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S.B.V.P. Samaj's,

**SAHAKAR MAHARSHI  
BHAUSAHEB SANTUJI THORAT COLLEGE  
OF ARTS, SCIENCE AND COMMERCE**

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NAAC Reaccredited 'B' Grade



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AISHE Code : C-41632

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Outword No. /202 - 202

Date : / / 202

**2.6.1. Teachers and students are aware of the stated Programme and course outcomes of the Programmes offered by the institution.**

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*OS.B.V.P.Samaj 's*  
**S. M. B. S. THORAT COLLEGE OF ARTS, SCIENCE & COMMERCE, SANGAMNER,**  
**DIST-AHMEDNAGAR.**

DEPARTMENT OF Computer Science (Electronics)

Programme and course outcomes of the programme offered to the instruction

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.Sc.	I	ELC 111	Semiconductor and basic electronic system	<ol style="list-style-type: none"> <li>1. To study various types of semiconductor devices</li> <li>2. To study elementary electronic circuits and systems</li> </ol>
	I	ELC 112	Principles of Digital Electronics	<ol style="list-style-type: none"> <li>1. To get familiar with concepts of digital electronics</li> <li>2. To learn number systems and their representation</li> <li>3. To understand basic logic gates, Boolean algebra and K-maps</li> <li>4. To study arithmetic circuits, combinational circuits and sequential circuits</li> </ol>
F.Y.B.Sc.	II	ELC 121	Instrumentation System	<ol style="list-style-type: none"> <li>1. To study Instrumentation System</li> <li>2. To study various blocks of Instrumentation System</li> <li>3. To study Smart Instrumentation System</li> </ol>
	II	ELC 122	Basics of Computer Organisation	<ol style="list-style-type: none"> <li>1. To get familiar digital sequential circuits</li> <li>2. To study Basic computer Organization</li> <li>3. To study Memory architecture</li> </ol>
S.Y.B.Sc.	I	ELC 231	Microcontroller Architecture & Programming	<p>On completion of the course, student will be able</p> <ol style="list-style-type: none"> <li>1. To write programs for 8051</li> </ol>




				<p>microcontroller</p> <p>2. To interface I/O peripherals to 8051 microcontroller</p> <p>. To design small microcontroller based projects</p>
S.Y.B.Sc.	I	ELC 232	Digital Communication and Networking	<p>: On completion of the course, student will be able</p> <ol style="list-style-type: none"> <li>1. Define and explain terminologies of data communication</li> <li>2. Understand the impact and limitations of various digital modulation techniques</li> <li>3. To acknowledge the need of spread spectrum schemes.</li> <li>4. Identify functions of data link layer and network layer while accessing communication link</li> <li>5. To choose appropriate and advanced techniques to build the computer network</li> </ol>
S.Y.B.Sc	II	ELC 241	Embedded System Design	<p>Course Outcomes : On completion of the course, student will be able</p> <ol style="list-style-type: none"> <li>1. To understand the difference between general computing and the Embedded systems.</li> <li>2. To know the fundamentals of embedded systems.</li> <li>3. Understand the use of Single board Computer (Such as Raspberry Pi) for an embedded system application.</li> <li>4. Familiar with the programming environment to develop</li> </ol>





				<p>embedded systems and their interfaces with peripheral devices.</p> <p>5. To develop familiarity with tools used to develop in an embedded environment.</p>
S.Y.B.Sc	II	ELC 242	Wireless Communication and Internet of Things	<p>Students will be able to</p> <ol style="list-style-type: none"> <li>1. Know working of wireless technologies such as Mobile communication, GSM, GPRS</li> <li>2. Become familiar with 3G and 4G Cellular Network Technologies for Data Connections.</li> <li>3. Understand working principles of short range communication application</li> <li>4. Get introduce to upcoming technology of Internet of Things</li> <li>5. Explore themselves and develop new IoT based applications</li> </ol>



  
 Principal  
 S.M.B.S.T. College, Sangamner



**S.B.V.P. Samaj's,**  
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**DIST-AHMEDNAGAR.**  
**DEPARTMENT OF COMPUTER SCIENCE**

Programme and course outcomes of the Programme offered to the institution

Programme Class	Semester	Course code	Name of the Course	Course outcomes
F.Y.B.Sc. Computer Science	I	CSST-111	Descriptive Statistics	i) To tabulate and make frequency distribution of the given data. ii) To use various graphical and diagrammatic techniques and interpret iii) To compute various measures of central tendency, dispersion, Skewness and kurtosis
	I	CSST-112	Mathematical Statistics	i) To study the concept of permutations and combinations. ii) Able to solve the probabilities of different events. iii) Ability to solve the examples using Discrete Probability Distribution Theory.
	I	CSST-113	Statistics Practical Paper I	i) The process of collection of data, its condensation and representation for real life data. ii) To study free statistical softwares and use them for data analysis in project.



F.Y.B.Sc. Computer Science	II	CSST-121	Methods of Applied Statistics	<ul style="list-style-type: none"> <li>i) To understand the relationship between two variables using scatter plot.</li> <li>ii) To compute coefficient of correlation, coefficient of regression.</li> <li>iii) To fit various regression models and to find best fit.</li> <li>v) To understand the trend in time series and how to remove it.</li> </ul>
	II	CSST-122	Continuous Probability Distributions and Testing of Hypothesis	<ul style="list-style-type: none"> <li>i) Ability to solve the examples using Discrete Probability Distribution Theory.</li> <li>ii) Identification of real life situations to find the chances.</li> </ul>
	II	CSST-123	Statistics Practical Paper II	<ul style="list-style-type: none"> <li>i) To apply inferential methods for real data sets.</li> <li>ii) To generate model sample from given distributions.</li> <li>iii) To understand the importance and functions of different statistical organizations in the development of nation.</li> </ul>

*Ms. Mahale L.M.*

**Ms. Mahale L.M.**  
**Subject Teacher**

*Prof. Thakare M.V.*

**Prof. Thakare M.V.**  
**Head, Department of Computer Science**

*Principal*

**Principal**  
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**DIST-AHMEDNAGAR.**  
**DEPARTMENT OF MATHEMATICS**

Programme and course outcomes of the programme offered to the instruction

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.Sc (Comp sci)	I	MTC-111	Matrix algebra	<p>1)A students should be able to work with Matrices and identify certain parameters and properties of the given Matrices.</p> <p>2) A students should be able to perform Consistency of Systems ,LU Decompsition</p> <p>3) A students should be able to solve basic exercises .</p> <p>4)facilitate the algebraic involving various type of matrices.</p>
	I	MTC-112 Mathematics	Discreate Mathematics	<p>1)A students should be able to work with figures identify certain parameters of Counting.</p> <p>2) A students should be able to perform certain Algorithms justify why these algorithms work, and give some estimates of the running times of these algorithms.</p> <p>3)Students should be able to work with relations And principles.</p>
	I	MTC-113	Mathematics	1)Student should know about the actual





			practical	<p>implementation of theory which they learn .</p> <p>2) To understand and applies concept related to variable,expresions,equations ,identities etc.</p> <p>3) To devolope a positive attitude towards the Mathematics.</p> <p>4) Implementation of Mathematical problems by using MAXIMA softwere.</p>
F.Y.B.Sc (C p sci)	II	MTC-121	Linear Algebra	<p>1)A students should be able to work with Matrices and identify certain parameters and properties of the given Matrices.</p> <p>2) A students should be able to perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.</p> <p>3) A student should be able to solve basic exercises.</p> <p>4)facilitate the algebraic involving various type of matrices.</p>
	II	MTC-122	Graph Theory	<p>A student should be able to work with Graphs &amp; identify certain parameters.</p> <p>2) A student should be able to perform certain Algorithms justify why these algorithms work, and give some estimates of the running times.</p> <p>3)Students should be able to work with relations and principles.</p>
	II	MTC-123	Mathematics	<p>1)Student should know about the actual</p>



			practical	implementation of theory which they learn. 2) To understand and applies concept related to variable, expressions, equations, identities etc. 3) To developed a positive attitude towards the mathematics.
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Principal  
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**DEPARTMENT OF MATHEMATICS**

Programme and course outcomes of the programme offered to the instruction

Programme Class	Semester	Course code	Name of the course	Course out comes
S.Y.B.Sc (Comp sci)	I	MTC-231 Coding	Groups and Coding Theory	1) A students should be able to work with integers, Groups and some properties of groups. 2) A students should be able to perform certain Definition, Theorems and Examples. 3) A students should be able to solve basic exercises of Groups, Coding, Decoding And Public Key Cryptology. 4) facilitate the algebraic involving various type of Matrices.i.e. Parity Check Matrix , Group Code and Decoding
	I	MTC-112	Numerical Technique  Solving	1) A students should be able to work with Algebraic roots of an Equation. 2) A students should be able to perform certain Method justify why these Method work, and give some estimates of Problem Solving 3) Students should be able to work with Interpolation, Numerical Differentiation And Integration.
	I	MTC-233	Mathematics	1) Student should know about the actual





			practical	<p>implementation of Code.</p> <p>2) To understand and applies concept related to variable, expressions, keywords, Packages etc.</p> <p>3) To develop a positive attitude towards the Mathematical Coding.</p>
S.Y.B.Sc (Comp sci)	II	MTC-241 GGeometryG	Computational Geometry  Computer C	<p>1)A student should be able to work with Matrices</p> <p>2) A students should be able to perform certain algorithms, justify why these algorithms work, and give some estimates of Circle, Parabola, Hyperbola and Ellipse.</p> <p>3) A student should be able to solve basic exercises of 2D,3D, Projection and Bezier Curve.</p> <p>4) Students Should learn basic information of Computer Graphics Subject .</p>
	II	MTC-242	Operations Research  cornerCornerCorner andandandan	<p>1)A student should be able to work with Graphical Method, Simplex Method, Dual Simplex Method.</p> <p>2) A student should be able to perform certain Algorithms like Least cost Method, North west Corner method, Vogel's Approximation Method and Assignment Method.</p> <p>3)Students should be able to work with Transportation model.</p>
	II	MTC-243	Mathematics practical	<p>1)Student should know about the actual implementation of Code</p>



				<p>2) To understand and applies concept related to variable, expressions, Keywords, Packages etc.</p> <p>3) To developed a positive attitude towards the mathematical Coding .</p>
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**Principal**  
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DIST-AHMEDNAGAR.**

**DEPARTMENT OF COMPUTER SCIENCE (UG)**

Programme and course outcomes of the Programme offered to the institution

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.Sc.	I	CS-111	Problem Solving using Computer and 'C' Programming	<ol style="list-style-type: none"> <li>1. Explore algorithmic approaches to problem solving.</li> <li>2. Develop modular programs using control structures and arrays in 'C'.</li> </ol>
	I	CS-112	Database Management Systems	<ol style="list-style-type: none"> <li>1. Solve real world problems using appropriate set, function, and relational models.</li> <li>2. Design E-R Model for given requirements and convert the same into database tables.</li> <li>3. Use SQL.</li> </ol>
	I	CS-113	Practical course based on CS101 and CS102	<ol style="list-style-type: none"> <li>1. Devise pseudocodes and flowchart for computational problems.</li> <li>2. Write, debug and execute simple programs in 'C'.</li> <li>3. Create database tables in PostgreSQL.</li> <li>4. Write and execute simple, nested queries.</li> </ol>





F.Y.B.Sc.	II	CS-121	Advanced 'C' Programming	<p>1. Develop modular programs using control structures, pointers, arrays, strings and structures</p> <p>2. Design and develop solutions to real world problems using C.</p>
	II	CS-122	Relational Database Management Systems	<p>1. Design E-R Model for given requirements and convert the same into database tables.</p> <p>2. Use database techniques such as SQL &amp; PL/SQL.</p> <p>3. Explain transaction Management in relational database System.</p> <p>4. Use advanced database Programming concepts.</p>
	II	CS-123	Practical course based on CS201 and CS202	<p>1. Write, debug and execute programs using advanced features in 'C'.</p> <p>2. To use SQL &amp; PL/SQL.</p> <p>3. To perform advanced database operations.</p>
S.Y.B.Sc.	I	CS-231	Data Structures and Algorithms – I	<p>1. To use well-organized data structures in solving various problems.</p> <p>2. To differentiate the usage of various structures in problem solution.</p>



				3. Implementing algorithms to solve problems using appropriate data structures.
	I	CS-232	Software Engineering	<p>1. Compare and chose a process model for a software project development.</p> <p>2. Identify requirements analyze and prepare models.</p> <p>3. Prepare the SRS, Design document, Project plan of a given software system.</p>
	I	CS-233	Practical course based on CS301	<p>1. To develop programming skills with a systematic approach in organizing and debugging programs in C.</p> <p>2. To implement data structures for problem solving.</p>
	II	CS-241	Data Structures and Algorithms – II	<p>1.Implementation of different data structures efficiently</p> <p>2. Usage of well-organized data structures to handle large amount of data.</p> <p>3. Usage of appropriate data structures for problem solving</p>
	II	CS-242	Computer Networks - I	1. Have a good understanding of the OSI and TCP/IP Reference Models and in



				<p>particular have a good knowledge of Layers.</p> <p>2. Understand the working of various protocols.</p> <p>3. Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies.</p>
	II	CS-243	Practical course based on CS401	<p>1. Implement List ADTs and their operations.</p> <p>2. Develop programs for sorting. 3. Develop programs for implementing trees and their traversal operations.</p> <p>4. Implement graph traversal algorithms.</p>
T.Y.B.Sc.	I	CS-351	Operating Systems - I	<p>1. Processes and Thread Scheduling by operating system 2. Synchronization in process and threads by operating system</p> <p>3. Memory management by operating system using with the help of various schemes.</p>
	I	CS-352	Computer Networks - II	<p>1. Student will understand the different protocols of Application layer.</p> <p>2. Developed understanding of technical</p>





				<p>aspect of Multimedia Systems.</p> <p>3. Develop various Multimedia Systems applicable in real time. 4. Identify information security goals.</p> <p>5. Understand, compare and apply different encryption techniques.</p> <p>6. Come to know about INTERNET security.</p>
	I	CS-357	Practical course based on CS501	<p>1. Installation of Linux operating system and administration.</p> <p>2. Processes and Thread. Scheduling by operating system 3. Memory management by operating system using with the help of various schemes</p>
	I	CS-353	Web Technologies - I	1. Understand how to develop dynamic and interactive Web Page
	I	CS-354	Foundations of Data Science	<p>1. Perform Exploratory Data Analysis.</p> <p>2. Obtain, clean/process, and transform data.</p> <p>3. Detect and diagnose common data issues, such as missing values, special values, outliers, inconsistencies, and localization. 4. Demonstrate proficiency</p>



				<p>with statistical analysis of data. 5. Present results using data visualization techniques.</p> <p>6. Apply concepts of data analysis, data collection, modeling, and inference.</p> <p>7. Prepare data for use with a variety of statistical methods and models and recognize how the quality of the data and the means of data collection may affect conclusions.</p>
	I	CS-358	Practical course based on CS503	1. Understand how to develop dynamic and interactive Web Page.
	I	CS-355	Object Oriented Programming - I (Core Java)	<p>1. Understand the concept of classes, objects and packages.</p> <p>2. To develop GUI based application.</p>
	I	CS-356	Theoretical Computer Science and Compiler Construction - I	1. Understand the use of automata during language design. 2. Relate various automata and Languages.
	I	CS-359	Practical Course based on CS505	<p>1. Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs.</p> <p>2. Read and make elementary</p>



				<p>modifications to Java programs that solve real-world problems.</p> <p>3. Validate input in a Java program.</p>
	II	CS-3510	Python Programming / R Programming	<p>1. Develop logic for problem solving .</p> <p>2.Determine the methods to create and develop Python programs by utilizing the data</p> <p>3. structures like lists, dictionaries, tuples and sets.</p> <p>4.To be familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.</p> <p>5. To write python programs and develop a small application project.</p>
	II	CS-361	Operating Systems - II	<p>1. Management of deadlocks and File System by operating system 2. Scheduling storage or disk for processes.</p> <p>3. Distributed Operating System and its architecture.</p>
	II	CS-362	Software Testing	<p>1. To understand various software testing methods and strategies.</p> <p>2. To understand a variety of software</p>





				<p>metrics, and identify defects and managing those defects for improvement in quality for given software.</p> <p>3. To design test cases and test plans, review reports of testing for qualitative software.</p> <p>4. To understand latest testing methods used in the software industries.</p>
	II	CS-367	Practical course based on CS601	<p>1. Management of deadlocks by operating system.</p> <p>2. File System management.</p> <p>3. Disk space management and scheduling for processes.</p>
	II	CS-363	Web Technologies - II	<p>1. Build dynamic website.</p> <p>2. Using MVC based framework easy to design and handling the errors in dynamic website.</p>
	II	CS-364	Data Analytics	<p>1. Use appropriate models of analysis, assess the quality of input, and derive insight from results.</p> <p>2. Demonstrate knowledge of statistical data analysis techniques utilized in business</p>



				<p>decision making.</p> <p>3. Apply modeling and data analysis techniques to the solution of real world business problems .</p> <p>4. Analyze data, choose relevant models and algorithms for respective applications.</p> <p>5. Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining Course C.</p>
	II	CS-368	Practical course based on CS603 and CS604	<p>1. Build dynamic website. 2. Using MVC based framework easy to design and handling the errors in dynamic website</p>
	II	CS-365	Object Oriented Programming - II (Advanced Java)	<p>1. To access open database through Java programs using Java Data Base Connectivity (JDBC) and develop the application.</p> <p>2. To understand and Create dynamic web pages, using Servlets and JSP.</p> <p>3. Work with basics of framework to develop secure web applications.</p>
	II	CS-366	Theoretical Computer Science and Compiler	<p>1. Understand the process of scanning and parsing of source code.</p>



			Construction - II	<p>2. Learn the conversion code written in source language to machine language.</p> <p>3. Understand tools like LEX and YACC.</p>
	II	CS-369	Practical Course based on CS605	<p>1. To Learn database Programming using Java.</p> <p>2. Understand and Create dynamic web pages using Servlets and JSP.</p> <p>3. Work with basics of framework to develop secure web applications</p>
	II	CS-3610	Mobile Application Development OR Software Testing Tools	<p>1. Describe the requirements for mobile applications.</p> <p>2. Explain the challenges in mobile application design and development.</p> <p>3. Develop design for mobile applications for specific requirements.</p> <p>4. Implement the design using Android.</p>
	II	CS-3611	Project OR Open Elective	

  
 HOD  
**Head of  
 Computer Science**



  
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DEPARTMENT OF COMPUTER SCIENCE (PG)

