते.
	4.मराठी साहित्यप्रकारांच्या तात्विक घटकांचे ज्ञान प्राप्त होते.
	5.साहित्यकृतीला मुक्त प्रतिसाद देण्याची क्षमता विकसित होते.
Marathi- 2026	1.अभ्यासाच्या प्रारंभी विद्यार्थ्यांमध्ये मराठी साहित्याच्या ऐतिहासिक परंपरेचे स्थूल ज्ञान
विशेष स्तर पेपर क्र. 1	प्राप्त होते.
अर्वाचीन मराठी वाङमयाचा इतिहास ज्(इ.स. 1818 ते	2.विशिष्ट कालखंडाच्या पार्श्वभूमीवर साहित्यामागील प्रेरणा प्रवृत्तीचे ज्ञान करून घेतो.
1960)	<ol> <li>साहित्यप्रकाराच्य विकसनञ्जील परंपरेचे स्थूल ज्ञान प्राप्त करुन घेतो.</li> </ol>
	4.विद्यार्थी पदव्युत्तर अभ्यासाची तयारी करतो.
SYBSc Marathi	

Marathi-83112	1.मराठी विज्ञान साहित्याबद्दल अभिरुची निर्माण होते.	
मराठी विज्ञान साहित्य आणि व्यवहारिक मराठी	2.विज्ञानविषयक जाणीवा तयार होतात.	
	3.विज्ञान,उद्योगातील विविध प्रवाह संधी इ. चा परिचय होतो.	
	4.लेखन,वाचन,आकलन आणि संभाषण ही भाषिक कौशल्ये विकसित होतात	
TYBA Marathi Anuual		
Marathi – 3024	1.आधुनिक मराठी साहित्यातील विविध साहित्यप्रकारांचा परिचय होतो.	
आधुनिक मराठी साहित्य व व्यावहारीक व उपयोजित मराठी	2.साहित्याबद्दलची अभिरुची विकसित होऊन कलाकृतीचा आस्वाद घेण्याची क्षमता विकसित होते.	
	3.भाषेचे यथोचित आकलन करून तिचा वापर करण्याची क्षमता विकसित होते.	
	4.निबंध व प्रवासवर्णन या साहित्य प्रकाराचे तात्विक विवेचन आत्मसात करतो.	
Marathi – 3025	1. साहित्याचे स्वरुप समजून घेतो.	
साहित्यविचार विशेष स्तर 3	2.वाङमयीन मूल्यांचा परिचय होतो.	
	3.साहित्याचे प्रयोजने जाणून घेतो.	
	4.साहित्य आणि समाज यांच्यातील परस्पर संबंध समजून घेतो.	
	5.साहित्य निर्मितीचे तत्व जाणतो.	
Marathi -3026 भाषाविज्ञान	1.भाषेचे स्वरुप व कार्य , भाषेच्या अभ्यासाचे महत्व भाषेच्या प्रमुख अंगाचा परिचय करुन घेतो.	
विशेष स्तर 4	2. भाषेचे मानवी जीवनातील कार्य व महत्व जाणून घेतो.	
	3.वेगवेगख्या भाषाभ्यास पध्दतीचे वेगळेपण व महत्व जाणून घेतो.	
	4.मराठी भाषेचा उत्पत्तीकाल जाणून तत्कालीन भाषिक स्थित्यंतराचा परिचय होतो.	
	5.मराठी भाषेचा ऐतिहासिक परिचय होतो.	
Course Outcomes M.A. Marathi		
Department of Marathi	After successful completion of two year degree program in Marathi a	
	student should be able to;	
Programme	1.विद्यार्थ्याला आपल्या आवडीचे संशोधन क्षेत्र निश्चित  करता येते.	
Outcomes	2.मराठी भाषा आणि वाङमयाचे प्रगत ज्ञान प्राप्त होते.	
	3.समकालीन वाङमयीन प्रवाहांचे नीट आकलन होते.	
	4.वाङमयीन प्रइनांविषयी विचार करण्याची जाण निर्माण होते.	
	5.वाङमयीन आणि जीवनविषयक जाणीव प्रौढ होते.	

	6.चिकित्सक अभ्यासाची क्षमता विकसित होते.
	7.विद्यार्थ्यांच्या लेखन गुणांना उत्तेजन मिळते.
Programme specific Outcomes	1.विशिष्ट कालखंडातील साहित्याच्या व्याप्ती बद्दल जाण निर्माण होण्यास मदत करणे.अशा विषयाच्या चिकित्सेची समज वाढविणे.,
	2.साहित्यकृतीच्या साहित्यप्रकाराच्या तौलनिक अभ्यासाबाबत दिशा,व्याप्ती आणि मर्यादा यांची समज निर्माण होण्यास मदत करणे, अशा अभ्यासाची क्षमता वाढविणे.
	3.साहित्याच्या व्यवच्छेदक लक्षणाबाबत विचारांची आणि वाङमयीन मूल्यमापनाच्या दृष्टीची समज वाढते.
	4.भाषेचे विविध व्यवहार आणि साहित्याच्या संदर्भातील भाषाव्यवहार याविषयी आकलनाची क्षमता वाढविणे.
	5.साहित्याभ्यासाच्या संदर्भातील विषयांची, त्यांच्या प्रस्तुततेविषयीची जाण निर्माण करणे.
Course Sem-I	Outcomes
भाषा व्यवहार आणि भाषिक कौशल्य भाग 1	1.प्रमाणभाषा संकल्पना स्वरुप आणि आवश्यकता याचे महत्वलक्षात येते.
	2.विविध साहित्यसंस्थांचे वाङमयीन कार्य लक्षात घेता येते.
	3.मुलाखतीचे स्वरुप प्रयोजन व प्रकार यांची अपखख होते.
	4.अर्जलेखन, पत्रलेखन याचे स्वरुप व प्रकार लक्षात घेतो.
आर्वाचीन मराठी वाङमयाचा इतिहास 1818 ते1920	1.वाङमयेतिहासाची संकल्पना ,स्पष्ट होते.
	2.वाङमयनिर्मितीमागील प्रेरणा प्रवृत्तीचा कालिक संदर्भ लक्षात येतो.
	3.अर्वाचीन कालखंडातील सामाजिक धार्मिक, राजकीय, सांस्कृतिक आणि वाङमयीन पार्श्वभूमी लक्षात येते.
	4.अर्वाचीन कालखंडातील विविध साहित्य प्रकारांचे स्वरुप व वाटचाल लक्षात घेतो.
Mararathi – 10433	<ol> <li>1.भाषेचे मानवी जीवनातील कार्य व महत्व जाणून घेतो.</li> </ol>
ऐतिहासिक भाषाविज्ञान	2.वेगवेगळ्या भाषाभ्यास पध्दतीचे वेगळेपण) व महत्व जाणून घेतो.
	3.भाषा कुलसंकल्पना स्वरुप व कार्य समजावून घेतो.
	4.मराठी भाषा विकासाचे कालिक टप्पे लक्षात घेतो.
	5.भाषिक परिवर्तनाची संकल्पना स्वरुप व कारणे यांची माहिती होते.
Mar – 10434 ग्रामीण साहित्य	1.स्वातंत्र्यानंतरच्या कालखंडात ग्रामीण साहित्याच्या निर्मितीची कारण परंपरा समजावून घेतो.
	2.ग्रामीण साहित्याचे स्वरुप व कार्य यांची चिकित्सा करतो.
	3.ग्रामीण साहित्यातील विविध वाङमय प्रकाराचा विकास कसा होत गेला याचे मूल्यमापन