Programme and course outcomes of the programme offered to the instruction

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.M.Sc. (Comp Sci)	I	CSUT111	Paradigm of Programming Language	<ul style="list-style-type: none"> <li>• Separate syntax from semantics</li> <li>• Compare programming language designs</li> <li>• Understand their strengths and weaknesses</li> <li>• Learn new languages more quickly</li> <li>• Understand basic language implementation techniques</li> <li>• Learn small programs in different programming Languages</li> </ul>
	I	CSUT112	Design and Analysis of Algorithms	<ul style="list-style-type: none"> <li>• To design the algorithms</li> <li>• To select the appropriate algorithm by doing necessary analysis of algorithms</li> <li>• To learn basic Algorithm Analysis techniques and understand the use of asymptotic notation</li> <li>• Understand different design strategies</li> <li>• Understand the use of data structures in improving algorithm performance</li> </ul>
	I	CSUT113	Database Technologies	<ul style="list-style-type: none"> <li>• Provide an overview of the concept of NoSQL technology.</li> <li>• Provide an insight to the different types of NoSQL databases</li> <li>• Make the student capable of making a choice of what database technologies to use, based on their application needs.</li> </ul>
	I	CSDT114B	Artificial Intelligence	<p>To learn various types of algorithms useful in Artificial Intelligence (AI).</p> <p>To convey the ideas in AI research and programming language related to emerging technology.</p> <p>To understand the numerous applications and huge possibilities in the field of AI that goes beyond the normal</p>



				human imagination.
	I	CSDP114B	Artificial Intelligence Practical	To learn various types of algorithms useful in Artificial Intelligence (AI). To convey the ideas in AI research and programming language related to emerging technology.
	I	CSUP115	PPL and Database Technologies Practical	<ul style="list-style-type: none"> <li>• Separate syntax from semantics</li> <li>• Compare programming language designs</li> <li>• Understand their strengths and weaknesses</li> <li>• Learn new languages more quickly</li> </ul>
F. Y.M.Sc. (Comp Sci)	II	CSUT121	Advanced Operating System	This course teaches Advanced Operating Systems Concepts using Unix/Linux. This course strikes a delicate balance between theory and practical applications In fact, most Units start with the theory and then switches focus on how the concepts are implemented in a C program. This course describes the programming interface to the Unix/Linux system - the system call interface. It is intended for anyone writing C
	II	CSUT122	Mobile Technologies	To impart basic understanding of the wireless communication systems. To expose students to various aspects of mobile and ad-hoc networks. Understand the issues relating to Wireless applications Understand the Mobile security
	II	CSUT123	Software Project Management	<ul style="list-style-type: none"> <li>• Software Metrics and Project Management covers skills that are required to ensure successful medium and large scale software projects.</li> <li>• It examines Requirements Elicitation, Project Management, Verification &amp; Validation and Management of Large Software Engineering Projects.</li> <li>• Students learn to select and apply project management techniques for process modeling, planning, estimation, process</li> </ul>






				metrics and risk management; perform software verification and validation using inspections, design and execution of system test cases.
	II	CSDT124A	Project	Training and implement theory concept
	II	CS-351	Project related Assignments	Training and implement theory concept
	II	CSUP125	Practical on Advanced OS & Mobile Technologies	To impart basic understanding of the wirelesscommunication systems. To expose students to various aspects of mobile and ad-hoc networks. Understand the issues relating to Wireless applications Understand the Mobile security
S. Y.M.Sc. (Comp Sci)	III	CSUT231	Software Architecture and Design Pattern	<input type="checkbox"/> Recognize the characteristics of patterns that make it useful to solve real-world problems. <input type="checkbox"/> Process available data using python libraries and predict outcomes using Machine Learning algorithms to solve given problem. <input type="checkbox"/> Able to use specific frameworks as per applications need. <input type="checkbox"/> Design java application using design pattern techniques.
	III	CSUT232	Machine Learning	<input type="checkbox"/> Recognize the characteristics of machine learning that make it useful to real-world problems. <input type="checkbox"/> Process available data using python libraries and predict outcomes using Machine Learning algorithms to solve given problem. <input type="checkbox"/> Able to estimate Machine Learning models efficiency using suitable metrics. <input type="checkbox"/> Design application using machine learning techniques.
	III	CSUT233	Web Frameworks	<input type="checkbox"/> Students will be ready with the technology which is used widely in Industry as a part of full stack developer. <input type="checkbox"/> Students will know the powerful way to develop the web application in Python.





				<input type="checkbox"/> Students will understand what really the asynchronous programming. <input type="checkbox"/> Build and deploy robust Django Web App. <input type="checkbox"/> Integrate with Restful web services.
	III	CSDT234C	Project	Training and implement theory concept
	III	CSDP234C	Project Related Assignments	Training and implement theory concept
	III	CSUP235	Practical on CSUT231, CSUT232 and CSUT233	Able to use specific frameworks as per applications need. <input type="checkbox"/> Design java application using design pattern techniques. <input type="checkbox"/> Process available data using python libraries and predict outcomes using Machine Learning algorithms to solve given problem. <input type="checkbox"/> Able to estimate Machine Learning models efficiency using suitable metrics.
S.Y.M.Sc. (Comp Sci)	IV	CSUIT241	Industrial Training /Institutional project	To get experience of Industrial Training

  
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Computer Science**

  
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# Department of BBA(Business Administration)

## Program Outcomes (POs) :

BBA is a professional programme aimed at inculcating managerial and entrepreneurial attitude and skills amongst the learners. This programme is designed to provide basic understanding about Management Education and prepare the students to avail the opportunities available in the Management Profession .It also helps them to become successful business leaders by creating self-employment opportunities. It is basically a development programme for enhancing leadership qualities and encouraging the students to build the required business acumen.The Bachelor of Business Administration (BBA) is a full time three (3) years programme. And it is divided into 6(six) semesters.

PO1	To develop precise understanding about business environment and organizations.
PO2	To develop leadership aptitude among the students in order to work independently and in organized groups.
PO3	To inculcate among the students the qualities of a dynamic manager, capable of taking various decisions and communicating effectively to different groups of people
PO4	To understand and gain knowledge of various financial institutions and agencies.
PO5	To train students in professional skills related to Industry.

## Programme Specific Outcomes (PSOs)

PSO1	To understand how modern technology affects businesses and media based communication is working in present context.
PSO2	Effects of new media on business is affecting on interpersonal relations and groups
PSO3	Impart an understanding of the basics of our discipline.
PSO4	Prepare for continued professional development.
PSO5	Develop proficiency in the practice of Managerial Skills.

## Course Outcomes (COs):

### F. Y. B. B.A Principles of Management Course Code 101 - GC Credit -3

CO1	Basic aspects of management thinking & Develop ability of managerial thinking and cultivates business acumen.
CO2.	To understand different approaches to management thoughts and philosophy & Ability to understand approaches to philosophy of management thinking.
CO3	To understand the importance of functions of management and their roles & Ability to organize various programs and events.
CO4.	To know what are the themes in modern management and changes in the business & To learn about new systems and trends in modern management

### F. Y. B. B.A Business Communication Skills Course Code: 102 SC Credit 4

CO1	To understand the basic purpose of communication. & Ability to understand and comprehend the meaning of different forms of communication
CO2.	To understand how to write effective messages and different types of communication, & Ability to write meaningful and concise and effective messages
CO3	To understand how to make effective Business Correspondence & Ability to write precise business letters and understanding about business correspondence
CO4.	To understand how modern technology effects businesses and media based communication is





**F. Y. B. B.A Business Accounting Code No. 103 GC Credit – 3**

CO1	To understand role and importance of accounting in Business and how accounting concept can be implemented in business.
CO2.	To understand how to record different financial transactions and their financial implications.
CO3	To understand the kind of accounting relationship between customer and bank .
CO4.	Ability to understand growing importance of software and to know how to use software and to write books of accounts

**F. Y. B. B.A Business Economics – Micro Course Code: 104 GC Credit – 3**

CO1	Role and purpose of economics in society and economic & Ability to think in prudent manner.
CO2.	To understand how the concept of demand and supply works in particular economy.
CO3	To understand role and function of revenue in different economic decision .
CO4.	To understand concept of market and different forces affecting completion of market under different economic circumstances

**F. Y. B. B.A Business Mathematics Course Code – 105 GC Credit 3**

CO1	To understand how to apply the concept of interest and methods of calculation of interest.
CO2.	Ability to examine concept of discount in different business situations.
CO3	Ability to apply the various concepts in business situations.
CO4.	Ability to develop the skills for data interpretation and inferences.

**F. Y. B. B.A Business Demography Code: 106 SC Credit 4**

CO1	To Develop Rational understanding of demography, analysis and effects on society
CO2.	To develop understanding regarding growth process and social economic changes
CO3	To understand importance in modern and socio economic statues and to learn about role of literacy in economic development
CO4.	To understand the various determinants of urbanization and migration.

**F. Y. B. B.A Business Organizations and Systems Course Code 201 Credit 4**

CO1	To understand the purpose of business,
CO2.	To understand the significance of different forms of business organizations their types, function, merits and limitations.
CO3	To know how to search business ideas, how to pre business feasibility report, how to identify ideal business location and deciding optimal size for a new business unit, identification of capital sources for new business unit and basic documentation required for business enterprise
CO4.	To learn about how a retail trade works in business system, different forms of retail trade and their contribution in the economy.

**F. Y. B. B.A Principles of Marketing Course code 202 Credit 3**

CO1	To understand various tasks performed by marketing managers in different environment
CO2.	To study the types of segmentation To develop write understanding of profile of Indian market
CO3	To have right understanding of marketing mix as they influences as marketing mix.
CO4.	To learn about types of market in developing economy and society.





**F. Y. B. B.A Principles of Finance Course code 203 Credit 3**

CO1	To understand role and importance in business Ability to understand implication of finance on business
CO2.	To learn about imp features and their applications considering their requirements in business
CO3	To Understand how basic financial structure is designed To know what are the constituents a financially sound business units.
CO4.	To understand new and emerging trends in business finance Ability to understand about current issues related with new trends in business finance

**F. Y. B. B.A Basics of Cost Accounting Course code 204 Credit 3**

CO1	To understand importance of costing in decision making Ability to understand importance of costing and role of costing.
CO2.	To understand how to prepare a cost statement and analyze implication of elements of cost on total cost Ability to examine different aspects of cost as they influence total cost structure and sales price. Ability to prepare comprehensive cost sheet.
CO3	To understand concept of overhead as it contributes to total cost of a product or service
CO4.	To understand role of contract costing in ascertaining cost of a particular project or activity

**F. Y. B. B.A Business Statistics Course code 205 Credit 3**

CO1	To understand role and importance of statistics in various business situations
CO2.	To develop skills related with basic statistical technique
CO3	Develop right understanding regarding regression, correlation & interpretation
CO4.	Concept and meaning of Correlation, Types of correlation.
CO5.	Concept and meaning of Index Number, Notations

**F. Y. B. B.A Fundamentals of Computers Course code 206 Credit 4**

CO1	To understand role and importance of computers in business processes
CO2.	To understand the importance of operating system
CO3	To learn the process for usage of different computer application in business processes.
CO4.	Ability to handle various software and programmes with due cautions and care.

**S. Y. B.B.A. Principles of Human Resource Management Course Code– GC - 301 Credits – 3**

CO1	To understand the basic concept of HRM and develop knowledge about the various functions .
CO2.	To make the students understand how Job Analysis & Human Resource Planning play an important role in the Organization.
CO3	To cultivate the knowledge about Career Planning, Employee Morale & Job
CO4	To make the students aware about Changing Environment of HRM.

**S. Y. B.B.A. Supply Chain Management Course Code: GC - 302 Credits -3**

CO1	To understand the functions of Supply Chain Management.
CO2.	To know the process of Work Flow Automation
CO3	To learn the methods of Logistics Planning.
CO4.	To learn the Supply Chain Network Design.

**S. Y. B.B.A. Global Competencies and Personality Development Course Code-GC- 303 Credits – 03**

CO1	To understand various factors affecting personality development of an individual.
CO2.	To decipher the characteristics of globally competent individual and encourage students to develop that characteristics among themselves





CO3	To introduce the concept of SWOC Analysis and encourage the students for personal Goal setting by providing theoretical as well as practical knowledge.
CO4.	To explain various styles and qualities of leaders and encourage students for effective leadership.
CO5.	To introduce basics of grooming and effective use of body language.

**S. Y. B.B.A. Fundamentals of Rural Development SY BBA Course Code: GC - 304 Credit: 3**

CO1	To provide sound knowledge about rural development.
CO2.	They should develop problemsolving skills and the ability of working with clients with diverse interests.
CO3	To develop awareness regarding the challenges of Rural Development.
CO4	They should develop problemsolving skills and the ability of working with clients with diverse interests.

**S. Y. B.B.A. Discipline Specific Electives (DSE- A- MM) Consumer Behavior& Sales Management SY BBA Course Code- A 305 MM Credits 3+1=4**

CO1	To know about determinants of consumer behavior affects the marketing system.
CO2.	To develop the conceptual decision making insights.
CO3	To provide the basic understanding of the processes followed in sales management
CO4	To provide an understanding of the tools and techniques necessary to effectively Manage& Control the sales function - organization - sales individual.

**S. Y. B.B.A. Discipline Specific Electives (DSE- A- MM) Retail Management Course Code- DSE A 306 MM Credits 2+2=4**

CO1	Retailing aims to develop students' understanding of retail strategy, retail operations management, innovation in retail, and the key issues impacting growth in retail firms
CO2.	To analysis the factors impacting store design and location selection.
CO3	To study store operations, merchandising and customer management.
CO4	To get conversant with the latest tool used in retail industry.

**S. Y. B.B.A. Discipline Specific Electives (DSE- B- FM) Corse Title – Management Accounting Course Code- B 305 FM Credit 3+1=4**

CO1	To understand the concept and meaning of management accounting. To understand difference between financial accounting, cost accounting and management accounting.
CO2.	To study different methods of analysis.
CO3	To understand the concept of contribution and breakeven point in business and its application while estimating profitability level.
CO4	To understand the concept of contribution and breakeven point in business and its application while estimating profitability level

**S.Y. BBA Semester III (CBCS) Pattern 2019 Discipline Specific Electives (DES- B- FM) Course Title – Banking & Finance Course Code- B 306 FM Credits 2+2= 4**

CO1	Overview of evolution and banking structure in India
CO2.	Students will understand various functions and activities of banks.
CO3	Knowledge of functioning and powers various Regulatory Authorities in India.
CO4	Use of technology in banking and study of security measures while using E- banking





CO3	To introduce the concept of SWOC Analysis and encourage the students for personal Goal setting by providing theoretical as well as practical knowledge.
CO4.	To explain various styles and qualities of leaders and encourage students for effective leadership.
CO5.	To introduce basics of grooming and effective use of body language.

**S. Y. B.B.A. Fundamentals of Rural Development SY BBA Course Code: GC - 304 Credit: 3**

CO1	To provide sound knowledge about rural development.
CO2.	They should develop problemsolving skills and the ability of working with clients with diverse interests.
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**S. Y. B.B.A. Discipline Specific Electives (DSE- A- MM) Consumer Behavior& Sales Management SY BBA Course Code- A 305 MM Credits 3+1=4**

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CO3	To provide the basic understanding of the processes followed in sales management
CO4	To provide an understanding of the tools and techniques necessary to effectively Manage& Control the sales function - organization - sales individual.

**S. Y. B.B.A. Discipline Specific Electives (DSE- A- MM) Retail Management Course Code- DSE A 306 MM Credits 2+2=4**

CO1	Retailing aims to develop students' understanding of retail strategy, retail operations management, innovation in retail, and the key issues impacting growth in retail firms
CO2.	To analysis the factors impacting store design and location selection.
CO3	To study store operations, merchandising and customer management.
CO4	To get conversant with the latest tool used in retail industry.

**S. Y. B.B.A. Discipline Specific Electives (DSE- B- FM) Corse Title – Management Accounting Course Code- B 305 FM Credit 3+1=4**

CO1	To understand the concept and meaning of management accounting. To understand difference between financial accounting, cost accounting and management accounting.
CO2.	To study different methods of analysis.
CO3	To understand the concept of contribution and breakeven point in business and its application while estimating profitability level.
CO4	To understand the concept of contribution and breakeven point in business and its application while estimating profitability level

**S.Y. BBA Semester III (CBCS) Pattern 2019 Discipline Specific Electives (DES- B- FM) Course Title – Banking & Finance Course Code- B 306 FM Credits 2+2= 4**

CO1	Overview of evolution and banking structure in India
CO2.	Students will understand various functions and activities of banks.
CO3	Knowledge of functioning and powers various Regulatory Authorities in India.
CO4	Use of technology in banking and study of security measures while using E- banking





**SY BBA Semester III (CBCS) Pattern 2019 Discipline Specific Electives (DES- C- HRM) Organizational Behaviour (OB) Course Code: DSE- C -305 HRM Credits: 3+1=4**

CO1	To understand and explain how and why O.B. study is important to students.
CO2.	To make use of the Theories of Personality by adding new perspective for overall development
CO3	To make use of Theories of Motivation to motivate employees to achieve higher performance in Organization.
CO4	To enable students to understand the relation between Organizational Performance & Conflict.

**SY BBA Semester III (CBCS) Pattern 2019 Legal Aspects in Human Resources DSE - C 306 (HRM) Course Code: DSE - C 306 (HRM) Credits: 2+2=4**

CO1	To study and explain rights of employees at work place.
CO2.	To understand the basic concepts of Wage & Salary Administration.
CO3	To gain knowledge & Applications of The Payment of Gratuity Act,1972
CO4	To enhance the awareness of the students towards different Acts and its application.

**SY BBA Entrepreneurship and Small Business Management- GC-401 Course Code – 401 Credit**

CO1	Learning & understanding the concept of Entrepreneur and process of Entrepreneurship.
CO2.	Environmental Scanning for identification of Business opportunities.
CO3	Creating awareness about financial assistance of various institutions
CO4	Development of interest and positive approach towards entrepreneurship and new startups.

**SY BBA : Production and Operation Management- 402 GC Course Code -402 GC Credits - 3**

CO1	To understand the different layout and safety considerations used for production mgt.
CO2.	To make the students understand how product developed, planned and controlled in manufacturing.
CO3	To provide knowledge to the students regarding Ergonomics and safety measures.
CO4	To make the students aware about Changing Environment, Production and operation maintenance methods.

**SY BBA Decision Making and Risk Management- 403 GC Course Code – 403 GC Credits – 3**

CO1	To understand the role and scope of Decision making and Risk management in organizations.
CO2.	To understand the importance of Decision making tools and models in business.
CO3	To understand the role of leadership and its allied aspects while making decisions
CO4	To understand the role and importance of organizational values in Decision making and Risk Management

**SY BBA International Business Management- 404 GC Course Code – 404 GC Credits – 3**

CO1	Understand the Role and Scope of International Business.
CO2.	Role of International Business and its importance at National and International
CO3	Understanding terms of trade in the International Market.
CO4	Understand the functions of International Organizations.