	करतो.	
	4.ग्रामीण साहित्याने दिलेले योगदान,त्याच्या विकासाची गती,दिशा यांची मीमांसा करतो.	
Course Sem-II	Outcomes	
भाषा व्यवहार आणि भाषिक कौशल्य भाग 2	1.भाषांतराचे स्वरुप,आवश्यकता व महत्व लक्षात घेतो.	
	2.भाषांतर ,अनुवाद,भावानुवाद आणि रुपांतर यातील साम्यभेद लक्षात घेतो.	
	3.निवेदन कौशल्याची आवश्यकता,तंत्रे,शैली व गुणविशेष याविषयी माहिती घेतो.	
	4.वाङमयीन प्रकल्पलेखनाचे स्वरुप ,घटक याचे आकलन होते.	
आर्वाचीन मराठी वाङमयाचा इतिहास 1920 ते 2010	1.अर्वाचीन मराठी साहित्यातील सामाजिक ,धार्मिक राजकीय विचारप्रवाह व साहित्याचा सहसंबंध लक्षात येतो.	
	2.स्वातंत्र्यानंतरच्या कालखंडातील सामाजिक ,धार्मिक,राजकीय विचाराच्या बदलाची जाणीव होते.	
	3.साहित्यात निर्माण झालेल्या नवपरिवर्तनाची जाणीव होते.	
	4.खाजगिकरण उदारीकरण व जागतिकिकरणाच्या धोरणाचा स्वीकार झाल्यानंतर साहित्याचे वेगळेपण स्पष्ट होते.	
Marathi – 20433	1. भाषा आणि समाज यांचे महत्व जाणतो.	
सामाजिक भाषाविज्ञान	2.सामाजिक भाषा विज्ञानाची नवी संकल्पना जाणतो.	
	3.समाजातील भाषा उपयोजनातील विविधता समजावून घेतो.	
	4.भाषा आणि विविध क्षेत्रीय वापराचे महत्व समजावून घेतो.	
	5.प्रमाणभाषा आणि परभाषा संपर्काचे स्वरुप जाणतो.	
Marathi – 20434 दलित साहित्य	1.स्वातंत्र्यप्राप्तीनंतरच्या कालखंडात दलित साहित्याच्या निर्मितीची कारणपरंपरा समजावून घेतो.	
	2.दलित साहित्याचे स्वरुप कार्य यांची चिकित्सा करतो.	
	3.दलित साहित्याने निर्माण केलेल्या विविध वाङमयप्रकाराच्या विकासाचे मूल्यमापन करतो.	
	4.दलित साहित्यातून व्क्त होणाऱ्या वेदनांचे व विद्रोहाचे स्वरुप जाणून घेतो.	
Course Sem-III	Outcomes	
प्रसारमाध्यमांसाठी लेखन कौशल्ये भाग 1	1.प्रसारमाध्यमांसाठी लेखन कौशल्ये आत्मसात करता येते.	
	2. दृकश्राव्य नवमाध्यमासाठी लेखनाची क्षमता विकसित होते.	
	3.प्रसारमाध्यमांच्या स्वरुपाचे ज्ञान करुन घेता येते.	
	4.प्रसारमाध्यमांचे समाजातील महत्व लक्षात येते.	
साहित्य समीक्षा	1. साहित्य आणि समीक्षा व्यवहाराची समज वाढीस लागते.	

	2.समीक्षेची संकल्पना समजून घेतो.	
	3.समीक्षा व्यवहारातील मूल्यकल्पनांचा परिचय करुन घेतो.	
	4. विविध समीक्षा पध्दती जाणून घेतो.	
	5.मराठी साहित्य समीक्षेची परंपरा समजून घेतो	
नेमलेल्या मध्ययुगीन साहित्यकृतीचा अभ्यास	1.मध्ययुगीन कालखंडातील साहित्यप्रकाराची ,संकल्पना व स्वरुप लक्षात घेता येते.	
	2.साहित्यकृतीची वैशिष्ट्ये जाणून घेता येतात.	
	3. मध्ययुगीन मराठी साहित्यकृतीची वाङमयीन व जीवनमूल्ये जाणून घेता येतात.	
Marathi – 30434	1.लोकसाहित्याचे स्वरुप समजावून घेतो.	
लोकसाहित्याची मुलतत्वे आणि मराठी लोकसाहित्य	2.लोकसाहित्याची व्यापकता व सर्वसमावेसकता समजून घेतो.	
	3.लोकसाहित्यातील व्यापकता व सर्वसमावेसकता समजून घेतो.	
	4.लोकसाहित्यातील सामाजिक ,धार्मिक सांस्कृतिक जाणिवा स्पष्ट होतात.	
Course Sem- IV	Outcomes	
प्रसारमाध्यमांसाठी लेखन कौशल्ये भाग 2	1.माहितीपटासाठी लेकनकौशल्याची क्षमता विकसित होते.	
	2.चित्रपटासाठी पटकथालेखनाचे स्वरुप समजून घेण्यास मदत होते.	
	3.लिखित स्वरुपाच्या नवमाध्यमांसाठी लेखन क्षमता प्राप्त करता येते.	
	4.दृकश्राव्य स्वरुपाच्या नवसमाजमाध्यमांसाठी लेखन कौशल्य प्राप्त करता येते.	
साहित्य संशोधन	1.संशोधनाची संकल्पना ,प्रयोजने आणि विविध संशोधन पध्दती समजावून घेता येतात.	
	2.वाङमयीन संशोधनाच्या विविध अभ्यास क्षेत्राचा परिचय करुन घेता येतो.	
	3.आंतर्विद्याशाखीय संशोधनाचे स्वरुप आणि महत्व लक्षात येते.	
	4.संशोधन करण्याची क्षमता व दृष्टी विकसित होते.	
नेमलेल्या मध्ययुगीन साहित्यकृतीचा अभ्यास	1.कालखंड आणि साहित्यकृतीच्या निर्मितीचा अनुबंध शोधता येतो.	
	2.मध्ययुगीन संत परंपरेचा अभ्यास करण्यास मदत होते.	
	3.संत साहित्य आणि समज जीवन यांचा अनुबंध लक्षात येतो.	
Marathi – 30434	1. लोकसाहित्याचे स्वरुप समजून घेतो.	
लोकसाहित्याची मुलतत्वे आणि मराठी लोकसाहित्य	2.लोकसाहित्याची व्यापकता व सर्वसमावेशकता समजून घेतो.	
	3.लोकसाहित्यातील विविध कला प्रकार समजून घेतो.	
	4.लोकसाहित्यातील सामाजिक ,धार्मिक अनुबंध स्पष्ट करुन घेतो	

### PROGRAMME OUTCOMES: B.Com (2019-20)

#### **Course Outcomes B.Com**

S.N.	Course	Course Outcomes
1	F.Y. B.Com. Semester: I Financial Accounting- I (112)	Outcomes:-         1) To impart the knowledge of various accounting concepts         2) To create awareness about application of these Concepts in business world.         3) To impart skills regarding Computerized Accounting 4)To impart knowledge regarding finalization of accounts Of various establishments.
1	F.Y. B.Com . Semester: I Business Economics (Micro)-I (113)	<ul> <li>Outcomes:-</li> <li>1)To impart knowledge of business economics</li> <li>2) To clarify micro economic concepts</li> <li>3) To analyze and interpret charts and graphs</li> <li>4) To understand basic theories, concepts of micro economics and their application</li> </ul>
1	F.Y. B.Com. Semester: I Business Mathematics & Statistics- I (114 (A)	<ul> <li>Outcomes:- <ol> <li>To introduce the basic concepts in Finance and Business Mathematics and Statistics</li> <li>To familiar the students with applications of Statistics and Mathematics in Business</li> <li>To acquaint students with some basic concepts in Statistics.</li> <li>To learn some elementary statistical methods for analysis of data.</li> </ol> </li> <li>The main outcome of this course is that the students are able to analyze the data by using some elementary statistical methods</li> </ul>
1	F.Y.B.Com. Semester: I BANKING & FINANCE- I (Fundamentals of Banking I) (115 – B)	Outcomes:- 1) To provide knowledge of fundamentals of Banking 2)To create awareness about various banking concepts 3) To conceptualize banking operations.
1	F.Y.B.Com. Semester: I Marketing and Salesmanship- I (Fundamentals of Marketing) (116 – C)	<ul> <li>Outcomes:- <ol> <li>To introduce the basic concepts in Marketing.</li> <li>To give the insight of the basic knowledge of Market Segmentation and Marketing Mix</li> <li>To impart knowledge on Product and Price Mix.</li> <li>To establish link between commerce, business and Marketing.</li> <li>To understand the segmentation of markets and Marketing Mix.</li> <li>To enable students to apply this knowledge in practicality by enhancing their skills in the field of Marketing.</li> </ol></li></ul>
1	F.Y.B.Com. Semester: II Financial Accounting- II (122)	Outcomes:-         1)To impart knowledge of various software used in accounting         2) To impart knowledge about final accounts of charitable trusts         3) To impart knowledge about valuation of intangible assets

	4) To impart knowledge about accounting f	or leases
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1	F.Y.B.Com. Semester: II	Outcomes:-
-	Business Economics (Micro) - II (123)	1)To understand the basic concepts of
		Micro economics.
		2)To understand the tools and theories
		of economics for solving the problem
		of decision making by consumers and
		Producers.
		3) To understand the problem of
		Scarcity and choices.
1	F.Y.B.Com. Semester: II	Outcomes:-
	Business Mathematics and Statistics –	1)To introduce the basic concepts in
	II	Finance and Business Mathematics
	(124 (A)	and Statistics
		2) To familiar the students with
		applications of Statistics and
		Mathematics in Business
		3)To acquaint students with some
		basic concepts in Statistics.
		4) To learn some elementary statistical
		methods for analysis of data.
		5) The main outcome of this course is
		that the students are able to analyze
		the data by using some elementary
		statistical methods
1	F.Y.B.Com. Semester: II	Outcomes:-
	Banking and Finance	1)To develop the working capability of
	FUNDAMENTALS OF BANKING -	students in banking sector
	II	2)To Make the Students aware of
	[125(B)]	Banking Business and practices.
		3)To enlighten the students regarding
		the new concepts introduced in the
		banking system.
1	F.Y.B.Com. Semester: II	Outcomes:-
	Marketing and Salesmanship-	1)To introduce the concept of
	Fundamental of Marketing- II [126 (C)]	Salesmanship.
		2)To give insight about various
		Techniques required for the
		salesman.
		3)To inculcate the importance of Rural
		Marketing.
		4)To acquaint the students with recent
		trends in marketing and social media
		marketing.
2	S.Y. B.Com.	Outcomes:-
	Business Communication (201)	1) To understand the concept, process and
		importance
		Of communication.
		2) To develop awareness regarding new trends in
		Business communication.
		3) To provide knowledge of various media of
		Communication.
		4) To develop business communication skills