**SY BBA Advertising and Promotion Management- DSE- 405 A-MM Course Code - 405 A-MM Credits – (3+1)=4**

CO1	To understand the basic concept of advertising and social issues, ethics.
CO2.	To provide the knowledge regarding copy creations and media selection.
CO3	To make the student aware about promotion techniques.
CO4	To cultivate the knowledge regarding online advertising and various types.

**SY BBA Digital Marketing- DSE 406 A- MM Course Code – 406 A-MM Credit –(2+ 2) = 4**

CO1	To develop digital strategy to influence consumer behaviour.
CO2.	To develop the right understanding of the situations as they are influenced under Digital
CO3	To understand the importance of Digital Platforms & its impact upon the performance of the organizations in complex & varied environment.
CO4	To know the optimum use of various social media platforms.

**SY BBA Business Taxation- 405- B-FM Course code 405 –B-FM Credits: (3+1) = 4**

CO1	Understanding the historical background of Indian Income tax structure.
CO2.	To know the tax compliances of business & Individual person.
CO3	To know & understand the procedure of online ITR filing.
CO4	To acquire the knowledge about important concepts of Income tax act 1961, such as TDS, TCS, Advance tax etc.

**SY BBA Financial Services. 406 B- FM Course code: 406 B-FM Credits: 4 = (2+2)**

CO1	To study & understand the basic concepts of Indian Financial system.
CO2.	To understand the functioning of primary & secondary market
CO3	To Study & examine various financial services provided by various financial institutions in India
CO4	Basic knowledge of derivatives & Commodity market.

**SY BBA Human Resource Management Functions& Practices- DSE 405 C- HRM Course Code: DSE- 405 –C-HRM Credits: (3+1) = 4**

CO1	To understand and explain the Concepts of Performance Appraisal, Training and Executive Development.
CO2.	To understand and explain the Concepts of Employee Compensation and other functions of
CO3	To develop an understanding about how Workers Participation is an important aspect in an organization and various forms of WPM.
CO4	To develop an understanding among the students regarding OD Programme and its interventions.

**SY BBA Employee Recruitment & Record Management DSE- 406 C- HRM Course Code: DSE-406 C- HRM Credits: 4 = (2+2)**

CO1	To understand the Techniques of Manpower Forecasting.
CO2.	To understand detailed Process of Selection in the Organization.
CO3	To gain knowledge & Applications of Employee Record Management in Organization.
CO4	To understand various concepts and steps relating to designing of computer technologies and its applications in various field.





CO2.	To develop analytical and interpreting skills for evaluating the financial position of business corporations by calculating and comparing various ratios
CO3	To understand the cash management of any business corporations by preparing cash flow statement.
CO4.	To understand the arrangement of funds for day-to-day business operations by preparing a fund flow statement

**T.Y. BBA Course Title – Legal Aspects of Finance & Security Laws Course Code- DSE B 506 FM Credit- 2+4=6**

CO1	To understand the fundamentals of legal aspects of Finance.
CO2.	To explore the legal procedure of IPO listing & Delisting.
CO3	To study & understand the basics of the Companies Act 2013
CO4.	To study & understand the basics of Goods & Service Tax.

**TY BBA Semester V (CBCS) Pattern 2019 Cross-Cultural HR & Industrial Relations Course code DSE C 505 HRM Credit 3+1= 4**

CO1	To discuss the impact of cross-cultural communication on international business.
CO2.	To make students aware of Cross-cultural Differences and Managerial Implications.
CO3	To provide an understanding of the relation between Ethical Codes & I.R
CO4.	To inculcate the knowledge among students about authorities under The Industrial Disputes Act,1947.

**TY BBA –Semester V (CBCS) Pattern 2019 Cases in Human Resource Management + Project Viva Course code DSE C 506 HRM Credit - 2+4 = 6**

CO1	To make student know the gist of the Case Study and the way of attempt or solution. Explain steps in solving case studies
CO2.	Analyze the broad fundamental components of HRM.
CO3	To make students know about recent happening in important concepts of Human Resource.
CO4.	Design critical thinking by making judgments related to problems in case studies of H.R.

**TY BBA – Essentials of E-Commerce Course Code- GC 601 Credit – 3**

CO1	To understand the concept and role of E-Commerce business with context to India.
CO2.	To understand the concept of digital currencies.
CO3	To understand various tools and techniques used in ECommerce.
CO4.	To understand the concept of cyber warfare and crimes that took place in cyberspace.

**TY BBA – Management Information System Course code GC 602 Credit 3**

CO1	To understand the basic concept of Information Technology and Management Information Technology.
CO2.	To make students understand the models of Decision Making and their application Decision-Making Process.
CO3	To inculcate knowledge of the different System Development Model.
CO4.	To find out the relation between Enterprise Model System and E-Business.

**TY BBA – Business Project Management Course Code- GC 603 Credits – 3**

CO1	To understand the role & importance of Management in Business Projects.
CO2.	To develop conceptual clarity in Planning & Implementation of Business Projects.





CO3	To understand the relevance of a technique-based project management system in the success of business projects.
CO4.	To develop a mindset of calculation-based business projects to minimize the chances of its failure.

**TY BBA – Management of Innovations and Sustainability Course Code GC 604 Credits – 3**

CO1	Introduction to a management approach to Innovation
CO2.	To Identify the factors organizations have to manage to achieve success in Innovation
CO3	Gain insight into the fundamental drivers creating opportunities for entrepreneurs and new ventures in the sustainability innovation arena.
CO4.	A better understanding of several aspects of sustainable development

**TY BBA – International Brand Management Course Code-DSE A 605 MM Credit – 3 + 1 = 4**

CO1	The module aims to familiarize the students with the key conceptual foundations of developing and managing a strong brand.
CO2.	The module introduces the process of creating a brand.
CO3	The module reviews the methods of measuring and interpreting brand performance.
CO4.	The module focuses on the stewardship and management of brands over time, geographic areas, and market segments.

**TY BBA – Cases in Marketing Management + Project Course Code- DSE A 606 MM Credit - 2+4 = 6**

CO1	To make student know the gist of the case study and way of attempt or solution
CO2.	To develop the ability about getting acquainted with the theory and its application in a real-life

**TY BBA – Financial Management Course Code-DSE B 605 FM Credits –3+1=4**

CO1	To understand various sources of finance for raising capital /funds required for the business. By studying various sources of finance analytical & reasoning skills will be developed.
CO2.	To understand the proportion of borrowed capital & owned capital, considering their cost of capital. It helps to develop calculative & mathematical skills
CO3	To understand the process of undercapitalization & overcapitalization. It helps to develop professional & problem-solving skills.
CO4.	To understand the process of evaluation of mutually exclusive proposals. It helps to evaluate different investment proposals through experiential learning.

**TY BBA – Cases in Finance +Project Course Code- DSE B 606 FM Credit- 2+4=6**

CO1	To study & understand the practical applications of Capital Budgeting.
CO2.	To understand the concept & importance of Working Capital Management.
CO3	To study & understand the basics of ROCE, ROI & Cost of Capital.
CO4.	To study & understand implications of selected core areas of finance under study.

**TY BBA – Global Human Resource Management Course code DSE C 605 HRM Credit 3+1=4**

CO1	To introduce the students to the study and the practice of Global HRM.
CO2.	To provide information about Global Workforce Management functions
CO3	To make students aware of barriers in Global Training & Development, Global Compensation and Global Performance Management
CO4.	To provide sound knowledge about strategic HRM and Ethics related challenges for the HR functions in multinational enterprises.

**TY BBA – Recent Trends & HR Accounting + Project Course Code DSE C 606 HRM Credit 6**

CO1	To understand the basic concept of Employee Engagement.
CO2.	To discuss the uses of Human Resource Information Systems in organizations
CO3	To study the methods of Human Resource Valuation.

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S.M.B.S.T. College, Sangamner



Principal  
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**S. M. B. S. THORAT COLLEGE OF ARTS, SCIENCE & COMMERCE, SANGAMNER, DIST-  
 AHMEDNAGAR.**  
**DEPARTMENT OF Marathi**

Programme and course outcomes of the programme offered to the instruction

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.A.	I	11021A	Marathi sahitya katha aani bhashik kaushalye (G1)	awareness about life through the study of marathi literature.
F.Y.B.A.	II	12021A	Marathi sahitya ekankika aani bhashik kaushalya(G1)	To develop linguistic competence to deal with different sectors in globalization.
S.Y.B.A. (G2)	I	23023 [cc-1C(3)]	Bhashik Kaushalyavikas Ani Marathi Sahitya Prakar : Kadambari (G2)	Students Understanding novel's idiosyncratic perception & taste.
S.Y.B.A. (G2)	II	24023 [CC-1D(3)]	Bhashik Kaushalyavikas Ani Marathi Sahitya Prakar : lalit Gadya (G2)	To understand & appreciate finer sentence types & to develop language skill.
S.Y.B.A (SPL-1)	I	23021 DSE1A(3)]	Adhunik Marathi Sahitya : Prakashavata (SPL-1)	To introduce the philosophical elements of the autobiographical sentence type.
S.Y.B.A (SPL-1)	II	24021 DSE2A(3)]	Mdhyayugin Marathi Sahitya : Nivadak Madhyayugin Gadya, Padya ((SPL-1))	Introduction to medieval literacy genres
S.Y.B.A (SPL- 2)	I	23022 [DSE1B(3)]	Sahitya Vichar (SPL 2)	Understanding the nature of literature.
S.Y.B.A (SPL -2)	II	24022 [DSE2B(3)]	Sahitya Samiksha (SPL 2)	By understanding & studing the nature of criticism according to literacy
S.Y.B.A (SEC)	I	23025 SEC2A(3)	SEC- I Prakashan vyavhar ani sampadan (S1) SEC	Developing Skills



S.Y.B.A (SEC)	II	24025 SEC2B(3)	SEC II Upayojit lekhan kaushalye (S2) SEC	Developing Skills
S.Y.B.A (MIL)	Sem- I	23011 MIL 2(2)	I-Marathi bhashik sadnypan kaushalye (MIL)	Developing Writing Ability
S.Y.B.A (MIL)	Sem- II	24011 MIL 2(2)	II- Navamadhyame ani samaja madhyamansathi Marathi lekhan(MIL)	Developing Writing Ability
SYBSC	Sem- I	23331 (AECC-2A)	I- Upyojit Marathi (SYBSC)	To Introduce Students to science Literatur.
SYBSC	Sem- II	24331 (AECC-2B)	II-Marathi sahitya (SY BSC)	To Introduce Students to science Literatur.
T.Y.B.A. (G3)	Sem- I	35023 [CC-1E(3)]	Bhashik kayshaly vikas ani adhunik marathi sahity prakar : pravas varnan (G3)	awareness about life through the study of marathi literature of Pravasvarnan
T.Y.B.A. (G3)	Sem- II	36023 [CC-1E(3)]	Bhashik kayshaly vikas ani adhunik marathi sahity prakar : kavita (G3)	awareness about life through the study of marathi literature of Poetry
T.Y.B.A (SPL 3)	Sem- I	35021 [DSE1C(३+१)]	Madhyayugin vadmaya sthul etahas prarambh te 1600 (SPL 3)	Intrest in Medieval Literature
T.Y.B.A (SPL 3)	Sem- II	36021 ][DSE1D(३+१)]	Madhyayugin vadmaya sthul etahas 1601- 1817 (SPL 3)	Intrest in Medieval Literature
T.Y.B.A (SPL 4)	Sem- I	35022 [DSE2C(३+१)]	Varnanatmak bhashavidnyan bhag:I (SPL 4)	Study In Language
T.Y.B.A (SPL 4)	Sem- II	36022 [DSE2D(३+१)]	Varnanatmak bhashavidnyan bhag:II (SPL 4)	Study In Language
T.Y.B.A (SEC)	Sem- I	35025 [SEC2C(2)]	SEC I Karyakram sanyojanatil bhashik kaushalye bhag :I (SPL 3)	To Develop Conduct Quwalitis in Students





T.Y.B.A (SEC)	Sem- - II	36025 [SEC2D(2)]	SEC II Karyakram sanyojanatil bhashik kaushalye bhag :II(SPL 4)	To Develop Conduct Quwalitis in Students
(FYBCOM)	Sem- II	117B	I-Bhashik sahitya aani kaushalya vikas (FY BCOM)	Language Practically Knowllege are Develop in Students
(FYBCOM)	Sem- I	127B	II-Bhasha aani kaushalya vikas (FY BCOM)	Language Practically Knowllege are Develop in Students

  
**HEAD**  
 Department of Marathi  
 S.M.B.S.T. College, Sangamner



## Dept. of Hindi

### Programme and Course Outcomes PG

Programme Class	Semester	Name of the course	Course out comes
M.A-I	I	Madhyougin Kavya	<ul style="list-style-type: none"><li>• To introduce Verse of middle age period of Hindi literature.</li><li>• To inform about Verse of middle age, characteristics of poet and their Verse.</li><li>• To develop innovative skill.</li><li>•</li></ul>
	I	Katha sahitya	<ul style="list-style-type: none"><li>• To introduce novel study.</li><li>• To introduce story study.</li><li>• To develop study skill of values reflected in the work.</li><li>•</li></ul>
	I	Bharitya Kavyasharshra	<ul style="list-style-type: none"><li>• To introduce development of Indian poetics.</li><li>• To develop critical analysis skill of the student.</li><li>• To study various structure of Indian poetics.</li><li>•</li></ul>
	I	Hindi Patrakarita	<ul style="list-style-type: none"><li>• To introduce language and it's study of journalism.</li><li>• To study participation of Hindi letter, magazines in the development of the language and literature.</li><li>•</li></ul>
M.A- I	II	Kathetar Gadya sahitya	<ul style="list-style-type: none"><li>• To introduce Essay,discriptive literature and biographical literature and it's study.</li><li>• To study language of literature.</li><li>• To develop effective writing skill.</li><li>•</li></ul>
	II	Shodh Pravidhi	<ul style="list-style-type: none"><li>• To introduce skill research.</li><li>• To develop vision of Research</li><li>• To introduce various Research stream.</li><li>• To achieve skill of research process and research project writing</li></ul>



	II	Pashatya kavyashashar	<ul style="list-style-type: none"> <li>To introduce the development of poetics in western country.</li> <li>To provide knowledge of Western philosophy, their views and streams.</li> <li>To develop critical,acsthetics sense among the students.</li> <li>Optional</li> <li></li> </ul>
	II	Hndi Upanyas Sahitya	<ul style="list-style-type: none"> <li>To provide knowledge of Hindi novels and it's development.</li> <li>To develop skill of study and skill</li> <li>Of achieving aesthetic pleasure.</li> <li>To study values reflected in the literature.</li> <li>To develop evaluation views among students.</li> <li></li> </ul>
M.A-II	III	Adhunik Kavya	<ul style="list-style-type: none"> <li>To introduce modern Verse to the student.</li> <li>To develop study capability of modern Verse among the student.</li> <li>To develop evaluation skill among the student .</li> <li>To develop Verse aesthetic skill among the Student.</li> </ul>
	III	Bhasha Vigyan	<ul style="list-style-type: none"> <li>To introduce structure of linguistic.</li> <li>To study area of linguistic and its scope.</li> <li>To introduce various direction of linguistic study.</li> <li>To understand importance of linguistic in the study of literature</li> </ul>
	III	Hindi Sahitya ka Itihas	<ul style="list-style-type: none"> <li>To introduce history of writing of Hindi literature.</li> <li>To inform about period and names of Hindi literature.</li> <li>To study adikal, Bhaktikal,Ritikal,and variour writer and their works .</li> <li></li> </ul>
	III	Sanchar Madhyam Sidhant Aur Swarup	<ul style="list-style-type: none"> <li>To study multipurpose role of communication media.</li> <li>To develop medium of communication skill.</li> </ul>





	IV	Adhunik Kavita	<ul style="list-style-type: none"> <li>• To introduce modern poetry to the student.</li> <li>• To introduce modern Verse study to the students.</li> <li>• To develop aesthetic skill among the Student.</li> <li>• To develop critical vision among the Student.</li> <li>•</li> </ul>
	IV	Hindi sahitya ka Itihas (Adhunik kal)	<ul style="list-style-type: none"> <li>• To aware about hindi prose, beginning and development.</li> <li>• To study various writer and their works of art like Dwedi yug, experimental poetry and new poetry.</li> <li>•</li> </ul>
	IV	Hindi Bhasha Ka Vikas	<ul style="list-style-type: none"> <li>• To introduce and study the Indian focal literature.</li> <li>• To study types of Indian focal literature.</li> <li>• To study space of focal literature.</li> <li>• To introduce maharashtriyen focal literature study.</li> </ul>
	IV	Bhartiya Loksahitya	<ul style="list-style-type: none"> <li>• To introduce and study the Indian focal literature.</li> <li>• To study types of Indian focal literature.</li> <li>• To study space of focal literature.</li> <li>• To introduce maharashtriyen focal literature study.</li> </ul>



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DEPARTMENT OF HINDI

2022- 2023

**Programme and Course Outcomes of the programmed offered to the instruction**

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.A.	I	11091	Vaikalpik Hindi Prashnpatr - I	<ul style="list-style-type: none"> <li>To introduce Hindi Verse literature to the students.</li> <li>To develop advertiser writing skill among the students</li> <li>To inculcate the awareness about Hindi stories literature to the students</li> <li>To introduce translation and Hindi computing to the students</li> </ul>
	II	11092	Vaikalpik Hindi Prashnpatr - II	<ul style="list-style-type: none"> <li>To introduce Hindi Verse literature to the students.</li> <li>To develop advertiser writing skill among the students</li> </ul>
F.Y.B.com	I	117C	Vaikalpik Hindi	<ul style="list-style-type: none"> <li>To develop communication skills through Hindi language.</li> <li>To develop quality literature writing.</li> <li>To develop innovative advertisement writing.</li> </ul>
	II	127C	Vaikalpik Hindi	<ul style="list-style-type: none"> <li>To introduce Hindi story writing.To aware about various types of advertisement.</li> <li>To give information about development of literary vocabulary</li> </ul>
S.Y.B.A.	III	23093	Adhunik kavya, kahani Tatha Vevaharik Hindi ( G-2)	<ul style="list-style-type: none"> <li>To introduce Hindi Verse to the students.</li> <li>To introduce Hindi language structure to students.</li> <li>To give knowledge about Hindi sentences construction of the literature.</li> </ul>
		23091	Kavyashashr ( S-I)	<ul style="list-style-type: none"> <li>To introduce Indian Hindi poetics to the students.</li> <li>To aware the students about Verse language principle .</li> </ul>





				<ul style="list-style-type: none"> <li>To introduce Indian poetics interest and develop critical approach of the student.</li> </ul>
		23092	Madhyayogin Kavya Tatha Upnyas Sahitya ( S-II)	<ul style="list-style-type: none"> <li>Verse of middle age or novel literature</li> <li>To introduce literature of Kabir.</li> <li>To give knowledge of Verse composol of Saint Mira.</li> <li>To provide information about development of novel.</li> <li>To study values give by literary art.</li> </ul>
		23096	Anuwad Swarup Yavm Vvahar ( SEC)	<ul style="list-style-type: none"> <li>To inform students about translation skill among the Student.</li> <li>To get knowledge about translation.</li> <li>To get knowledge about translation.</li> <li>To get information about translation field.</li> <li>To develop translation skill from Hindi to Marathi.</li> <li>To develop translation skill about English to Hindi, Marathi.</li> </ul>
	IV	24093	Adhunik kavya, kahani Tatha Vevaharik Hindi ( G-2)	<ul style="list-style-type: none"> <li><u>To understand Mobile technology in the language.</u></li> <li><u>To provide interview skill to students.</u></li> <li><u>To introduce story 'literature to the students.</u></li> </ul>
		24091	Sahitya Ke bhed ( S-I)	Types of literature <ul style="list-style-type: none"> <li>To aware students about variety of the literature.</li> <li>To give knowledge students about types of prose.</li> <li>To achieve knowledge about drama.</li> <li>To develop interest of the student in dream</li> </ul>
		24092	Madhyayogin Kavya Tatha Natak Sahitya ( S-II)	<ul style="list-style-type: none"> <li>To introduce Verse of Rahim.</li> <li>To study elements of Verse in the poetry of Bihari.</li> <li>To introduce knowledge of Hindi drama and stage.</li> <li>To provide knowledge of dreama criticism</li> </ul>
		24096	Anuwad Swarup Yavm Vvahar ( SEC)	Medium writing <ul style="list-style-type: none"> <li>To develop skill of innovative writing.</li> <li>To provide knowledge about medium writing.</li> <li>To introduce language of audio -video medium to the student</li> <li>To introduce knowledge to the student about medium writing.</li> </ul>
T.Y.B.A.	V	35093	Kathetar Vidhaye ( G-3)	<ul style="list-style-type: none"> <li>To develop vision of student through valuation.</li> </ul>



				<ul style="list-style-type: none"> <li>To develop skill writing minutes of meeting.</li> <li>To develop skill of news writing among the Student.</li> </ul>
		35091	Hindi Sahitya ka Itihas ( Adikal, Bhaktikal,Ritikal ( S-3)	<ul style="list-style-type: none"> <li>To introduce the knowledge about writing of Hindi literature.</li> <li>To introduce the knowledge about Hindi literature and it's period or name.</li> <li>To give knowledge about Adikal Bhaktikal Ritikal and it's various writer and their work of art.</li> </ul>
		35092	BhashaVidyan ( S-4)	<ul style="list-style-type: none"> <li>To introduce structure of language study.</li> <li>To give knowledge about science of language and it's direction.</li> <li>To study importance of literary study to get knowledge of language</li> </ul>
		35096	Pathkatha Lekhan ( SEC )	<ul style="list-style-type: none"> <li>To provide knowledge of script writing, meaning, language to the student.</li> <li>To give introduction about story, script and communication to the student.</li> <li>To develop skill of students about draft writing.</li> </ul>
	VI	36093	Gajal Vidha Aur Patrachar (G-3)	<ul style="list-style-type: none"> <li>To inform about gazal writing among students.</li> <li>To give knowledge about biography of gazal writer.</li> <li>To develop evaluation method among student .</li> <li>To develop skill of official letter writing skill among students</li> </ul>
		36091	Hindi Sahitya ka Itihas Adhunik Kal (S-3)	<ul style="list-style-type: none"> <li>History of Hindi literature modern period introduction</li> <li>To give basis knowledge about modern period.</li> <li>To give knowledge about Bartendu period,Duvedi period Verse and it's characteristics to the students.</li> <li>To period knowledge about modern period Hindi writer and their work of art.</li> </ul>
		36092	Hindi Bhasha Ka Vikas ( S-4)	<ul style="list-style-type: none"> <li>Hindi language and it's development</li> <li>To give knowledge about linguistic of language.</li> <li>To inform about Hindi language poetics among the student.</li> <li>To introduce linguistic of language study and it's direction.</li> <li>To study linguistic for study of literature.</li> </ul>





		36096	Sahitya Aur filmantaran ( SEC)	<ul style="list-style-type: none"><li>• To introduce structure of Film among the students.</li><li>• To inform student about relationship about Hindi literature and cinema.</li><li>• To inform about Film which as based on Hindi novels</li></ul>
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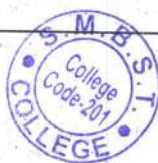
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**Department of Zoology 2022-2023  
 Course outcome**

Sr.No.	Class	COURSE NUMBER AND NAME	Course Outcomes:
1	FYBSc Sem I	ZO - 111 Animal Diversity I	<p>1. The student will be able to understand classify and identify the diversity of animals.</p> <p>2. The student understands the importance of classification of animals and classifies them effectively using the six levels of classification.</p> <p>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.</p>
		ZO - 112 Animal Ecology	<ul style="list-style-type: none"> <li>• 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.</li> <li>☑ To understand anticipate, analyse and evaluate natural resource issues and act on a lifestyle that conserves nature.</li> <li>☑ The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community.</li> <li>☑ 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.</li> <li>☑ The working in nature to save environment will help development of leadership skills to promote betterment</li> </ul>





			of environment.
		ZO - 113 Zoology Practical Paper	<ul style="list-style-type: none"> <li>• CO1: Gain knowledge to identify various animals based on morphological features.</li> <li>☑ CO2: Prepare the culture of <i>Paramecium</i></li> <li>☑ CO3: understand the principle and use of microscopes and micrometry.</li> <li>☑ CO4: List the various invertebrate and vertebrate animals in a given class.</li> <li>☑ CO5: Identify various larval stages and development in invertebrate and vertebrate groups.</li> <li>☑ CO6: Understand blood cells as differential and total count with normal range.</li> </ul>
2	FYBSc Sem II	ZO-121 Animal Diversity II	<ol style="list-style-type: none"> <li>1. The student will be able to understand classify and identify the diversity of animals.</li> <li>2. The student understands the importance of classification of animals and classifies them effectively using the six levels of classification.</li> <li>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.</li> </ol>
		ZO-122 Cell Biology	<ul style="list-style-type: none"> <li>• The learner will understand the importance of cell as a structural and functional unit of life.</li> <li>☑ The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development.</li> <li>☑ The dynamism of bio membranes indicates the dynamism of life. Its working mechanism and precision are responsible for our performance in life.</li> </ul>





			<p>☑ The cellular mechanisms and its functioning depends on endo-membranes and structures. They are best studied with microscopy.</p>
		ZO-123 Zoology Practical Paper	<p>• CO1: Gain knowledge to identify various animals based on morphological features.</p> <p>☑ CO2: Prepare the culture of <i>Paramecium</i></p> <p>☑ CO3: understand the principle and use of microscopes and micrometry.</p> <p>☑ CO4: List the various invertebrate and vertebrate animals in a given class.</p> <p>☑ CO5: Identify various larval stages and development in invertebrate and vertebrate groups.</p> <p>☑ CO6: Understand blood cells as differential and total count with normal range.</p>
3	SYBSc Sem I	ZO - 231 Animal Diversity III	<p>CO1: The student will be able to classify various animals in a given phylum of invertebrates and vertebrates. CO2: Gain knowledge to identify various larval stages and development in invertebrate and vertebrates groups. CO3: Explain various modifications in these groups and the need of the modification for survival. CO4: Explain various adaptations in insects including mimicry and metamorphosis CO5: Describe the morphology, habit and habitat, systematic position and various systems in Star fish and Scoliodon. CO6: State the outline of animal classification of non-chordates and chordates. CO7: Classify the higher invertebrate and vertebrates groups. CO8: Categorize the diversity found in the invertebrate groups of animals like Arthropoda, Mollusca and Echinodermata. CO9: Categorize the diversity found in the vertebrate groups of animals like reptiles, birds and mammals. CO9: Explain various adaptations in avian group as well as migration and flight in birds.</p>
		ZO - 232 Applied	<p>CO1: Gain knowledge to define the concepts of the applied subjects like</p>





		Zoology I	<p>Fisheries, Aquaculture and Pest Control. CO2: The student will be able to identify, freshwater, marine water fishes. • CO3: Gain knowledge to explain the tools and techniques used in • aquaculture and agricultural practices. CO4: The student will be able to describe the fish species commonly used in • fishery business. CO5: Describe the common agricultural pests from nearby area. • CO6: Illustrate the diseases in aquaculture and agriculture. • CO7: Classify freshwater and Marine water fishes. • CO8: Categorize economically important fish species. •</p>
		ZO - 242 Applied Zoology II	<p>CO 1: Gain knowledge to define the concepts of the applied subjects like • Apiculture and Sericulture. CO 2: Identify different species and casts of honeybees and species of • silkworm. CO 3: Explain the tools and techniques used in apiculture and sericulture. • CO 4: The student will be able to explain the important pests of apiculture • and sericulture. CO 5: Describe the economic importance of honeybee and silkworm. • CO 6: Illustrate management of the apiary and sericulture units. • CO 7: Classify of Apis, Bombyx and Anthereria. • CO 8: Select economically important species of Apis for uni-floral and • multi-floral honey production.</p>
		ZO - 233 Zoology Practical Paper	<p>CO1: Gain knowledge to identify various animals based on morphological • features. CO2: Gain knowledge to distinguish between poisonous and non-poisonous • snakes CO3: Observe the various tools, crafts and gears used in Apiary, Fishery, • Sericulture and Pest control. CO4: Identify the pests in agriculture and enemies in Apiary. • CO5: The student will be able to describe the morphology, habit and habitat. • Systematic position and various systems in starfish and Scoliodon. CO6: Explain the modifications and adaptations in animals • CO7: Explain the use of tools in Apiary, Sericulture and appliances in Pest • control. CO8: Describe External features and economic importance of freshwater and • Marine water fishes and other aquaculture organisms</p>
4	SYBSc Sem II	ZO - 241 Animal Diversity IV	<p>1. The students will be able to understand, classify and identify the diversity of higher vertebrates.</p> <p>2. The students will able to understand</p>





			<p>the complexity of higher vertebrates</p> <p>3. The students will be able to understand different life functions of higher vertebrates.</p> <p>4. The students will be able to understand the linkage among different groups of higher vertebrates.</p> <p>5. 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.</p>
		ZO - 242 Applied Zoology II	<p>1. The learner understands the basics about beekeeping tools, equipment, and managing beehives.</p> <p>2. The learner understands the basic information about fishery, cultural and harvesting methods of fishes and fish preservation techniques.</p> <p>3. The learner understands the biology, varieties of silkworms and the basic techniques of silk production.</p> <p>4. The learner understands the types of agricultural pests, Major insect pests of agricultural importance and Pest control practices.</p>
		ZO - 243 Zoology Practical Paper	<ul style="list-style-type: none"> <li>• CO1: Gain knowledge to identify various animals based on morphological features.</li> <li>☐ CO2: Gain knowledge to distinguish between poisonous and non-poisonous snakes</li> <li>☐ CO3: Observe the various tools, crafts and gears used in Apiary, Fishery, Sericulture and Pest control.</li> </ul>





			<p>☐ CO4: Identify the pests in agriculture and enemies in Apiary.</p> <p>☐ CO5: The student will be able to describe the morphology, habit and habitat. Systematic position and various systems in starfish and <i>Scoliodon</i>.</p> <p>☐ CO6: Explain the modifications and adaptations in animals</p> <p>☐ CO7: Explain the use of tools in Apiary, Sericulture and appliances in Pest control.</p> <p>☐ CO8: Describe External features and economic importance of freshwater and Marine water fishes and other aquaculture organisms</p>
5	TYBSc SEM I	ZO 351 - Pest Management	<ol style="list-style-type: none"> <li>1. Define pest management.</li> <li>2. Describe the economic, ecological, and sociological benefits of IPM.</li> <li>3. Distinguish positive and negative impacts of pesticide use.</li> <li>4. Understand problems resulting from misuse, overuse, and abuse of chemical pesticides.</li> <li>5. Define and describe pesticide resistance and how it develops.</li> <li>6. Identify ecological and biological characteristics important in development of pest populations.</li> <li>7. Identify 10 tactics commonly used in IPM and be able to distinguish them.</li> <li>8. Understand society's role in IPM decisions.</li> <li>9. Describe different groups of pests and</li> </ol>





			<p>compare them to weeds and plant pathogens.</p> <p>10. Analyse and compare management tactics to determine the best approach to reducing pest populations, weeds, and disease presence.</p> <p>11. Locate appropriate, scientifically valid sources of information on specific tactics to manage insect pests, weeds, and diseases.</p> <p>12. Know and how to develop an IPM program.</p>
		ZO 352 - Histology	<p>1. The students will be able to understand, classify and identify the different types of tissue.</p> <p>2. The students will understand the complexity of various tissues in an organ.</p> <p>3. The students will be able to learn structure &amp; functions of various tissues.</p> <p>4. The students will understand the various diseases related to organs.</p> <p>5. The student will be able to know the role of glands in mammals.</p>
		ZO 353 - Biological chemistry	<p>1. Learners shall be able to understand basic concepts and significance of biochemistry</p> <p>2. The students will learn about the pH and Buffers.</p> <p>3. The students will learn about the chemical structures of carbohydrate, and their biological and clinical significance.</p> <p>4. The students will be able to understand, interpret structure and importance of proteins, carbohydrates and lipids</p> <p>5. Learners will be able to comprehend variations in enzyme activity and kinetics.</p>
		ZO 354 - Genetics	<p>The students will be able to understand, interpret structure and importance of gene , hybridcross ratios</p>
		ZO 355 - Developmental Biology	<p>Explain the molecular and genetic background of animal and plant development;</p>





			<p>Describe evolutionary history of complex multicellular life forms;          Compare environmental influence on development and homeostasis of animals and plants;          Interpret, analyse and present experimental results and conclusions in a scientific manner.          Critically assess and present current scientific literature on topics related to ecological and evolutionary developmental biology.</p>
		ZO 356 - Parasitology	<ol style="list-style-type: none"> <li>1. The students will be able to learn about basics and scope of parasitology.</li> <li>2. The students will be able to learn the types of host and parasite with examples.</li> <li>3. The students will be able to learn about the morphology, life cycle, pathogenicity and treatment of common parasites (Protists and Platyhelminthes).</li> <li>4. The students will be able to learn about host -parasite relationships and their effects on host body.</li> <li>5. The students will be able to learn about the arthropod parasites and their role as vector.</li> </ol>
		ZO 3510 - Aquarium Management	<ol style="list-style-type: none"> <li>1. The students will be able to understand the Aquarium Management practices.</li> <li>2. The students will be able to understand the Aquarium Management techniques.</li> <li>3. The students will be able to understand Aquarium rearing techniques.</li> <li>4. The students will be able to understand market value of Aquarium Management.</li> </ol>





		ZO 3511 - Poultry Management	<ol style="list-style-type: none"> <li>1. The students will be able to understand the Poultry farming practices.</li> <li>2. The students will be able to understand the poultry breeding techniques.</li> <li>3. The students will be able to understand poultry rearing techniques.</li> <li>4. The students will be able to understand feeding requirement and food ingredients.</li> <li>5. The students will be able to understand the poultry disease and their pathogens.</li> <li>6. The students will be able to understand market value of poultry products.</li> </ol>
6	TYBSc SEM II	ZO 361 - Medical & Forensic Zoology	<ol style="list-style-type: none"> <li>1. The students will be able to understand the basics principles of Medical and Forensic Zoology.</li> <li>2. The students will be able to understand scientific methods in crime detection.</li> <li>3. The students will be able to understand the advancements in the field of Medical and Forensic Zoology.</li> <li>4. The students will be able to understand modern tools, techniques and skills in forensic investigations.</li> <li>5. The students will be able to describe the fundamental principles and functions of forensic science and its significance to human society.</li> </ol>
		ZO 362 - Animal Physiology	<ol style="list-style-type: none"> <li>1. The various physiological organ-systems and their importance to the integrative functions of the human body.</li> <li>2. Understand Concept of energy requirements</li> <li>3. Various aspects of Digestive physiology.</li> <li>4. Circulatory system with medical conditions</li> </ol>





			<p>5. Understand Respiratory mechanism and gases transport.</p> <p>6. Eliminations of waste materials from the body.</p> <p>7. Develop understanding in Structure and functions of muscles</p> <p>8. Understand formation of gametes and function of endocrine glands.</p>
		ZO 363 - Molecular Biology	<p>1. Learner shall get an insight into molecular mechanisms of various biological processes in cells and organisms</p> <p>2. Learner shall get an insight into the Structure of DNA and RNA, DNA and RNA as genetic material</p> <p>3. The course shall prepare learner to get insight into the Central Dogma of Molecular Biology <b>CBCS: 2021-20222 T. Y. B. Sc. Zoology</b> <i>Savitribai Phule Pune University Page 27</i></p> <p>4. Learner shall also understand the concept of gene regulation</p> <p>5. Learner shall get an insight into the DNA Damage and Repair</p>
		ZO 364 - Entomology	<p>1. Understand basic concepts in Entomology and its scope.</p> <p>2. Learn morphology and anatomy of Insects.</p> <p>3. Understand the concept of social organization in Insects.</p> <p>4. Understand the development process of Insects.</p> <p>5. Identify disease causing insect vectors.</p> <p>6. Will be able to design and implement pest controlling methods against pests.</p>
		ZO 365 - Techniques in Biology	This skill based course introduces the students to the concepts in tissue culture





			<p>applicable to plants and animals They are also taught their applications in biotechnology and biochemical research This skill based course will teach the students the various instrumentations that are used in the analytical laboratories. This course covers both fundamental and applications of the instruments that are routinely used for the characterization of biomolecules At the end of the course, the student has the basic knowledge on the theory, operation and function of analytical instruments</p>
		ZO 366 - Evolutionary Biology	<p>1. Students will be able to learn most of the essential aspects of Evolutionary Biology in detail which will help them in acquiring better understanding regarding the subject.</p> <p>2. Explain important processes, principles and concepts and critically evaluate theories and empirical research within evolutionary biology</p> <p>3. Apply evolutionary theory and concepts to address empirical and theoretical questions in evolutionary biology.</p> <p>4. Independently investigate evolutionary questions using literature and analyses of empirical data.</p> <p>5. Communicate the principles, theories, problems and research results associated with questions that lie within the evolutionary framework to students</p>
		ZO 367 - Zoology Practical Paper 1	<p>To carry out routine analysis of given urine sample for i. Physical Properties: Volume, Colour, pH, Turbidity, Specific gravity. ii. Chemical Properties: Sugars, Protein, Bile salts &amp; bile pigments, Ketone bodies, Blood. . Determination of serum urea. Determination of serum uric acid. Determination of serum Calcium.</p>
		ZO 368 - Zoology Practical Paper 2	<p>Lab safety techniques &amp; sterilisation.. Preparation of DNA paper model and study its characteristics. Staining of DNA and RNA by methyl green – pyronin.. Estimation of DNA by Diphenylamine method. Estimation of RNA by Bial's Orcinol method. Isolation</p>





			of DNA from Bacteria / liver / Onion
		ZO 3610 - Environmental Impact Assessment	To study the importance of EIA To know the role of public in EIA studies Understand phenomena of impacts in the environment Know the impact quantification of various projects on the environment
		ZO 3611 - Project	Students have to complete the research project in the stipulated time and present the dissertation at the time of the examination in a proper format. Students should be encouraged to take up laboratory work, hands-on practical investigation and design experimental setup. Field work to be carried out under proper supervision and permissions from the concerned authorities.