		through the Application and exercises.
2	S.Y. B.Com Corporate Accounting (202)	Outcomes:-To enable the students to developawareness about Corporate Accountingin conformity with the provisions ofCompanies Act and Accounting as perIndian Accounting Standards.1) To make aware the students aboutthe conceptual aspect ofcorporateaccounting2) To enable the students to developskills for Computerized Accounting3) To enable the students to developskills about accounting standards
2	S.Y. B.Com Business Economics (Macro) (203)	Outcomes:-         1) The objective of the course is to familiarize the students the basic concept of Macro Economics and application.         2) To Study the behavior of the economy as a whole.         3) To Study the relationship among broad aggregates.         4) To apply economic reasoning to problems of the economy.
2	S.Y. B.Com Business Management(204)	Outcomes:-         1) To provide basic knowledge & understanding about business management concept.         2) To provide an understanding about various functions of management.
2	S.Y. B.Com Elements of Company Law (205)	<ul> <li>Outcomes:- <ol> <li>To impart students with the knowledge of fundamentals of Company Law.</li> <li>To update the knowledge of provisions of the Companies Act of 2013.</li> <li>To apprise the students of new concepts involving in company law regime.</li> <li>To acquaint the students with the duties and responsibilities of Key Managerial Personnel.</li> <li>To impart students the provisions and procedures under company law.</li> </ol> </li> </ul>
2	S.Y. B.Com Banking & Finance - I (Indian Banking System – I)( 206 – B)	Outcomes:-         1)To create the awareness among the students of Indian banking system.         2)To enables students to understand the reforms and other developments in the Indian Banking         3) To provide students insight into the functions and role of Reserve Bank of India.
2	S.Y. B.Com Cost and Works Accounting –I (206-E)	Outcomes:-         To Impart The Knowledge Of:         1) Basic Cost concepts.         2) Elements of cost.         3) Ascertainment of         Material and Labour Cost.

2	S.Y. B.Com	Outcomes:-
Z		1) To orient the students recent trends in marketing
	Marketing Management-I	management
		2)To create awareness about marketing of
		ecofriendly products in the society through
		students
		3)To inculcate knowledge of various aspects of marketing management through practical approach
		4)To acquaint the students with the use of E-
		Commerce in competitive environment
		5)To help the students understand the influences of
		marketing management on consumer behavior
3	T.Y. B.Com.	Outcomes:-
5	Business Regulatory Framework (Mercantile	1)To acquaint students with the basic concepts,
	Law) (301)	terms & provisions of Mercantile and Business
		Laws.
		2. To develop the awareness among the students
		regarding these laws affecting business, trade and
		Commerce.
3	T.Y. B.Com.	Outcomes:-
	Advanced Accounting (302)	1)To impart the knowledge of various accounting
		Concepts.
		2)To instill the knowledge about accounting
		Procedures, methods and techniques.
		3)To acquaint them with practical approach to
2		Accounts writing by using software package.
3	T.Y. B.Com.	Outcomes:-
	Indian & Global Economic Development	1) To expose students to a new approach to the Study of the Indian Economy
	[303 (A)]	<ul><li>Study of the Indian Economy.</li><li>To help the students in analyzing the present</li></ul>
		status of the Indian Economy.
		<ul><li>3) To enable students to understand the process of</li></ul>
		Integration of the Indian Economy with other
		economics of the world.
		4) To acquaint students with the emerging issues in
		Policies of India's foreign trade.
3	T.Y. B.Com.	Outcomes:-
	Auditing & Taxation (304)	The Study of Various Components of this course will
		enable the students:
		1. To acquaint themselves about the concept and
		principles of Auditing, Audit process, Assurance
		Standards, Tax Audit, and Audit of computerized
		Systems.
		2. To get knowledge about preparation of Audit
		report.
		3. To understand the basic concepts and to acquire
		knowledge about Computation of Income,
		Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection
		Authorities under the Income Tax Act, 1961.
3	T.Y. B.Com.	Outcomes:-
5		1) To acquaint the students with Financial Markets
		the Indian Economy.
	Banking & Finance Special Paper II (305 – b)	<ul> <li>And it's various segments.</li> <li>2) To give the students and understanding of the Operations and developments in financial markets in India.</li> <li>3) To enable them to gain an insight into the Functioning and role of financial institutions in</li> </ul>

3	T.Y. B.Com.	Outcomes:-
-	Cost and Works Accounting Special Paper II	1) To provide Knowledge about the concepts and
	(305 - e)	principles application of Overheads
		2) To provide also understanding various methods
		of costing and their applications.
3	T.Y. B.Com.	Outcomes:-
	Marketing Management Special Paper II	1)To understand the concept and functioning of
	(305 – h.)	marketing planning and sales management
		2) To know marketing strategies and organization
		3)To inform various facets of marketing with
		regulatory aspects
		4)To understand marketing in globalize scenario
3	T.Y. B.Com.	Outcomes:-
	Banking & Finance Special Paper III	1)To acquaint the students with Banking Law and
	(306 - b)	Practice in relation to the Banking system in
		India
		2) To understand the legal aspects of Banking
		transactions and its implications as Banker and
		Customer.
		3)To make the Students aware of the Banking Law
		and Practice in India
3	T.Y. B.Com.	Outcomes:-
	Cost and Works Accounting Special Paper	1)To impart knowledge regarding costing
	III	Techniques.
	(306 - e)	2)To provide training as regards concepts,
_		Procedures and legal Provisions of cost audit.
3	T.Y. B.Com.	Outcomes:-
	Marketing Management Special Paper III	1) To know detailing of Marketing Research
	(306 – h.)	2) To understand the role Brand and Distribution
		Management in marketing
		3) To inform about Marketing and Economic
		Development
		4) To Know of the importance of control on
		marketing activities