*Dhakane*  
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**Department Of Sanskrit**

**Outcomes - परिणाम (F.Y.B.A-G1,S.Y.B.A-G2,T.Y.B.A-G3)**

- This course leads to get the students acquainted with the outline of Sanskrit literature.e.g. Upanishadas, Plays, Epics, Proses etc.
- This course get students to know about the principl thesis of the Upanishadas and the Gītā.e
- This course acquaint the students with the Classical Sanskrit Prose literature.
- This course leads to get the students acquainted with the outline of Sanskrit dramas of Sanskrit literature, which not only reflect poetic excellence but also depict contemporary society and highlight human values.
- This course get the students acquainted with the outline of Sanskrit Nīti literature through text Nītiśatakam with the General Introduction to Sanskrit Literature.
- This course get the students acquainted with the Classical Sanskrit Poetry. It also intends to give the introduction to the “Shastra” of the Poetry.
- This Literary Criticism course aims to get the students to know about the aims, essential resources, and definition and principle types of poetry on the basis of Mammat’s Kāvya prakāśa.

*M.B.Kashid*

Smt.Mohini Kashid

**HEAD**

**Department of Sanskrit  
S.M.B.S.T. College, Sangamner**

*Dr.D.D.Patil*

Dr.D.D.Patil

**Principal**

**Sahakar Maharshi Bhausaheb Santuji Thorat  
College of Art's, Science, Commerce, &  
Computer Science, Sangamner - 422605**





Semester I (Total Credit - 03)

F.Y.B.A

Code - 1111, 12111

Sr.No.	Unit	Name of the Lesson	Total Credit
<b>गद्यपाठाः</b>			
01	01	उमाहैमवती-आख्यानम् (केनोपनिषद् - खण्डः 3 व 4)	01.5
02		उपयुक्तपरीक्षा (कौटिल्य- अर्थशास्त्र -अधिकरणम् -2 अध्यायः - 9)	
03		का एषा का ? (मृच्छकटिकम् - दुर्दिनम् - अङ्कः - 5, नाट्यांशः)	
04		रासभशृगालकथा (पञ्चतन्त्रम् - अपरीक्षितकारकम्)	
<b>पद्यपाठाः</b>			
01	02	सागरवर्णनम् (रघुवंशम् - सर्गः- 13, श्लोकाः - 1 तः 20)	01.5
02		उपदेशबन्धः (विदुरनीतिः - उद्योगपर्वम् - प्रजागरपर्वम् - श्लोकाः 16)	
03		कलिविडम्बनम् (श्लोकाः- 23)	
04		वृत्तमुक्तावलिः (स्तोत्रवाङ्मयम् - 14 श्लोकाः)	

Semester II (Total Credit - 03)

Sr.No.	Unit	Name of the Lesson	Total Credit
<b>गद्यपाठाः</b>			
01	01	पाणिनीयप्रवेशाय (व्याकरणशास्त्रसंज्ञा)	01.5
02		अद्वितीयो बाणः (हर्षचरितम् - प्रथम-उच्छ्वासः)	
03		न ह्यनारुह्य नागेन्द्रं वैजयन्ती निपात्यते ! (चतुर्थः अङ्कः प्रतिमायौगन्धरायणम्)	
04		आहारविचारः (आयुर्वेदानुसारः)	
<b>पद्यपाठाः</b>			
01	02	दुर्गलक्षणम् (विश्वकर्मवास्तुशास्त्रम् - अध्यायः- 10, श्लोकाः 31)	01.5
02		काव्यशास्त्रविनोदः I (श्लोक 22)	
03		बद्धाञ्जलिः कृपाकाङ्क्षी (तिलकयशोवर्णनम् - तरंग - 41 - श्लोकाः -22)	
04		नाट्योत्पत्तिः (नाट्यशास्त्रम् - अध्यायः 1- श्लोकाः- 1 तः 22)	

M.S./Kashid

Smt. Mohini Kashid

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Class S.Y.B.A (SEC-1VB)

Subject :-Sanskrit G4

Sanskrutarnav (संस्कृतार्णव)

<b>Title Of The Topic</b>
गद्यपाठाः
अनुशासनम्
आतिथ्यम् जीवितप्रदानेन
पाणिनीय परिभाषा, कड.कणस्य तु लोभेन
पद्यपाठाः
पुरुषोत्तमयोगः (श्रीमद्भगवद्गीता-अध्याय15)
उत्तिष्ठत उत्तिष्ठत सुप्तसिंहाः (भवानीभारती)
द्वादश ज्योतिर्लिङ्ग स्तोत्रम्,दकार्गलाध्याय दकलब्धीः(जलशास्त्रम्),
गद्यपाठाः
शिवराजगुणवर्णनम्,तृतीयनेत्रम्
प्राणवोपसना,कौटिल्यअर्थशात्र-रत्नपरीक्षा
पद्यपाठाः
श्रीमद्भगवद्गीता-अध्याय१७ श्रद्धात्रयविभागः,दशावतार स्तोत्र (जयदेवकृताम्)
विश्वगुण दर्शनम् सुभाषितानि-नीतिशतकम्(दैवपद्धति तथाकर्मपद्धति)

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Term /Semester :-5 Class T.Y.B.A (SEC-1C) Subject :Sanskrit G3

Term /Semester :-6 Class T.Y.B.A (SEC-1D) Subject :Sanskrit G3

कविभासरचितप्रतिमानाटकम् अंक-१
कविभासरचितप्रतिमानाटकम् अंक-२
कविभासरचितप्रतिमानाटकम् अंक-३
पद्यपाठाः
कविभासरचितप्रतिमानाटकम् अंक-४
कविभासरचितप्रतिमानाटकम् अंक-५
कविभासरचितप्रतिमानाटकम् अंक - ६,७
गद्यपाठाः
कविभर्तृहरिरचितं नीतिशतकम् श्लोकः-१तः२५
कविभर्तृहरिरचितं नीतिशतकम् श्लोकः-२६तः५०
पद्यपाठाः
कविभर्तृहरिरचितं नीतिशतकम् श्लोकः-५१तः७५
कविभर्तृहरिरचितं नीतिशतकम् श्लोकः-७६तः१००

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**College ,Sangamner**  
**DEPARTMENT OF CHEMISTRY**  
**Program Outcome 2022-2023**

Sr.No.	Program	Program Outcomes
1	B.Sc.	Students have working knowledge of the main area of the chemistry
2	M.Sc.	1.Students have an advance knowledge of chemistry 2.Students establish a sound foundation on which further learning in chemistry can build

**Program Specific Outcome**

Sr.No.	Program	Program Specific Outcomes
1	B.Sc.	1.Students should possess critical thinking and problem solving ability 2. Students should able to perform and u understand the measure concepts theoretical principals and experimental finding in experimental chemistry
2	M.Sc.	1.To aquaria the basic told needed to carry out independent chemical research 2.to become proficient in their specialized area of chemistry and successful complete an advance research projects

**Course Outcomes : Course Offered**

Sr. No.	Course	Semester	Paper Name & Code	Course Outcomes
1	F.Y.B.S c.	Sem -I	CH- 101: Physical Chemistry	1. Chemical Energetics 1. Students will be able to apply thermodynamic principles to physical and chemical process 2. Calculations of enthalpy , Bond energy, Bond dissociation energy , resonance energy 3. Variation of enthalpy with temperature –Kirchoff's equation 4. Third law of thermodynamic and its applications 2. Chemical Equilibrium 1. Relation between Free energy and equilibrium and factors affecting on equilibrium constant. 2. Exergonic and endergonic reaction





				<p>3. Gas equilibrium, equilibrium constant and molecular interpretation of equilibrium constant</p> <p>4. Van't Haff equation and its application</p> <p>3. Ionic equilibria</p> <p>1. Concept to ionization process occurred in acids, bases and pH scale</p> <p>2. Related concepts such as Common ion effect hydrolysis constant, ionic product, solubility product</p> <p>3. Degree of hydrolysis and pH for different salts , buffer solutions</p>
			<b>CH- 102: Organic Chemistry</b>	<p>1. The students are expected to understand the fundamentals, principles, and recent developments in the subject area.</p> <p>2. It is expected to inspire and boost interest of the students towards chemistry as themain subject.</p> <p>3. To familiarize with current and recent developments in Chemistry.</p> <p>4. To create foundation for research and development in Chemistry.</p>
			<b>CH- 103: Chemistry Practical Course I</b>	<p>1. Importance of chemical safety and Lab safety while performing experiments in laboratory</p> <p>2. Determination of thermochemical parameters and related concepts</p> <p>3. Techniques of pH measurements</p> <p>4. Preparation of buffer solutions</p> <p>5. Elemental analysis of organic compounds (non instrumental)</p> <p>6. Chromatographic Techniques for separation of constituents of mixtures.</p>
		<b>Sem – II</b>	<b>CH-201: Inorganic Chemistry</b>	<p>1. Atomic Structure</p> <p>1. Various theories and principles applied to revel atomic structure</p> <p>2. Origin of quantum mechanics and its need to understand structure of hydrogen atom</p> <p>3. Schrodinger equation for hydrogen atom</p> <p>4. Radial and angular part of hydrogenic wave functions</p> <p>5. Significance of quantum numbers</p> <p>6. Shapes of orbitals</p>
			<b>CH- 202: Analytical Chemistry</b>	<p>1. Introduction to Analytical Chemistry</p> <p>i. Analytical Chemistry –branch of chemistry</p> <p>ii. Perspectives of analytical Chemistry</p> <p>iii. analytical problems</p> <p>2. Calculations used in Analytical Chemistry</p>



				<p>i. Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution</p> <p>ii. Relation between molecular formula and empirical formula</p> <p>iii. Stoichiometric calculation</p> <p>iv. Define term mole, millimole, molar concentration, molar equilibrium concentration and Percent Concentration.</p> <p>v. SI units, distinction between mass and weight</p> <p>vi. Units such as parts per million, parts per billion, parts per thousand, solution-dilutant volume ratio, function density and specific gravity of solutions.</p> <p>3 Qualitative Analysis of Organic Compounds Basics of type determination, characteristic tests and classifications, reactions of different functional groups.</p> <p>i. Separation of binary mixtures and analysis</p> <p>ii. Elemental analysis -Detection of nitrogen, sulfur, halogen and phosphorous by Lassaigne's test.</p> <p>iii. Purification techniques for organic compounds.</p> <p>4. Chromatographic Techniques – Paper and Thin layer Chromatography</p> <p>i. Basics of chromatography and types of chromatography</p> <p>ii. Theoretical background for Paper and Thin Layer Chromatography</p> <p>5. pH metry</p> <p>i. pH meter and electrodes for pH measurement</p> <p>ii. Measurement of pH</p> <p>iii. Working of pH meter</p> <p>iv. Applications of pH meter</p>
			<b>CH- 203: Chemistry Practical –II</b>	<p>1. Inorganic Estimations using volumetric analysis</p> <p>2. Synthesis of Inorganic compounds</p> <p>3. Analysis of commercial products</p> <p>4. Purification of organic compounds</p> <p>5. Preparations and mechanism of reactions involved</p>
2	S.Y.B.S c.	SEM – I	<b>CH-301 : Physical and Analytical Chemistry (2 credit, 36 L)</b>	<p>1. Define / Explain concept of kinetics, terms used, rate laws, molecularity, order.</p> <p>2. Explain factors affecting rate of reaction.</p> <p>3. Explain / discuss / derive integrated rate laws, characteristics, expression for half-life and examples of zero order, first order, and second order reactions.</p> <p>4. Determination of order of reaction by integrated rate equation method, graphical method, half-life method and</p>





			<p>differential method.</p> <p>5. Explain / discuss the term energy of activation with the help of energy diagram.</p> <p>6. Explanation for temperature coefficient and effect of temperature on rate constant k.</p> <p>7. Derivation of Arrhenius equation and evaluation of energy of activation graphically.</p> <p>8. Derivations of collision theory and transition state theory of bimolecular reaction and comparison.</p> <p>9. Solve / discuss the problem based applying theory and equations.</p> <p>Define / explain adsorption, classification of given processes into physical and chemical adsorption.</p> <p>Discuss factors influencing <input type="checkbox"/> adsorption, its characteristics, differentiates types as physisorption and Chemisorption</p> <p>Classification of Adsorption <input type="checkbox"/> Isotherms, to derive isotherms.</p> <p>Explanation of adsorption <input type="checkbox"/> results in the light of Langmuir adsorption isotherm, Freundlich's adsorption Isotherm and BET theory.</p> <p>Apply adsorption process to <input type="checkbox"/> real life problem.</p> <p>Solve / discuss problems using theory. <input type="checkbox"/></p> <p>Define, explain and compare meaning of accuracy and precision.</p> <p>Apply the methods of expressing <input type="checkbox"/> the errors in analysis from results.</p> <p>Explain / discuss different <input type="checkbox"/> terms related to errors in quantitative analysis.</p> <p>Apply statistical methods to <input type="checkbox"/> express his / her analytical results in laboratory.</p> <p>Solve problems applying equations <input type="checkbox"/></p> <p>1. Explain / define different terms in volumetric analysis such as units of concentration, indicator, equivalence point, end point, standard solutions, primary and secondary standards, complexing agent, precipitating agent, oxidizing agent, reducing agent, redox indicators, acid base indicators, metallochrome indicators, etc.</p>
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				<ol style="list-style-type: none"> <li>2. Perform calculations involved in volumetric analysis.</li> <li>3. Explain why indicator show colour change and pH range of colour change.</li> <li>4. To prepare standard solution and b. perform standardization of solutions.</li> <li>5. To construct acid – base titration curves and performs choice of indicator for particular titration.</li> <li>6. Explain / discuss acid-base titrations, complexometric titration / precipitation titration / redox titration.</li> <li>7. Apply volumetric methods of analysis to real problem in analytical chemistry / industry.</li> </ol>
			<b>CH-302 : Inorganic and Organic Chemistry</b>	<ol style="list-style-type: none"> <li>1. Define terms related to molecular orbital theory (AO, MO, sigma bond, pi bond, bond order, magnetic property of molecules, etc).</li> <li>2. Explain and apply LCAO principle for the formation of MO's from AO's.</li> <li>3. Explain formation of different types of MO's from AO's.</li> <li>4. Distinguish between atomic and molecular orbitals, bonding, anti-bonding and non-bonding molecular orbitals.</li> <li>5. Draw and explain MO energy level diagrams for homo and hetero diatomic molecules. Explain bond order and magnetic property of molecule.</li> <li>6. Explain formation and stability of molecule on the basis of bond order.</li> <li>7. Apply MOT to explain bonding in diatomic molecules other than explained in syllabus</li> </ol> <ol style="list-style-type: none"> <li>1. Define different terms related to the coordination chemistry (double salt, coordination compounds, coordinate bond, ligand, central metal ion, complex ion, coordination number, magnetic moment, crystal field stabilization energy, types of ligand, chelate effect, etc.)</li> <li>2. Explain Werner's theory of coordination compounds. Differentiate between primary and secondary valency. Correlate coordination number and structure of complex ion.</li> <li>3. Apply IUPAC nomenclature to coordination compound.</li> </ol> <ol style="list-style-type: none"> <li>1. Identify and draw the structures aromatic hydrocarbons from their names or from structure name can be assigned.</li> <li>2. Explain / discuss synthesis of aromatic hydrocarbons.</li> <li>3. Give the mechanism of reactions involved.</li> <li>4. Explain /Discuss important reactions of aromatic hydrocarbon.</li> <li>5. To correlate reagent and reactions.</li> </ol> <ol style="list-style-type: none"> <li>1. Identify and draw the structures alkyl / aryl halides from their names or from structure name can be assigned.</li> </ol>





				<ol style="list-style-type: none"> <li>2. Explain / discuss synthesis of alkyl / aryl halides.</li> <li>3. Write / discuss the mechanism of Nucleophilic Substitution (SN1, SN2 and SNi) reactions.</li> <li>4. Explain /Discuss important reactions of alkyl / aryl halides.</li> <li>5. To correlate reagent and reactions.</li> <li>6. Give synthesis of expected alkyl / aryl halides.</li> <li>1. Identify and draw the structures alcohols / phenols from their names or from structure name can be assigned.</li> <li>2. Able to differentiate between alcohols and phenols</li> <li>3. Explain / discuss synthesis of alcohols / phenols.</li> <li>4. Write / discuss the mechanism of various reactions involved.</li> <li>5. Explain /Discuss important reactions of alcohols / phenols.</li> <li>6. To correlate reagent and reactions of alcohols / phenols</li> <li>7. Give synthesis of expected alcohols / phenols</li> </ol>
			<b>CH-303 : Chemistry Practical - III</b>	<ol style="list-style-type: none"> <li>1. Verify theoretical principles experimentally.</li> <li>2. Interpret the experimental data on the basis of theoretical principles.</li> <li>3. Correlate theory to experiments. Understand/verify theoretical principles by experiment observations; explain practical output / data with the help of theory.</li> <li>4. Understand systematic methods of identification of substance by chemical methods.</li> <li>5. Write balanced equation for the chemical reactions performed in the laboratory.</li> <li>6. Perform organic and inorganic synthesis and is able to follow the progress of the chemical reaction by suitable method (colour change, ppt. formation, TLC).</li> <li>7. Set up the apparatus / prepare the solutions - properly for the designed experiments.</li> <li>8. Perform the quantitative chemical analysis of substances explain principles behind it.</li> <li>9. Systematic working skill in laboratory will be imparted in student.</li> </ol>
		<b>SEM - II</b>	<b>CH-401 : Physical and Analytical Chemistry</b>	<p>system, degree of freedom, one / two component system, phase rule, etc.</p> <p>Explain meaning and Types of <math>\square</math> equilibrium such as true or static, metastable and unstable equilibrium.</p> <p>Discuss meaning of phase, <math>\square</math> component and degree of freedom.</p> <p>Derive of phase rule. <math>\square</math></p>



			<p>Explain of one component system with respect to: Description of the curve, Phase rule relationship and typical features for i) Water system ii) Carbon dioxide system iii) Sulphur system</p> <p>Define various terms, laws, differentiate ideal and non-ideal solutions.</p> <p>Discuss / explain thermodynamic aspects of Ideal solutions-Gibbs free energy change, Volume change, Enthalpy change and entropy change of mixing of Ideal solution.</p> <p>Differentiate between ideal and non-ideal solutions and can apply Raoult's law.</p> <p>Interpretation of i) vapour pressure-composition diagram ii) temperature- composition diagram.</p> <p>Explain distillation of liquid solutions from temperature - composition diagram.</p> <p>Explain / discuss azeotropes, Lever rule, Henry's law and its application.</p> <p>Discuss / explain solubility of partially miscible liquids-systems with upper critical. Solution temperature, lower critical solution temperature and having both UCST and LCST.</p> <p>Explain / discuss concept of distribution of solute amongst pair of immiscible solvents.</p> <p>Derive distribution law and its thermodynamic proof.</p> <p>Apply solvent extraction to separate the components of mixture interest.</p> <p>Solve problem by applying theory.</p> <p>Explain / define different terms in conductometry such as electrolytic conductance, resistance, conductance, Ohm's law, cell constant, specific and equivalent conductance, molar conductance, Kohlrausch's law, etc.</p> <p>Discuss / explain Kohlrausch's law and its Applications, Conductivity Cell, Conductivity Meter, Wheatstone Bridge.</p> <p>Explain / discuss conductometric titrations.</p> <p>Apply conductometric methods of analysis to real</p>
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			<p>problem in analytical laboratory.</p> <p>Solve problems based on theory / equations.</p> <p>Correlate different terms with each other and derive equations for their correlati</p> <p>Explain / define different terms in Colorimetry such as radiant power, transmittance, absorbance, molar, Lamberts Law, Beer's Law, molar absorptivity</p> <p>Discuss / explain / derive Beer's law of absorptivity.</p> <p>Explain construction and working of colorimeter.</p> <p>Apply colorimetric methods of analysis to real problem in analytical laboratory.</p> <p>Solve problems based on theory / equations.</p> <p>Correlate different terms with each other and derive equations for their correlations</p> <p>Explain / define different terms in column chromatography such as stationary phase, mobile phase, elution, adsorption, ion exchange resin, adsorbate, etc.</p> <p>Explain properties of adsorbents, ion exchange resins, etc.</p> <p>Discuss / explain separation of ionic substances using resins.</p> <p>Discuss / explain separation of substances using silica gel / alumina.</p> <p>Apply column chromatographic process for real analysis in analytical laboratory.</p>
		<p><b>CH-402 : Inorganic and Organic Chemistry</b></p>	<p>1. Isomerism in coordination complexes</p> <p>2. Explain different types of isomerism in coordination complexes.</p> <p>1. Apply principles of VBT to explain bonding in coordination compound of different geometries.</p> <p>2. Correlate no of unpaired electrons and orbitals used for bonding.</p> <p>2. Identify / explain / discuss inner and outer orbital complexes.</p> <p>4. Explain / discuss limitation of VBT.</p> <p>1. Explain principle of CFT.</p>



			<p>2. Apply crystal field theory to different type of complexes (Td, Oh, Sq, Pl complexes)</p> <p>3. Explain: i) strong field and weak field ligand approach in Oh complexes ii) Magnetic properties of coordination compounds on the basis of weak and strong ligand field ligand concept. iii) Origin of colour of coordination complex.</p> <p>4. Calculate field stabilization energy and magnetic moment for various complexes.</p> <p>5. To identify Td and Sq, Pl complexes on the basis of magnetic properties / unpaired electrons.</p> <p>6. Explain spectrochemical series, tetragonal distortion / Jahn-Teller effect in Cu(II) Oh complexes only.</p> <p>1. Identify and draw the structures aldehydes and ketones from their names or from structure name can be assigned.</p> <p>2. Explain / discuss synthesis of aldehydes and ketones.</p> <p>3. Write / discuss the mechanism reactions aldehydes and ketones.</p> <p>4. Explain /Discuss important reactions of aldehydes and ketones.</p> <p>5. To correlate reagent and reactions of aldehydes and ketones</p> <p>6. Give synthesis of expected aldehydes and ketones.</p> <p>7. Perform inter conversion of functional groups.</p> <p>1. Identify and draw the structures carboxylic acids and their derivatives from their names or from structure name can be assigned.</p> <p>2. Explain / discuss synthesis of carboxylic acids and their derivatives.</p> <p>3. Write / discuss the mechanism reactions carboxylic acids and their derivatives.</p> <p>4. Explain /Discuss important reactions of carboxylic acids and their derivatives.</p> <p>5. Correlate reagent and reactions of carboxylic acids and their derivatives</p> <p>6. Give synthesis of expected carboxylic acids and their derivatives.</p> <p>7. Perform inter conversion of functional groups. 1.</p> <p>1. Identify and draw the structures amines from their names or from structure name can be assigned.</p> <p>2. Explain / discuss synthesis of carboxylic amines.</p> <p>3. Write / discuss the mechanism reactions carboxylic amines.</p> <p>4. Explain /Discuss important reactions of carboxylic amines.</p> <p>5. To correlate reagent and reactions of carboxylic amines.</p>
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				<p>6. Give synthesis diazonium salt from amines and reactions of diazonium salt.</p> <p>7. Perform inter conversion of functional groups. 1. Draw the structures of different conformations of cyclohexane.</p> <p>2. Define terms such as axial hydrogen, equatorial hydrogen, confirmation, substituted cyclohexane, etc.</p> <p>3. Convert one conformation of cyclohexane to another conformation and should able to identify governing structural changes.</p> <p>4. Explain / discuss stability with respect to potential energy of different conformations of cyclohexane.</p> <p>5. Draw structures of different conformations of methyl / t-butyl monosubstituted cyclohexane (axial, equatorial) and 1, 2 dimethyl cyclohexane.</p> <p>6. Identify cis- and trans-isomers of 1, 2 dimethyl substituted cyclohexane and able to compare their stability.</p>
			<b>CH-403 : Chemistry Practical - IV</b>	<p>1. Verify theoretical principles experimentally</p> <p>2. Interpret the experimental data on the basis of theoretical principles.</p> <p>3. Correlate the theory to the experiments. Understand / verify theoretical principles by experiment or explain practical output with the help of theory.</p> <p>4. Understand systematic methods of identification of substance by chemical methods.</p> <p>5. Write balanced equation for all the chemical reactions performed in the laboratory.</p> <p>6. Perform organic and inorganic synthesis and able to follow the progress of the chemical reaction.</p> <p>7. Set up the apparatus properly for the designed experiments.</p> <p>8. Perform the quantitative chemical analysis of substances and able to explain principles behind it.</p>
<b>3</b>	<b>T.Y.B.S c.</b>	<b>SEM – I</b>	<b>CH-501: Physical Chemistry- I</b>	<p>1. Know historical of development of quantum mechanics in chemistry.</p> <p>2. Understand and explain the differences between classical and quantum mechanics.</p> <p>1. Understand the term additive and constitutive properties.</p> <p>2. Understand the term specific volume, molar volume and molar refraction</p> <p>1. Difference between thermal and photochemical processes.</p> <p>2. photochemical laws: Grothus - Draper law, Stark-Einstein law,</p> <p>3. Quantum yield and reasons for high and low quantum</p>



				yield, 4. factors affecting the quantum yield,
			<b>CH-502: Analytical Chemistry- I</b>	1. Define basic terms in gravimetry Identify important parameters in analytical processes or estimations  Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis.  4. Perform quantitative calculations depending upon equations student has studied in the theory. Furthermore, student should able to solve problems on the basis of theory.  5. Discuss / Describe procedure for different types analyses included in the syllabus
			<b>CH-503: Physical Chemistry Practical - I</b>	To determine the indicator constant of methyl red indicator Titration of a mixture of weak acid and strong acid with strong alkali
			<b>CH-504: Inorganic Chemistry - I</b>	i. To understand about inert and labile complexes and stability of complexes in aqueous solutions ii. Classification of reactions of coordination compounds iii. The basic mechanisms of ligand substitution reactions. iv. Substitution reactions of square planer complexes. v. Tran's effect and applications of Trans effect vi. Stereochemistry of mechanism vii. Gain the knowledge of inorganic reaction mechanisms available in the literature to solve chemical problems.
			<b>CH-505: Industrial Chemistry - I</b>	Dyes - Students should know about i. Dyes: introduction, ii. Dye intermediates, iii. Structural features of a dye; iv. Classification of dyes,





				<p>v. Synthesis, Structures, properties and applications of dyes</p> <p>Pigments: Students should know about</p> <ol style="list-style-type: none"> <li>Introduction,</li> <li>Classification and general properties of pigment</li> <li>Production processes of zinc oxide and iron oxide</li> </ol>
			<p><b>CH-507: Organic Chemistry - I</b></p>	<p>Chapter 1 Polynuclear and Heteronuclear Aromatic Compounds: After studying the polynuclear and heteronuclear aromatic compounds, students will be able to</p> <ol style="list-style-type: none"> <li>Define and classify polynuclear and heteronuclear aromatic hydrocarbons.</li> <li>Write the structure, synthesis of polynuclear and heteronuclear aromatic hydrocarbons.</li> <li>Understand the reactions and mechanisms</li> <li>Explain the reactivity of polynuclear and heteronuclear aromatic hydrocarbons.</li> <li>Describe the synthesis of chemical reactions of polynuclear and heteronuclear aromatic Hydrocarbons.</li> </ol> <p>Chapter 2 Active Methylene Compounds : Students should be able to understand</p> <ol style="list-style-type: none"> <li>Meaning of active methylene group</li> <li>Reactivity of methylene group,</li> <li>Synthetic applications ethyl acetoacetate and malonic ester</li> <li>To predict product with panning or supply the reagent/s for these reactions</li> </ol> <p>Chapter 3 Molecular Rearrangements Students will study</p> <ol style="list-style-type: none"> <li>What is rearrangement reaction?</li> <li>Different types of intermediate in rearrangement reactions?</li> <li>To write the mechanism of some named rearrangement reactions and their applications</li> </ol> <p>Chapter 4 Elimination Reactions: Students should be familiar with</p> <ol style="list-style-type: none"> <li>1,1 and 1,2 elimination</li> <li>E1, E2 and E1cB mechanism with evidences of these reactions</li> <li>Understand stereochemistry by using models and learn reactivity of geometrical isomers</li> <li>Orientation and reactivity in E1 and E2 elimination</li> <li>Hoffmann and Saytzeff's Orientation</li> <li>Effect of factors on the rate elimination reactions</li> </ol>



			<p><b>CH-508: Chemistry of Biomolecule</b></p>	<p>The student will understanding of Cell types, Difference between a bacterial cell, Plant cell and animal cell. Biological composition and organization of cell membrane, structure and function of various cell organelles of plant and animal cell. Concepts of biomolecules, Bonds that link monomeric units to form macromolecules</p> <p>The student will understand the types of carbohydrates and their biochemical significance in living organisms, structure of carbohydrates and reactions of carbohydrates with Glucose as example. Properties of carbohydrates.</p> <p>The student needs to know the types of lipids with examples, structure of lipids, properties of lipids</p> <p>The student will understand the structure and types of amino acids. Reactions of amino acids. Properties of amino acids. Peptide bond formation. Types of proteins. Structural features in proteins. Effect of pH on structure of amino acid, Determination of N and C terminus of peptide chain.</p> <p>The student know the classes of enzymes with subclasses and examples. Enzyme specificity, Equations of enzyme kinetics <math>K_m</math> and its significance, features of various types of enzyme inhibitions, industrial applications of enzymes. Basic concepts of Endocrinology. Types of Endocrine glands and their hormones. Biochemical nature of hormones. Mechanism of action of lipophilic and hydrophilic hormones.</p>
			<p><b>CH-509: Organic Chemistry Practical-I</b></p>	<p>A) Separation of Binary Mixtures and Qualitative Analysis The students will be able to</p> <ol style="list-style-type: none"> <li>1. Perform the quantitative chemical analysis of binary mixture, explain principles behind it.</li> <li>2. Separate, purify and analyse binary water insoluble mixture.</li> <li>3. Separate, purify and analyse binary water-soluble mixture.</li> <li>4. Understand the techniques involving drying and recrystallization by various method.</li> <li>5. Familiarize the test involving identification of special elements.</li> <li>6. Learn the confirmatory test for various functional groups.</li> </ol> <p>B) Preparations The students will be able to</p>





			<ol style="list-style-type: none"> <li>1. Systematic working skill in laboratory will be imparted in student.</li> <li>2. Learn the basic principles of green and sustainable chemistry.</li> <li>3. Synthesis of various organic compounds through greener approach.</li> <li>4. Do and understand stoichiometric calculations and relate them to green process metrics.</li> <li>5. Learn alternative solvent media and energy sources for chemical processes.</li> <li>6. Learn the preparations of derivative various functional groups aspects of electrical experiments.</li> <li>7. Understand the techniques involving drying and recrystallization by various method</li> <li>8. Expertise the various techniques of preparation and analysis of organic substances</li> <li>9. Understand principle of Thin Layer Chromatographic techniques.</li> <li>10. Understand the purification technique used in organic chemistry.</li> </ol>
		<b>CH--510 (B) : Polymer Chemistry</b>	<p>Course Outcome: The students are expected to learn the following aspects of Polymer Chemistry:</p> <ol style="list-style-type: none"> <li>1) History of polymers.</li> <li>2) Difference between simple compounds and polymer.</li> <li>3) Names of polymers.</li> <li>4) Various ways of nomenclature.</li> <li>5) Difference between natural, synthetic, organic and inorganic polymers.</li> <li>6) Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight.</li> <li>7) Mechanisms of polymerization.</li> <li>8) Polymerization techniques.</li> <li>9) Uses &amp; properties of polymers.</li> <li>10) Role of polymer industry in the economy.</li> <li>11) Advantages of polymers.</li> </ol> <p>Polymer</p>
		<b>CH-511 (A) : Environmen tal Chemistry</b>	<p>Aims and Objectives:- Students should know:</p> <ol style="list-style-type: none"> <li>i. Water resources</li> <li>ii. Hydrological Cycle</li> <li>iii. Organic and inorganic pollutants</li> <li>iv. Water quality parameters</li> </ol>



			<b>CH-601 :Physical Chemistry- II</b>	<ol style="list-style-type: none"> <li>1. Distinguish between crystalline and amorphous solids / anisotropic and isotropic solids.</li> <li>2. Explain the term crystallography and laws of crystallography.</li> <li>3. Weiss and Millers Indices, determination of Miller Indices</li> <li>4. Bravais lattices, space groups, seven crystal systems and fourteen Bravais lattices;</li> <li>5. Cubic lattice and types of cubic lattice</li> <li>6. Distance between the planes for 100, 110 and 111 for cubic lattice</li> <li>7. Methods of Crystal structure analysis: The Laue method and Braggs method: Derivation of Bragg's equation,</li> <li>8. Determination of crystal structure of NaCl by Bragg's method,</li> <li>9. X ray analysis of NaCl crystal system and Calculation of <math>d</math> and <math>\lambda</math> for a crystal system,</li> <li>10. Problems</li> </ol>
			<b>CH-602 : Physical Chemistry- III</b>	<ol style="list-style-type: none"> <li>1. Factors affecting on solid state reactions,</li> <li>2. Rate laws for reactions in solid state</li> <li>3. Applying rate laws for solid state reactions</li> <li>4. Results of kinetics studies</li> </ol>
			<b>CH-604 : Inorganic Chemistry - II</b>	<ol style="list-style-type: none"> <li>i. To understand M-C bond and to define organometallic compounds</li> <li>ii. To define organometallic chemistry</li> <li>iii. To understand the multiple bonding due to CO ligand.</li> <li>iv. To know methods of synthesis of binary metal carbonyls.</li> <li>v. To understand the structure and bonding using valence electron count (18 ele. rule)</li> <li>vi. To understand the catalytic properties of binary metal carbonyls.</li> <li>vii. To understand the uses of organometallic compounds in the homogenous catalysis.</li> <li>viii. Chemistry of ferrocene</li> </ol>





			<b>CH-605: Inorganic Chemistry - III</b>	<ol style="list-style-type: none"> <li>1. Student will learn the concept of acid base and their theories.</li> <li>2. They will also come to know different properties of acids and bases.</li> <li>3. Strength of various types acids.</li> <li>4. How acid and base strengths get affected in non-aqueous solvents.</li> </ol>
			<b>CH-607: Organic Chemistry- II</b>	<p>Students will learn the principle of mass spectroscopy, its instrumentation and nature of mass spectrum.</p> <ol style="list-style-type: none"> <li>2. Students will understand the principle of UV spectroscopy and the nature of UV spectrum. They will learn types of electronic excitations.</li> <li>3. Students will be able to calculate maximum wavelength for any conjugated system. And from the value of <math>\lambda</math>-max they will be able to find out the extent of conjugation in the compound.</li> <li>4. Students will understand the principle of IR spectroscopy, types of vibrations and the nature of IR spectrum.</li> <li>5. From the IR spectrum, they will be able to find out IR frequencies of different functional groups. And thus, they will be able to find functional groups present in the compound.</li> <li>6. Students will understand the principle of NMR spectroscopy and will understand various terms used in NMR spectroscopy. They will learn measurement of chemical shift and coupling constants.</li> <li>7. Students will be able to interpret the NMR data and they will be able to use it for determination of structure of organic compounds.</li> <li>8. Students will be able to determine the structure of simple organic compounds on the basis of spectral data such as <math>\lambda</math> max values, IR frequencies, chemical shift (<math>\delta</math> values).</li> </ol>
			<b>CH-608: Organic Chemistry- III</b>	<p>:Advance medicinal chemistry To introduced the students to the basic concept to make students aware of the need of protection</p>
			<b>CH-609: Organic Chemistry Practical-II</b>	<ol style="list-style-type: none"> <li>1. Explain "fingerprint region" of an infrared spectrum can used in the identification of an unknown compound.</li> <li>2. Identify the functional group or groups present in a compound.</li> <li>3. Identify the broad regions of the infrared spectrum in which occur absorptions caused by N-H, C-H, and O-H, C≡C and C≡N, C=O, C=N, and C=C.</li> </ol>