#### PROGRAMME OUTCOMES: M.Com (2019-20)

#### **Course Outcomes M.Com**

S.No.	Course	Course Outcomes
1	M.Com. Part I (Semester I) Management Accounting (101)	Outcomes:- The objective of the course is to enable students to acquire sound Knowledge of concepts, methods and techniques of management accounting and to make the students develop competence with their usage in Managerial decision making and control.
1	M.Com. Part I (Semester I) Strategic Management (102)	<ul> <li>Outcomes:-</li> <li>1)To introduce the students to the emerging changes in the modern business environment</li> <li>2)To develop the analytical, technical and managerial skills of students in the various areas of Business Administration</li> <li>3)To empower to students with necessary skill to become</li> </ul>

		<ul> <li>effective future managers and leaders</li> <li>4)To develop Technical skills among the students for designing and developing effective Functional strategies for growth and sustainability of business</li> </ul>
1	M.Com. Part I (Semester I) Production & Operation Management (113-F)	<ul> <li>Outcomes:- <ol> <li>To understand and develop deep insight of Production &amp; Operation Management.</li> <li>To understand &amp; identity business problems involving operational function, planning and control, design Development and quality management.</li> <li>Demonstrate awareness and importance of application, Operation and supply chain management.</li> <li>To develop skills necessary to effectively analyze and synthesize the many inter relationship inherent in Complex socio-economic productive systems.</li> <li>To increase the knowledge and perspective to gain from emerging trends in production and operation Management.</li> </ol> </li> </ul>
1	M.Com. Part I (Semester I) Financial Management (114-F)	<ul> <li>Outcomes:- <ol> <li>To acquaint the student with knowledge of various</li> <li>Financial Management terminologies (Investment, Credit Planning, Working Capital Management</li> <li>To understand the concepts relating to Financing &amp; Financial Statement Analysis</li> <li>To utilize the information gathered to reach an optimum conclusion by a process of reasoning</li> <li>To enable the students to use their learning to evaluate, make decisions and provide recommendations</li> </ol> </li> </ul>
1	M.Com. Part I (Semester II) Financial Analysis & Control (201)	Outcomes:- The objective of the course is to enable students to acquire sound knowledge of concepts, methods and techniques of management accounting and to make the students develop competence with their usage in managerial decision making and control.
1	M.Com. Part I (Semester II) Industrial Economics (202-A)	Outcomes:-1) To study the basic concepts of Industrial Economics.2)To study the significance and problems ofIndustrialization.3)To study the impact of Industrialization on IndianEconomy.
1	M.Com. Part I (Semester II) Business Ethics and Professional Values (213-F)	Outcomes:-         1)To understand How companies ethically         Operate.         2) To understand how CSR activities help the         Society for better living.         3) To understand how ethical practices can be         Adopted in different areas of business.         4)Awareness on the importance of         environmental issues and Sustainable         Development.
1	M.Com. Part I (Semester II) Elements of Knowledge Management (214-F)	Outcomes:-         1) Conceptual Clarity         2) Analytical ability         3) Application Oriented Skills         4) Managerial skills

2	M.Com. Part II (Semester III) Business Finance. (301)	Outcomes:- To enable students to acquire sound knowledge of concepts, nature and structure of business finance.
2	M.Com. Part II (Semester III) Research Methodology for Business. (302)	<ul> <li>Outcomes:- <ol> <li>To acquaint the students with the areas of Business Research Activities.</li> <li>To enhance capabilities of students to conduct the research in the field of business and social sciences.</li> <li>To enable students, in developing the most appropriate methodology for their research Studies.</li> <li>To make them familiar with the art of using different research methods and techniques</li> </ol></li></ul>
2	M.Com. Part II (Semester III) Human Resource Management (313-F)	<ul> <li>Outcomes:-</li> <li>1)To acquaint the students with in-depth knowledge Of HRM.</li> <li>2)To inculcate among students various practices Followed by HR managers.</li> <li>3)To create understanding about recent trends in HRM</li> </ul>
2	M.Com. Part II (Semester III) Organizational Behavior (314-F)	Outcomes:- 1) To make the students understand various concepts of organization behavior 2)To provide in depth knowledge about process of formation of group behavior in an organization set up
2	M.Com. Part II (Semester IV) Capital Market and Financial Services (401)	Outcomes:- To enable students to acquire sound knowledge, concept and structure of capital market and financial services.
2	M.Com. Part II (Semester IV) Industrial Economic Environment. (402-A)	<ul> <li>Outcomes:-</li> <li>1. To study the basic concepts of Industrial Finance.</li> <li>2. To study the effects of New Economic Policy.</li> <li>3. To study the impact of Labor reforms on Industries.</li> </ul>
2	M.Com. Part II (Semester IV) Recent Advances in Business Administration (413-F)	<ul> <li>Outcomes:-</li> <li>1) To familiarize the students with the recent advancements in business administration</li> <li>2)To develop an understanding about tools and their Application in the business.</li> </ul>

Department of BCA	After successful completion of three year degree program in Computer a student should be able to;
Programme	PO1 :To produce skill oriented human resource.
Outcomes	PO2:To import practical skills among students.
	PO3:To make industry ready resource.
	PO4: To bring the spirit of entrepreneurship.
Programme Specific Outcomes	<ul> <li>PSO1: Graduates will demonstrate knowledge and understanding of computer science principles and apply these to manage projects and in multi-disciplinary environment.</li> <li>PSO2:Graduates will show the understanding of impact of computer based solution on thesociety and also will be aware of contemporary issues</li> <li>PSO3: Graduates will demonstrate knowledge of professional and ethical responsibilities.</li> <li>PSO4:Graduates are asked to demonstrate an environmental projects to overcome the issues related to environment and have a detailed overview of environmental issuesolutions.</li> </ul>

### Programme outcomes, Programme Specific Outcomes and Course Outcomes(2019-20)

Sr. No.	Course	Course Outcomes
1.	FYBBA(C.A) Business Communication Skills (101)	1The role of communication in personal and business world
		2. To understand system and communication and their utility
		3. To develop proficiency in how to write business letters and other communications in required
1	FYBBA(C.A) Principles of Management (102)	1.To understand basic concept regarding org. Business Administration
		2.To examining how various management principles
		3. To develop managerial skills among the students
1	FYBBA(C.A) C Language (103)	1.Students should be able to: understand the basic components of an object-oriented program including methods and attributes, the distinctionbetween classes and instances, the structures .

1	FYBBA(C.A) DBMS (104)	<ul><li>1. This course is intended to provide you with an understanding of the current theory and practiceof database management systems.</li><li>2. To help you more fully appreciate their nature, the course provides a solid technical overview of database management systems, using a current database product as a case study.</li></ul>
1.	FYBBA(C.A) Business Statistics (105)	<ol> <li>To develop skills related with basic statistical technique</li> <li>Develop right understanding regarding regression, correlation and data interpretation</li> </ol>
1.	FYBBA(C.A) Organizational Behavior & Human Resource Management (201)	<ol> <li>To understand basic concept of HRM &amp; OB</li> <li>To make aware students about traditional &amp; modern methods of procurement &amp; development in organization.</li> </ol>
1.	FYBBA(C.A) Financial Accounting (202)	<ul> <li>1.To develop right understanding regarding role and importance of monetary and financial transactions in business</li> <li>2.) To develop proficiency preparation of basic financial as to how to write basis accounting statement - Trading and P&amp;L</li> </ul>
1	FYBBA(C.A) Business Mathmatics(203)	<ul><li>1.To understand role and importance of Mathematics in various business situations and while developing softwares.</li><li>2.To develop skills related with basic mathematical technique</li></ul>
1	FYBBA(C.A) Relational DataBase(204)	<ol> <li>Enables students to understand relational database concepts and transaction management concepts in database system.</li> <li>Enables student to write PL/SQL programs that use: procedure, function, package, cursor and trigger.</li> </ol>
1	FYBBA(C.A) Web Technology (HTML-JSS-CSS)(205)	<ul> <li>i) To know &amp; understand concepts of internet programming.</li> <li>ii) To understand how to develop web based applications using JavaScript</li> </ul>

2	SYBBA (CA) Data Structure Using C (302)	Objective:-
		<ol> <li>To understand different methods of organisinglarge amounts of data</li> <li>To efficiently implement different datastructure</li> </ol>
2	SYBBA (CA) Introduction to Operating System (303)	Objective -: 1. To know system programming 2. To know the Scheduling concepts

2	SYBBA (CA) Business Mathematics (304)	1. Understanding basic terms in the areas of business calculus and financial mathematics, Independently solving of business problems.
2	SYBBA (CA) Software Engineering (305)	Objective: This course enables students to understand system concepts and its application in Software development.
2	SYBBA (CA) Object Oriented Programming Using C++ (401)	<ul> <li>Objectives:</li> <li>1. Acquire an understanding of basic object-oriented concepts and the issues involved in effective class design.</li> <li>2. Enables student to write C++ programs thatuse: object-oriented concepts such as information hiding, constructors, destructors, inheritance.</li> </ul>
2	SYBBA (CA) Programming in Visual Basic (402)	Objectives:- 1.To learn properties and events, methods of controls and how to handle events of different controls. 2.To understand the use of active controls and how to design VB application To learn connectivity between VB and databases.
2	SYBBA (CA) Computer Networking (4 03)	<ol> <li>To understand different topologies used in networking</li> <li>To learn different types of network.</li> <li>To understanding the use of connecting device used in network.</li> </ol>
2	SYBBA (CA) Enterprise Resource Planning and Management. (4 04)	Objectives -: 1. To know what is ERP. 2. To learn different ERP technologies.
2	SYBBA (CA) Human Resource Management (405)	Objective: To acquaint the students with theHuman Resource Management its different functions in an organization and the Human Resource Processes that are concerned with planning, motivating and developing suitable employees for the benefit of the organization.
3	TYBBA (CA ) 501 : Core Java	<ul> <li>1.Students will be able to program Java classes and methods using a subset of data types and using assignment, method calls, while loops, for loops, and conditionals.</li> <li>2.Students will learn how to use and manipulate several core data structures: Arrays, linked lists, trees, stacks, and queues.</li> </ul>
3	TYBBA (CA ) 502 : Web Technologies	<ol> <li>Write JavaScript programs using functions, forloops, and conditional statements         <ol> <li>To understand how to develop web based applications using PHP.</li> <li>To know &amp; understand concepts of internet programming.</li> <li>To understand how to develop web based applications using PHP.</li> </ol> </li> </ol>

3	TYBBA (CA ) 503 : Dot Net Programming	<ol> <li>Students will able to design web applicationsusing .NET</li> <li>Students will be able to debug and deploy.NET web applications</li> <li>Students will be able to create database driven.NET web applications and web services</li> </ol>
3	TYBBA (CA ) 504 : Object Oriented SoftwareEngineering	<ol> <li>To Understand concept of system design usingUML.</li> <li>To understand system development through object oriented techniques.</li> </ol>
3	TYBBA (CA) 601 : Advanced Web Technologies	<ul><li>1.Student is able to understand and use the basics of the XML based technologies</li><li>3.To understand the concepts of XML and AJAX.</li></ul>
3	TYBBA (CA) 602 : Advanced Java	<ol> <li>To know the concept of Java Programming.</li> <li>To develop programming logic</li> </ol>
3	TYBBA (CA) 603 : Recent Trends in IT	<ol> <li>To introduce upcoming trends in Information technology.</li> <li>To study Eco friendly software development.</li> </ol>
3	TYBBA (CA) 604 : Software Testing	<ol> <li>To understand how to test bugs in software.</li> <li>To develop programming logic.</li> </ol>

# **Department of Political Sciences**

# AY 2019-20

### **Program Outcomes: BA POLITICAL SCIENCE**

#### After completion of BA programme students should be able to ...

- Students enable to develop academic proficiency in the subfields of Indian Government and Politics, Comparative Government, International Relations, Public Administration, Political Theory, and Political Ideology.
- Students enable to develop and be able to demonstrate skills in conducting as well as presenting research in political science.
- Students enable to analyze political and policy problems and formulate policy options.
- Students enable to discuss the major theories and concepts of political science and its subfields, and also deliver thoughtful and well articulated presentations of research findings.