				<p>4. Understand use NMR spectra to determine the structures of compounds.</p> <p>5. Interpret integration of NMR spectra</p> <p>6. Calculate coupling constants from <math>^1\text{H}</math> NMR spectra.</p> <p>7. Interpret elemental analysis technique</p>
			<p><b>CH-610 (A)</b>  <b>: Chemistry of Soil and Agrochemicals</b></p>	<p>1) Understood various components of soil and soil properties and their impact on plant growth.</p> <p>2) Understood the classification of the soil.</p> <p>3) Explores the problems and potentials of soil and decide the most appropriate treatment for land use.</p> <p>4) Understood the Reclamation and management of soil physical and chemical constraints.</p> <p>5) Useful in making decisions on nutrient dose, choice of fertilizers and method of application etc. practiced in crop production.</p> <p>6) Got experience on advanced analytical and instrumentation methods in the estimation of soil.</p> <p>7) Understood various Nutrient management concepts and Nutrient use efficiencies of major and micronutrients and enhancement techniques.</p> <p>8) Proper understanding of chemistry of pesticides will be inculcated among the students.</p> <p>9) Imparts knowledge on different pesticides, their nature and, mode of action and their fate in soil so as to monitor their effect on the environment.</p>





			<p><b>CH-611(A): Analytical Chemistry- II</b></p>	<p>1. Define basic terms in solvent extraction, basics of chromatography, HPLC, GC, and AAS and AES. Some important terms are: solvent extraction, aqueous and organic phase, distribution ratio and coefficient, solute remain unextracted, percent extraction, ion association complex, theoretical plate, HETP, retention time, selectivity, resolution, stationary phase, normal and reverse phase, ion exchange, column efficiency, carrier gas, split and spitless injection, packed column, tubular column, atomic absorption and emission spectroscopy, electronic excitation in atoms, nebulization, atomization, reduction of metal ions in flame, absorbance by atoms in flame, flame atomizers, furnace atomizers, interference in AES and FES, HCL, hydride generator, etc. 2. Identify important parameters in analytical processes or estimations. Example: minimum analyte concentration in particular method, reagent concentration for particular analysis, reagent for particular analysis, reaction condition to convert analyte into measurable form, wavelength selection in HPLC with spectrophotometric and fluorometric detector, solvent or carrier gas in HPLC and GC, choice method for the sample preparation in atomic spectroscopic methods, choice of filter and HCL in atomic spectroscopic methods, etc.</p> <p>3. Explain different principles involved in the analyses using solvent extraction, basics of instrumental chromatography, HPLC, GC, and atomic spectroscopic techniques.</p> <p>4. Perform quantitative calculations depending upon equations students has studied in the theory. Furthermore, student should able to solve problems on the basis of theory.</p> <p>5. Discuss / Describe procedure for different types analyses included in the syllabus.</p> <p>6. Select particular method of analysis if analyte sample is given to him.</p> <p>7. Differentiate / distinguish / compare among the different analytical terms, process and analytical methods.</p> <p>8. Demonstrate / explain theoretical principles with help of practical.</p> <p>9. Design analytical procedure for given sample.</p> <p>10. Apply whatever theoretical principles he has studied in theory during practical in laboratory.</p>
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4	M.Sc I Organic Chemistry	Sem-I	CHP-110 : Fundamental Physical Chemistry	<p>1. Ability to assess and interpret information respond &amp; adopt to changing situations, make complex decisions, solve problems and evaluate action</p> <p>2. To demonstrate awareness &amp; understanding of the skills necessary to leave and work in diverse world</p> <p>3. To demonstrate and awareness and understanding of the ethical standards of their academics discipline and profession</p> <p>4. To perform and understand chemical research</p> <p>1. To provide a course of future study in chemistry and allowed subject in aspects of physical chemistry</p> <p>2. An introduction to contamination of energy and degeneracy</p> <p>3. to provide mathematical skill</p> <p>CO1: Students should be able to remember the concepts of thermodynamic parameters, quantum mechanical postulates, rate laws of chemical reactions and computation of macroscopic properties of matter.</p> <p>CO2: Students should understand the basics like state function and path function, Schrodinger wave equation, kinetics of fast reactions, partition functions and ensembles.</p> <p>CO3: Students should be able to apply the knowledge of various quantum mechanical methods to determine the different molecular properties and built the concept of the relation between thermodynamics and quantum mechanics.</p> <p>CO4: Students should be able to analyze the rates of various chemical reactions both theoretically and experimentally and also observe the effect of catalyst and determine energies of activation of such reactions.</p> <p>CO5: Students should be able to evaluate variation of thermodynamic parameters for multi component systems and their variation with other extensive properties, Schrodinger wave equation and its application to hydrogen and hydrogen like atoms.</p>
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			<p><b>CHI-130: Molecular Symmetry And Bioinorganic Chemistry Sec-I</b></p> <p><b>Sec-II</b></p> <p><b>CHO-150: Basic Organic Chemistry</b></p>	<ol style="list-style-type: none"> <li>1. Student should visualize/ imagine molecules in 3 dimensions.</li> <li>2. To understand the concept of symmetry and able to pass various symmetry elements through the molecule.</li> <li>3. Understand the concept and point group and apply it to molecules.</li> <li>5. To apply the concept of point group for determining optical activity and dipole moment.</li> <li>6. Student should understand the importance of Orthogonality Theorem.</li> <li>7. They should able to learn the rules for constructing character table.</li> <li>8. Using reduction formulae should be able to find out the possible type of hybridization.</li> <li>9. Student should know the concept of SALC.</li> <li>10. Student able to find out character for reducible representation.</li> <li>11. To know about projection operator.</li> <li>12. Apply projection operator to find out the normalized wave function for atomic orbital.</li> <li>13. Student should correlate the application of symmetry to spectroscopy.</li> <li>14. Students able to find out the possible modes of vibration.</li> <li>15. From the previous knowledge of symmetry student must able to find out which mode are IR active.</li> </ol> <p>, 1. Student should understand the detail chemistry of S and P block elements w.r.t. their compounds, their reactions and applications.</p> <ol style="list-style-type: none"> <li>2. To learn the advance chemistry of boranes, fullerene, zeolites, polymers etc.</li> <li>3. Organometallic chemistry of some important elements from the main groups and their applications</li> </ol> <ol style="list-style-type: none"> <li>1. They will understand the criteria for aromaticity in nonbenzenoid molecules and other advanced polycyclic aromatics</li> <li>2. To understand some fundamental aspects of organic chemistry, to learn the concept aromaticity, to understand the various types of aromaticity</li> <li>3. To study heterocyclic compound containing one and two</li> </ol>
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			<p><b>CHG-190: Laboratory Safety</b></p> <p><b>CHP-210: Fundamenta l physical chemistry</b></p>	<p>hetero atoms with their structure, synthesis and reactions.</p> <p>4. To know stereochemistry of organic compounds; able to do interconversion of Fischer to Newmann, Newmann to Sawhorse and vice versa, Able to assign R and S to given molecules; Understand stereoselective and stereospecific reactions; acquire knowledge on topicity.</p> <p>5. To study structure, formation, stability and related name reaction of intermediates like Carbocation, Carbanion, Free Radical, Carbenes and nitrenes; Recognize neighboring group participation</p> <p>6. To study rearrangement reaction with specific mechanism and migratory aptitude of different groups.</p> <p>7. To study Ylides and their reaction.</p> <p>8. To understands the basis of redox reaction; acquire knowledge about the reagents which causes selective oxidation / reduction in various compounds; learn the basic mechanism of oxidation / reduction in organic compounds.</p> <p>1) Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.</p> <p>2) Students will be able to function as a member of an interdisciplinary problem solving team.</p> <p>3) To impart the students thorough idea in the chemistry of carbohydrates, amino acids, proteins and nucleic acids etc.</p> <p>4) Be able to describe the chemical basis for replication, transcription, translation and how each of these central processes can be expanded to include new chemical matter.</p> <p>5) Develop skills to critically read the literature and effectively communicate research in a peer setting.</p> <p>CO1: Students will grasp the concept of reaction rate and its significance in Chemical Kinetics.</p> <p>CO2: Students will learn how to use experimental data to deduce rate laws and rate constants.</p> <p>CO3: Students will be familiar with the fundamental principles of colorimetry and spectrophotometry including Beer's law, Lambert- Beer's law and the relationship between absorbance and concentration.</p> <p>CO4: Students will be able to operate the instruments like spectrophotometer and colorimeter.</p> <p>CO5: Students will be able to determine the densities of the solutions and can calculate molar volumes</p>
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		<p><b>CHI-230</b> <b>:Coordination chemistry &amp; chemistry of P-block elements</b></p>	<p>CO-1: Define metalloproteins, metallo-enzymes, photosynthesis, HSAB concept, nucleic acids, metalloregulation, Biopolymer effects and acetylcholine receptor.</p> <p>CO-2 : Explain chelate effect and Irving-William series, pKa values of coordinated ligands, Tuning of redox potential, and Reactions of coordinated ligands.</p> <p>CO-3: Describe Fe-S clusters, model compounds and spontaneous self-assembly, metals in medicine, blue copper proteins, and cytochromes, and Na/K pumps.</p> <p>CO-4: Express nitrogen fixation, detoxification of mercury, structure of RNA, cis-platin, amino acids, siderophore, and calmoduline zinc finger proteins.</p> <p>CO-5: Distinguish between hemoglobin and myoglobin, transferrin and ferritin, photosystem-I and photosystem-II.</p> <p>CO-6: Decide role of metals in biological system, medicine, blood coagulation, oxygen storage and transport, photosynthesis and uptake and transport of</p>
		<p><b>CHO-250:</b> <b>Synthetic organic chemistry &amp; spectroscopy</b></p>	<ol style="list-style-type: none"> <li>1. Student should able to find out the no of microstates and meaningful term symbols, construction of microstate table for various configuration</li> <li>2. Hund's rules for arranging the terms according to energy.</li> <li>3. Student should understand interelectronic repulsion.</li> <li>4. Student should know the concept of weak and strong ligand field.</li> <li>5. Student able to find out splitting of the free ion terms in weak ligand field and strong ligand field.</li> <li>6. To draw correlations diagram for various configurations in Td and Oh ligand field.</li> <li>7. Student should know basic instrumentation and selection rules and relaxation in rules.</li> <li>8. Students should know basic d-d transition, d-p mixing, charge transfer spectra</li> <li>9. Interpretation of electronic spectra for spin allowed oh and td complexes using Orgel diagram.</li> <li>10. Understand the concept of spectro chemical series and Nephelauxetic series.</li> <li>11. Should able to solve numerical based on crystal field parameters.</li> <li>12. Understand the various terms involved in magnetochemistry.</li> </ol>



			<p><b>CHG-290: Basic Biochemistry</b></p>	<p>13. Various phenomenon of magnetism and their temperature dependence.  14. Various experimental methods to find out magnetic moment.  15. Understand the various Quenching of orbital angular momentum.</p> <p>1. MOT and will be able to extend this in predicting reaction mechanism and stereochemistry of electrocyclic reactions.  2. The concepts in free radical reactions, mechanism and the stereo chemical outcomes.  3. The basic principle of spectroscopic methods and their applications in structure elucidation of organic compounds using given spectroscopic data or spectra.  1) Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.  2) Students will be able to function as a member of an interdisciplinary problem solving team.  3) To impart the students thorough idea in the chemistry of carbohydrates, amino acids, proteins and nucleic acids etc.  4) Be able to describe the chemical basis for replication, transcription, translation and how each of these central processes can be expanded to include new chemical matter.  5) Develop skills to critically read the literature and effectively communicate research in a peer setting.  6) <b>Describe the importance of chemical biology research and interdisciplinary work.</b></p>
			<p><b>CHO-350: To define the structure foundation of heterocyclic</b></p>	<p>1. Understand the term additive and constitutive properties.  2. Understand the term specific volume, molar volume and molar refraction.  3. Understand the meaning of electrical polarization of molecule, induced and orientation polarization.  4. Dipole moment and its experimental determination by temperature variation method.  5. Electromagnetic spectrum, Nature of wave and its characteristics such as wavelength, wave number, frequency and velocity, Energy level diagram,  6. Classification of molecules on the basis of moment of</p>





				<p>Inertia,</p> <p>7. Rotational spectra of rigid diatomic molecules, selection rules, nature of spectral lines.</p> <p>8. Simple Harmonic oscillator model, Born-Oppenheimer approximation. Vibrational spectra of diatomic molecules selection rules, nature of spectral lines.</p> <p>9. Explain the difference between Rayleigh, Stokes and anti-Stokes lines in a Raman spectrum.</p> <p>10. Justify the difference in intensity between Stokes and anti-Stokes lines.</p> <p>11. Draw the Stokes and anti-Stokes lines in a Raman spectrum</p> <p>12. Raman spectra: Concept of polarizability,</p> <p>13. Pure rotational Raman spectra of diatomic molecules, Energy Expression, Selection rule, Rotational energy level diagram, Rotational Raman spectrum and Problems</p> <p>1 Structure Determination of Organic Compounds by Spectroscopic Method</p> <p>2. NMR in Stereochemistry Determination: Homotopic, enantiotopic and diastereotopic protons, Chemical and Magnetic equivalence</p> <p>3. Principle, ionization methods like EI, CI, ES, MALDI and FAB-Fragmentation of typical organic compounds, stability of fragments, Rearrangements</p> <p>4. Determination of the elemental composition, Isotopic Abundance in structure establishment; Analysis Biomolecule: Proteins and Peptides, Oligonucleotides and Oligosaccharides</p>
			<p><b>CHO-351: Spectroscopy</b></p>	
			<p><b>CHD-352: Drug Developments And Discovery</b></p>	<p>1. Protection and de-protection of functional group in organic synthesis</p> <p>2. Introduction of sugars, structures of monosaccharides, triose, tetrose, pentose, hexose, D/L forms of aldoses and ketoses .</p> <p>3. glycosyl donor acceptor concept, general methods for glycosyl bond formation: Glycosyl halides, Trichloroacetimides, Glycals and Glycal derivatives,</p> <p>4. Effect of protecting groups on glycosylation stereoselectivity and coupling efficiency, Intramolecular glycosylation, Total synthesis of natural products</p>



			<p><b>CHO-353</b> <b>:Synthetic Method in organic Chemistry :</b></p> <p><b>CHO-450:Advanced medicinal chemistry</b></p> <p><b>CHO-451: Principal and application in drug Desine</b></p> <p><b>452(A): Concepts and Applications of Medicinal Chemistry</b></p>	<p>1.Chemistry of Natural Products 2. Understanding and planning of total synthesis while maintaining the stereochemism</p> <p>1. Transition metal complexes in organic synthesis; Pd, Ni, Ru, Fe, Ir and Cu only (C-C, C-N, C-O bond formation reactions with catalytic cycle, ligand and % mole concepts) 2. C=C formation reactions: Wittig, Horner-Wordworth-Emmons, Shapiro, Bamford-Stevens, McMurry, Julia-Lythgoe and Peterson olefination reactions. [ 3. Multi-component reactions: Ugi, Passerini, Biginelli and Mannich reaction 4. Ring formation reactions: Pausan-Khand, Bergman and Nazarov cyclization 5. Click chemistry: criterion for click reaction, Sharpless azides cycloadditions. Click reactions in synthesis of bioconjugates</p> <p>1. Introduction to Peptides and proteins, Proteins as biological catalyst Nucleic acids, Metabolism, Chemistry of 2.cofactors/coenzymes, Chemistry of TPP, PLP, Folic 3.Introduction to medicinal Chemistry. History, drug targets, Drug discovery, design and development, Case Study: Design of Oxamniquine. 4. Pharmacokinetics and Pharmacodynamics of drug: Drug absorption, distribution, metabolism, elimination and toxicity, drug metabolism, biotransformation</p> <p>1. Understand and employ concept of type determination and separation 2. Meticulously record physical constants 3. Perform micro scale chemical elemental analysis 4. Perform qualitative estimation of functional groups 5. Recrystallize /distill the separated compounds 6. Extend these skills to organic synthesis</p>
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			<p><b>CHO-453: Practical-III: Section-I: Ternary Mixture Separation</b></p> <p><b>Section-II: Carbohydrates Synthesis and Isolation Natural Products</b></p> <p><b>CHD-360: Advanced Analytical Metho</b></p>	<p>1. Students should be able to collect a reasonable quantities natural products to do the characterization (Physical Constant, solubility ,2. Elemental analysis functional group test etc ) and should also form the appropriate derivative. They are encouraged to study novel medicinal plants from their local area.</p> <p>1. Understand the principle, working and application of Nuclear magnetic resonance spectroscopy. 2. Understand the use of coupling constant values in structure determination. 3. Understand the principle, working and application of Mass spectrometry. 4. Understand the structure elucidation using combined spectroscopic data.</p> <p>1. Student should understand the various systems of medicines. 2. To understand concept of drug and different sources of drugs. 3. Student should able to learn lead discovery and pharmacophore identification. 4. To know about bioassays and toxicological evaluation of new drugs. 5. Student should understand the pre-clinical testing and clinical trials. 6. Student should able to understand the concept of Patents and intellectual property rights. 7. To know about Pharmacokinetics and Pharmacodynamics of drug action. 8. Student should able to understand the different dosageforms of drug</p> <p>1. Understand the stereochemistry, reactivity and conformational effects of six membered rings. 2. Understand the stereochemistry, shapes of rings other than six membered rings.</p>
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				<p>3. Understand the role various resolution methods, stereoselective synthesis and asymmetric synthesis.</p> <p>4. Understand the stereochemistry of polymer cha</p>
			<p><b>CHD-361: Drug Discovery and Developmen t</b></p>	<p>1. Understand recent trends in drug development</p> <p>2. Learn various biological databases and their applications</p> <p>3. Learn applications of bioinformatics and chemoinformatics</p> <p>4. Learn applications of biostatistics</p>
			<p><b>CHD-362: Stereochemi cal Principles and Applications</b></p>	<p>1. Understand recent trends in drug development</p> <p>2. Learn various biological databases and their applications</p> <p>3. Learn applications of bioinformatics and chemoinformatics</p> <p><b>4. Learn applications of biostatistics</b></p>
			<p><b>CHD-363(B) : Section-I : Immunology and Microbiolog y.</b></p>	<p>1. Understand aspects of entrepreneurship development</p> <p>2. Innovation and creativity</p> <p>3. Development of an idea in marketing and finance</p> <p>4. Entrepreneurship success and failure</p>
			<p><b>Section-II :Bioinforma tics, Biostatistics in Drug Discovery</b></p>	<p>1. Understand different name reactions</p> <p>2. Learn monitoring of reactions</p> <p>3. Be able to purify and characterize the reaction products</p>





			<p><b>Section-III: Entrepreneurship Development</b></p> <p><b>CHD – 364: Practical-I: Two Preparation</b></p>	<ol style="list-style-type: none"> <li>1. Understand development of various antibiotics.</li> <li>2. Understand mode of actions of different antibiotics.</li> <li>3. Study pharmacokinetics and pharmacodynamics of antibiotics</li> <li>4. Understand the selective toxicity and side effects of various antibiotics.</li> <li>5. Will understand diseases caused by various pathogens and their treatment.</li> <li>6. Will biochemical basis of cancer and different approaches to treat cancer.</li> <li>7. Will study functioning of systems like CNS, CVS, Gastrointestinal system and endocrine system, coordination among these, systemic diseases and their treatment</li> </ol> <ol style="list-style-type: none"> <li>1. Student should understand the various types of receptors and its superfamilies.</li> <li>2. To understand concept of Receptor theories.</li> <li>3. Student should able to understand the Receptors and metabolic disorders important in drug design.</li> <li>4. To know about signal transduction mechanism of various receptors.</li> <li>5. Student should understand the physicochemical principles of Drug action.</li> <li>6. Student should able to understand the concept of Quantitative description of physicochemical parameters and their calculation.</li> <li>7. To know about Pharmacokinetics and Pharmacodynamics of drug action.</li> <li>8. Student should able to understand the different dosage forms of drugs.</li> <li>9. To understand concept of Design of Drugs based on pharmacokinetics.</li> <li>10. Student should understand the concept of Pro-drug design strategy.</li> <li>11. Student should know the concept of molecular biology.</li> <li>12. To know about Computers Aided Drug design.</li> <li>13. To know about Ligand based drug design and Receptor based drug design</li> </ol>
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			<p><b>CHD-460: Advanced Medicinal Chemistry</b></p> <ol style="list-style-type: none"> <li>1) Concept of supramolecular chemistry</li> <li>2) Application of supramolecular chemistry in drug synthesis</li> <li>3) Concept of green chemistry, various green synthetic strategies</li> <li>4) Use of microwave and ultrasound techniques in synthetic chemistry</li> </ol>
		<p><b>CHD-461:Drug Desin CHD-462 (B): Supramolec ular, Green Chemistry and Forensic Sec-I Sec-II CHD- 463 Section-III: Ternary Mixture Separations</b></p>	<ol style="list-style-type: none"> <li>1. Identification of Type of Drug</li> <li>2. Expertise in handling UV, IR, GC and HPLC</li> <li>3. Interpretation of data and comparative study with literature</li> <li>4. Crime investigation of drug abuse</li> <li>5. Methods of development of fingerprint</li> <li>6. Role of Fingerprinting in investigation</li> </ol> <ol style="list-style-type: none"> <li>1. Determine the type</li> <li>2. Separation of mixture using ether</li> <li>3. Microscale workup</li> </ol>
		<p><b>CHD – 464, Practical II: Synthesis of Heterocycles and Drug Molecules</b></p>	<ol style="list-style-type: none"> <li>1. Learn different syntheses of heterocycles</li> <li>2. Use of various synthetic strategies in drug synthesis</li> </ol>





**Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution**

PG History in the College is a credit system on the lines of CBCS for students. The university has 50% evaluation and 50% examination is under the College. Under this, innovation in the students is encouraged by the promotion of more marks or student development. Grade points can be given from their valuation. It is also 80-20 marks pattern pattern for UG students. Of these, 80 marks are examinations in the university and 20 marks are under examination in the college for which the college takes the first session of 60 marks. The mark is converted to 20 marks. This way students paper fixes are improved.