### **PROGRAM SPECIFIC OUTCOMES: BA Political Science**

#### On Completion of the BA (Political Science) Students are able to:

- 1. Serve as a politician
- 2. Work as a teacher in colleges, schools and high schools
- 3. Serve as political party member, political adviser, and well citizen of India.
- 4. Work in elections and political as well as administrative system.
- 5. Serve in forest department as forest conservator.
- 6. Can admit to MA Politics, LLB, MSW, MBA,
- 7. Work in NGOs.
- 8. Can Prepare for Competitive exams.

#### **FYBA**

#### **Indian Government and Politics (G-1)**

- Students enable to understand the philosophy of Indian constitutions.
- Students enable to identify the causes, impact of British colonial rule.
- Students enable to appreciate the various phases of Indian national movement.
- Students enable to create value in young youth regarding the patriotism.
- Students enable to understand the various Government of Indian acts their provision and reforms.
- Students enable to know the salient features in making of Indian constitution
- Students enable to appreciate the socio-economic political factors which lead to the freedom struggle.
- Students enable to appreciate the fundamental rights and duties and the directive principle of state policy
- Students enable to evaluate the evolution, functioning and consequences of political parties in India.
- Students enable to identify how electoral rules and procedure in India effect election outcomes.

### <u>SYBA</u>

### **Political Theory (G-2)**

- Students enable to understand the nature and scope of political theory.
- Students enable to understand the significance of political theory.
- Students enable to acquaint with the theories, approaches, concepts and principles of political theory.
- Students enable to appreciate the procedure of different theoretical ideas in political theory.
- Students enable to Interpret and assess information regarding a variety of political theory.
- Students enable to understand the various traditional and modern theories of political science.
- Students enable to evaluate the theories of origin of the state.

### Western Political Thought (S-1)

Students enable to:-

- Examine political thought through the Classical, Renaissance, and Enlightenment periods based on the works of Plato, Aristotle, Machiavelli, Hobbes, Locke, Rousseau, Tocqueville, and Marx;
- Compare and contrast the concepts of justice, freedom, equality, citizenship, and sovereignty in the works of Machiavelli, Hobbes, Locke, and Rousseau;
- Explain the different versions of, and importance of, the state of nature to political thought;
- Explain Karl Marx's worldview, with particular regard to his critique of democracy and the modern, politically liberal state; how it came to be; and its fundamental link to capitalism; and
- Explain John Stuart Mill's theory on utilitarianism and how he applies it to society and the state.

### **Political Sociology (S-2)**

- Have good knowledge about main issues and topics in political sociology.
- Be able to understand basic principles of the exercise of power, of the state relations with civil society; individual and group interactions in the political realm.
- Achieve practical skills of analysis of social phenomena in their political settings.
- Acquire habits of socio-political information finding, sorting and critical examining.
- Foster skills of public presentations and discussions.

### <u>TYBA</u>

### **Evaluation of Local Government in Maharashtra** (G-3)

- Students enable to explain the role of British imperial on local government in India.
- Students enable to understand the contributions of various committees on local government.

- Students enable to describe the features and provisions of Constitutional Amendment Acts regarding Local Government Institutions.
- Students enable to equip the learner to play an active and responsible leadership role in the functioning of Local Government Institutions.
- Students enable to describe the significance and role of Grama Sabha in Maharashtra.

### **Public Administration (S-3)**

- Students enable to demonstrate understanding of various activities of governmental administrators that fall under the rubric of public administration to include rule-making, ratemaking, and other regulatory activities, policy making and the delivery of services and programs
- Students enable to understand the 20th century emergence of the modern administrative state as a result of the technological, social, economic and political pressures that have emerged in national industrialized and developed complex, interdependent systems.
- Students enable to understanding of public administration as a career field in government.

### **International Politics (S-4)**

- Students enable to understand the evolution, scope and significance of international relations
- Students enable to demonstrate an understanding of: the key historical events and also they enable to understand contemporary international system; and the key actors which shaped the international Politics.
- Students enable to discuss the main international relations theories.
- Students enable to analyze importance of International relation in process of nation progress.
- Students enable to appreciate the foreign policy their determinants features& its relevance.

### **PROGRAM OUTCOMES: M.A. POLITICAL SCIENCE**

- Post Graduate Course in Political Science seeks to offer students advance knowledge of political concepts and practices in a manner that enables students to relate them to the contemporary local, national and international event.
- It seeks to emphasize both the knowledge and skill element by exposing students to new ideas not only by classroom teaching, but by also engaging in continuous experiential learning through field visits, seminars, discussions etc.
- Understanding of the institutions, processes, constitutional background, and policy outcomes of Indian government and the ability to compare Indian government to other countries around the world.
- Knowledge of key theories and concepts, historical developments, organizations, and modern issues in international relations.
- Understanding of government institutions, electoral processes, and policies in a variety of countries around the world and the ability to compare the effectiveness or impact of differing political arrangements across countries.
- Knowledge of some of the philosophical underpinnings of modern politics and government and the legal principles by which political disputes are often settled.
- Ability to use the comparative case study method of analysis, quantitative forms of analysis, and legal analysis in oral communication and in written research.

### PROGRAM SPECIFIC OUTCOMES: MA POLITICAL SCIENCE

# On completion of the M.A. (POLITICAL SCIENCE), students are able to work in various fields:

### Public Administrator:

As a Public Administrator, MA Political Science graduates can utilize their knowledge to inform policy decisions and administer those decisions effectively.

#### Academician:

Those who choose to pursue further education can in turn become lecturers and professors.

#### Archivist:

A political archivist is responsible for assessing, collecting, processing, organizing, maintaining and preserving important records which possess long term value.

#### **Correspondent:**

A political correspondent is responsible for relaying important political events primarily for news channels.

#### **Political Content Writer:**

A Political content writer"s job is to write about various contemporary and historical political

issues majorly for online media outlets for news and information.

#### **Consultant:**

A political consultant is a professional who helps an organization make politically informed choices. Their knowledge about political philosophy comes in handy in such roles.

#### Manager:

MA in Political Science helps understand the broad administrative system in India, thus making them the right fit for managerial positions.

#### Subject Matter Expert:

Nowadays many IT and knowledge processing companies require subject matter experts for different subjects.

#### **PR** Executive

Public Relations is also a good option as exposure to political practices also acquaints one with culture and social systems of a place and hence making them ideal for a role as Public Relations executive.

#### **Competitive Examinations:**

It is learn that in the NET/SET, MPSC/UPSC and other competitive examinations.

## M.A. (Semester -I)

### **PO-C1 : Political Theory**

- Students got ability introduces Political Theory as a distinctive area of inquiry that is integral to the study of politics.
- Students got ability to highlights contemporary normative debates and place them in a historical perspective.
- Students enable to projects the global and interdisciplinary orientation of Political Theory. It also emphasizes the interplay of theory and practice in the political process.

### **PO-C2 : Public Administration**

- Student enable to understand important concepts, approaches and theories of public administration
- Student enables to equip students with understanding of the latest developments in the field of Public Administration.
- Student enables to understand and analyze broad transformations in the study of public administration in the course of changes in socio-economic and political life.

### **PO-C3 : Political Institutions in India**

- Students enable to introduce the leading institutions of the Indian political system and to the changing nature of these institutions. Apart from explaining the structure and functions of the main institutions.
- Student enable to understanding the institutional balance of power as discussed in the Indian constitution and as developed during the functioning of Indian democracy over the past decades.

### PO-O1 : Modern Political Ideologies

- Student enables to understand the difference between ideology and thought as well as between theory and ideology.
- Students enable to understand the relationship between ideas and politics.
- Student enables to understand the core doctrines of each of the ideologies and to make sense of politics through different ideological perspectives.

### M.A. (Semester -II)

### **PO-C4 : Public policy**

- Student enables to understand basic concepts, theories and process of public policy.
- Student enables to understand policy processes and actors involved in it by studying specific policies.
- Student enables to understand and analyze policy making in practical context.

### **PO-C5 : Issues in World Politics**

- Students enable to apply the theories and used to illustrate how each level of analysis the international system, the state, and the individual- to help in organizing and conceptualizing the issues.
- Student enables to understand the major issues of the twenty first century- security, economics and transnational issues are presented and analyzed.

### **PO-C6 : Comparative Politics**

The purpose of this course is to acquaint the students with the sub-discipline of Comparative Politics with the following outcomes.

- Students enable to understand the trajectory of the sub-discipline.
- Student enable to understand the significance of the comparative methodology
- Student enables to understand the dynamics of domestic politics across the countries.

### **PO-O5 : Political Process in Maharashtra**

- Student enables to study one state in an in-depth manner to understand how the political process evolves at the state level.
- Student enables to do assignments based on field studies. The study is to be done from socio-historical as well as political economy perspectives.

• Students enable to know the changes in the political process over the period of over half a century from Congress domination to a bipolar competition and from Maratha hegemony to the crisis of hegemony.

# M.A. (Semester -III)

### **PO-C7: Political Thinking in Modern India**

- Student knows the key ideas of political thinking in modern India as it shaped in the colonial context.
- Student enable to understand and decipher the diverse and often contesting ways in which ideas of nationalism, democracy and social transformation were discussed by leading Indian thinkers.

### **PO-C8: Political Sociology**

- Student enables to introduce the overall scope of the sub-discipline of political sociology.
- Student enables to know power of political Sociology.
- Students enable to understand different forms of justifications of power and the role of ideology in this regard.
- They studied as a repository of power in society while class and patriarchy are two instances of how the nature of power is shaped by social factors.

### **PO - C9: Theory of International Relations**

- Students enable to introduces the evolution and important of various theories.
- Students know a brief history of international politics.
- They understanding what are happening in the world and the levels of analysis. Competing theories are presented.

### PO-O10: Indian Administration

- Student knows the key dimensions of Indian Administration functioning at different levels.
- Students understand and analyze the administrative reforms introduced recently to make administration people-centric and to what extent that goal has been realized.

### M.A. (Semester -IV)

### **PO-C10: Traditions of Political Thought**

- Student enables to know major traditions of thought that have shaped political discourse in different parts of the world over the last three millennia.
- Student stresses the great diversity of social contexts and philosophical visions that have informed the ideas of key political thinkers across epochs.
- The chief outcome is Student project the history of political thought as a series of critical, interconnected and open-ended conversations about the ends and means of the good life.

### PO-C11: Political Process in India

- Student knows how to introduce the key issues and details of the political process in post independence India.
- Students enable to understand and analyze Indian politics.
- student understand the expansive meaning of political process as it shapes in the arena of electoral and party politics, in the form of mass mobilizations and as politics of interests.

### **PO-C12: Political Participation**

- Student knows Political socialization is the process that shapes the durable set of attitudes and beliefs which affect nature and extent of participation.
- Student knows Public opinion also shapes political activity.
- Students are going beyond the study of routine participation.
- Student understand the relevance of collective action in the form of social movements

### PO-O14: Party System in India

- Student understands the nature of party system in India.
- Student understands the functioning of main political parties operating in the system.
- Student focused on analytical perspectives on party politics in I