Program Name	Number of students appeared in the final year examination	Number of students passed in final year examination
T.Y. BSc.	2018-2019	54
	2019-2020	50
	2020-2021	44
	2021-2022	42
	2022-2023	56
M.Sc. ( Drug & Organic)	2018-2019	13
	2019-2020	40
	2020-2021	30
	2021-2022	40
	2022-2023	40



Sr. No.	Class	No. of Student admitted from the Reserved Category					
		SC	ST	OBC	GEN	Other	Total
1	F.Y.BSc.	07	07	62	52	18	139
2	M.Sc. - I(Organic Chemistry)	01	00	13	06	03	21
3	M.Sc. -I(Drug Chemistry)	00	01	09	01	01	12
4	M.Sc. -I (Analytical Chemistry)	00	02	13	03	04	22



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**S.B.V.P.Samaj's,  
S. M. B. S. THORAT COLLEGE OF ARTS, SCIENCE & COMMERCE, SANGAMNER,  
DIST-AHMEDNAGAR.  
DEPARTMENT OF HISTORY**

**Programme and course outcomes of the programme offered to the instruction**

**UG & PG**

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.A.	I	Discipline Specific Elective -1	Early India: From Prehistory to the Age of the Mauryas	<p>1.The history of Early India is a crucial part of Indian history.</p> <p>2. It is a base for understanding the entire Indian history. The course is aimed at helping the student to understand the history of early India from the prehistoric times to the age of the Mauryas.</p> <p>3.Itattempts to highlight the factors and forces behind the rise, growth and spread of civilization and culture of India along with the dynastic history.</p> <p>4.It also attempts to help the students to understand the contribution of Early Indians to polity, art, literature, philosophy, religion and science and technology.</p> <p>5. It also aims to foster the spirit of enquiry among the students by studying the major developments in early Indian history.</p>
F.Y.B.A.	II	Discipline Specific Elective -2	Early India: Post Mauryan Age to the Rashtrakutas	<p>1The history of India after the Mauryas is very important to understand the developments in early India after the Mauryas, which finally led to the transition to medieval India. The course is aimed at introducing the students to the developments in different parts of India through a brief study of regional kingdoms</p>



				<p>up to the tenth century C.E.</p> <p>2. It attempts to highlight the consequences of the foreign invasions, particularly on the polity, economy, society and art and architecture. The attempt is also to instill the spirit of enquiry among the students. Agriculture types and pattern.</p>
S.Y.B.A.	III	Core Courses(CC)	<p>CC-1</p> <p>History of the Marathas: (1630-1707)</p>	<ol style="list-style-type: none"> <li>1. Student will develop the ability to analyse sources for Maratha History.</li> <li>2. Student will learn significance of regional history and political foundation of the region.</li> <li>3. It will enhance their perception of 17th century Maharashtra and India in context of Maratha history.</li> <li>4. Appreciate the skills of leadership and the administrative system of the Marathas.</li> </ol>
	III	Discipline Specific Elective Course (DSE-1A)	<p>Medieval India - Sultanate Period</p>	<ol style="list-style-type: none"> <li>1. Provides examples of sources used to study various periods in history.</li> <li>2. Relates key historical developments during medieval period occurring in one place with another.</li> <li>3. Analyses socio - political and economic changes during medieval period</li> <li>4. Estimate the foreign invasion and the achievement of rulers</li> </ol>
		Discipline Specific Elective Courses (DSE)-2	<p>Glimpses of the Modern World - Part I</p>	<ol style="list-style-type: none"> <li>1. It will enable students to develop the overall understanding of the Modern World.</li> <li>2. The students will get acquainted with the Renaissance, major political, socio-religious and economic</li> </ol>



				<p>developments during the Modern World.</p> <p>3. It will enhance their perception of the history of the Modern World.</p> <p>4. It will enable students to understand the significance of the intellectual, economic, political developments in the Modern World.</p>
		Skill Enhancement Course -2A	Tourism Management	<p>1. Students will get an overall understanding of the process of Tourism Management.</p> <p>2. They will learn to work in the Tourism Management with great potential.</p> <p>3. They will be able to seek self-employment by starting their own tourism related business.</p>
	IV	Core Course -2C	History of the Marathas: (1707-1818)	<p>1. Students will be able to analyze the Marathas policy of expansionism and its consequences.</p> <p>2. They will understand the role played by the Marathas in the 18th century India.</p> <p>3. They will be acquainted with the art of diplomacy in the Deccan region.</p> <p>4. It will help to enrich the knowledge of the administrative skills and profundity of diplomacy.</p>
		Discipline Specific Elective – 1B	Medieval India: Mughal Period	<p>1. Draws comparisons between policies of different rulers.</p> <p>2. Understanding Role of Akbar in the consolidation of Mughal rule in India.</p> <p>3. Understand Aurangzeb's conflict with Rajputas, Maratha and weakening Mughals age.</p>



				<p>4. Analyses factors which led to the emergence of new religious ideas and movements (bhakti and Sufi) Understand the prospectus of tourism activities in Maharashtra with role of MTDC in development. 5. Understand the role of MIDC in industrial development in rural Maharashtra.</p>
		Discipline Specific Elective – 2B	Glimpses of the Modern World - Part II	<p>1. It will enable students to develop the overall understanding of the Modern World.</p> <p>2. The students will get acquainted with the major nationalist movements, the World War II and its consequences, the Cold War and its Consequences.</p> <p>3. It will enhance their overall perception of the history of the Modern World.</p> <p>4. It will enable students to understand the significance of the strategic political developments in the Modern World.</p>
		Skill Enhancement Course -2B	Travel Agency & Tour Business	<p>1. The students will understand the details of the business of Travel Agency.</p> <p>2. They will be trained on both Theory and Practical aspect and Travel Agency and creating professionals for Tourism Industry.</p> <p>3. It will enable student to seek self-employment by starting their own Travel Agency related to business.</p>
T.Y.B.A.	V	Core Course 1E	Indian National Movement	<p>1. It will enable students to develop an overall understanding</p>





			(1885-1947)	<p>of Modern India.</p> <p>2. It will increase the spirit of healthy Nationalism, Democratic Values and Secularism among the Students.</p> <p>3. Students will understand various aspects of the Indian Independence Movement and the creation of Modern India.</p>
		Discipline Specific Elective 1 C	Introduction to Historiography	<p>1. Students will be introduced to the information and importance of Historiography.</p> <p>2. Students will be introduced to the different Methods and Tools of data collection.</p> <p>3. Students can study the interdisciplinary approach of History .</p> <p>4. Students will learn about the usefulness of History in the 21st century, its changing perspectives, the new ideas that have been invented, and the importance of History in a competitive World.</p> <p>5. This curriculum develops Research ability and process of Research Methodology in History</p>
		Discipline Specific Elective 2 C	Maharashtra in the 19th Century	<p>1. Student will develop the ability to analyse sources for 19th century Maharashtra History.</p> <p>2. Student will learn significance of Regional History and Socio-religious reformism foundation of the region.</p>



				<p>3. It will enhance their perception of 19th Century Maharashtra.</p> <p>4. Appreciate the skills of leadership and the Socio-religious System of the Maharashtra.</p>
		Skill Enhancement Course 2C	Research Paper Writing	<p>1. Students will be introduced to the information and importance of Historiography. 2. Students can study the interdisciplinary approach History . 3. This curriculum Will help to develop Research ability and Process of Research Paper Writing in History</p>
	VI	Core Course CC- 4(3)	India After Independence- (1947-1991)	<p>1. It will enable students to develop an overall understanding of the Contemporary India.</p> <p>2. To increase the spirit of healthy Nationalism, Democratic Values and Secularism among the students.</p> <p>3. Students will understand various aspects of India's domestic and foreign policies that shaped Post-Independence India.</p>
		Discipline Specific Elective 3 C	Applied History	<p>1. Students will be introduced to the information and importance of applied history.</p> <p>2. Student will learn about the Historical significance of Archaeology and Archives and opportunities in the field of Archaeology and Archives.</p> <p>3. Through this course, students will be informed about the</p>





				<p>opportunities in the field of Media, Museums.</p> <p>4. Students will learn about the usefulness of history in the 21st Century, its changing Perspectives, the new ideas that have been invented, and the importance of History in a Competitive World.</p>
		Discipline Specific Elective 2D	Maharashtra in the 20th Century	<ol style="list-style-type: none"> <li>1. Student will develop the ability to analyse sources for 20th Century Maharashtra History.</li> <li>2. Student will learn significance of regional history and Socio-Religious Reformism foundation of the region.</li> <li>3. It will enhance their Perception of 20th Century Maharashtra.</li> <li>4. Appreciate the skills of leadership and the Socio-Religious System of the Maharashtra.</li> </ol>
		Skill Enhancement Course 2 D (2)	Archaeology	<ol style="list-style-type: none"> <li>1. Students will learn to understand the definition, aims and scope of Archaeology so as to understand its applications in interpreting the human past.</li> <li>2. They will be able to understand the nature of the archaeological record and the unique role of science in archaeology.</li> <li>3. They will have an overall understanding of the Archaeology.</li> </ol>



MA I	I	Core Paper No. 1	History: Theory and Method	The paper is designed to provide adequate conceptual base, bring better understanding of history and its forces, help interrogate existing paradigms and challenge the outdated, help in developing critique, help research in terms of formulating hypotheses and develop broad frames of interaction with other social sciences and attain certain level of Interdisciplinary approach.
		Core Paper No. 2	2. Evolution of Ideas and Institutions in Early India	The course intends to provide an understanding of the social, economic and institutional bases of early India. It is based on the premise that an understanding of early Indian history is crucial to understand Indian history as a whole.
		Core Paper No. 3	3. Maratha Polity	The purpose of the course is to study the administrative system of the Marathas in an analytical way, to acquaint the student with the nature of Maratha Polity, to understand basic components of the Maratha administrative structure, to enable the student to understand the basic concepts of the Maratha polity.
		Elective Course No.1	History of Deccan – Pre History to Chalukyas	The paper is designed to make the student aware of the background of the history of the region. A broad survey of the pre-history which connects with the early history is aimed at





				emphasising the continuities and changes in terms of geographical and cultural conditions created by the rulers.
	II	Core Paper No. 4	Approaches to History	The paper is designed to make the student aware about the various approaches to the discipline of History. With its roots in Indian history, the paper provides a historical review of the salient approaches that have developed over the last few centuries. It is hoped that the student will become aware of the idea that the same set of historical source materials can be interpreted in different ways depending upon the approach one takes in studying them.
		Core Paper No. 5	5. Ideas and Institutions in Medieval India	The course examines the nature of medieval Indian society, economy, state formations, and the main religious currents of the time. It is seen as a continuation of the course on ancient India. It is also seen to be crucial to an understanding of the nature of society, and the problems of the challenge to that society, through colonialism, at a later stage.
		Core Paper No. 6	6. Socio-Economic History of the Marathas	The purpose of the course is to study socio-economic history of the Marathas in an analytical way, to acquaint the student with the components of social structure and their functions, to



				understand the relationship between religion, caste, customs, traditions, class in 17th and 18th century Maratha Society, to enable the student to understand aspects of economic life, to trace the determinants of changes in social and economic life.
		Elective Course No.2	Marathas in 17th and 18th Century: Power Politics	The course intends to study the role played by the Marathas in the context of India, the changing nature of Maratha State, to understand and analyse the Maratha expansionism and its significance in various spheres.
MA II	III	Core Paper No.7	Cultural History of Maharashtra	This paper is designed to help the student situate and interpret the cultural manifestations across historical memory which have contributed to the creation of the geopolitical region of Maharashtra.
		Core Paper No.8	Intellectual History of the Modern World	The paper is seen as a prerequisite for understanding the concepts that are used in history, to acquaint the student with the intellectual activity that played an important role in shaping events; the transition from medieval to modern times.
		Core Paper No.9	Economic History of Modern India	To acquaint the student with structural and conceptual changes in Indian economy after coming of the British, to make them aware of the exploitative nature of the British rule, to help them





				understand the process of internalization by Indians of new economic ideas, principles and practices.
		Elective Course No.2	Peasant Movements in India (Medieval and Modern)	This course attempts to study various approaches to peasant revolts and movements, so as to help the student to understand characteristics of peasant movements.
	IV	Core Paper No.10	Modern Maharashtra: History of Ideas	The paper aims to let the students explore the ideas which have given Maharashtra its unique character. It also hopes to offer a specialised knowledge of the Intellectual History of Maharashtra based on a critical reading of the original textual sources.
		Core Paper No.11	Debates in Indian Historiography	The course is designed to introduce the student to some of the issues that that have been debated by historians and to introduce some perspectives with reference to Indian History.
		Core Paper No.12	World after World War II (1945-2000)	To acquaint the student with the post-World War II scenario and to enable them to understand contemporary world from the historical perspective.
		Elective Course No.	Ancient and Medieval Civilizations of the World	The paper intends to examine Ancient civilizations with a view to understand, reinterpret and present them in historical perspective; to enable the student to understand intellectual trends







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**DEPARTMENT OF ECONOMICS**

Programme and course outcomes of the programme offered to the instruction



Sr. No.	Name of Program	Semester	Course Code	Subject	Programmes Outcomes
1.	F.Y.B.A.	I & II	Discipline Specific Elective-I	Indian Economic Environment	<p>1.Ability to develop an understanding of the Economic environment and the factors affecting economic Environment.</p> <p>2. Ability to develop awareness on the various new developments in the different sectors of an economy- Agriculture, industry, services, banking, etc.</p> <p>3.Ability to compare and contrast Indian Economy with other world economies.</p> <p>4. 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.</p>
2.	S.Y.B.A.	III & IV	Discipline Specific Elective – 1A	Micro Economics	<p>1. Ability to apply the concepts of micro economics such as demand, supply, revenue, cost, elasticity etc.</p> <p>2. Ability to analyze and demonstrate knowledge of the basic theories/laws in economics- law of demand, law of supply, production function, etc.</p> <p>3. At the end of the course, the student should be able to evaluate microeconomic concepts, models and its use in real life situations.</p> <p>4. Ability to apply the concepts of micro economics such as demand, supply, revenue, cost, elasticity, etc.</p> <p>5. Ability to compare and contrast various market structures and understand concept of equilibrium, price determination</p> <p>6. At the end of the course,</p>



					the student should be able to evaluate microeconomic concepts, models and its use in real life situations.
		III & IV	Discipline Specific Elective – 2A	Macro Economics	<ol style="list-style-type: none"> <li>1. Macroeconomics or aggregative economics analyses and establishes the functional relationship between the large aggregates.</li> <li>2. The aggregate analysis has assumed such a great significance in recent times that a prior understanding of macroeconomic theoretical structure is considered essential for the proper comprehension of the different issues and policies.</li> <li>3. Macroeconomics is not only a scientific method of analysis; but also a body of empirical economic knowledge.</li> <li>4. The students understand systemic facts and latest theoretical developments for empirical analysis.</li> </ol>
		III & IV	Economics CC-1C	Financial System - I	<ol style="list-style-type: none"> <li>1. To understand fundamentals of modern financial system.</li> <li>2. To understand the recent trends and developments in banking system.</li> <li>3. To understand the role of the Reserve Bank of India in Indian financial system.</li> <li>4. To provide the knowledge of various financial and non-financial institutions.</li> <li>5. To provide the students the intricacies of Indian financial system for better financial decision making.</li> </ol>
3.	T.Y.B.A.	V & VI	Discipline Specific Elective 1C	International Economics	<ol style="list-style-type: none"> <li>1. Ability to understand the concepts of international economics such as comparative cost, terms of trade, trade policies and trade agreements</li> <li>2. Ability to interpret and apply theory relating to understand international trade</li> <li>3. Ability to discuss and</li> </ol>





					time, ability to show leadership qualities.
4.	F.Y.B.Com	I & II	Core Course	Business Economics	<ol style="list-style-type: none"> <li>1. Students will understand basic concepts of micro economics, Will be able to analyze and Interpret cardinal and ordinal approach</li> <li>2. Students Will understand the concept of consumer surplus</li> <li>5. Students Will understand the concept of demand and elasticity of demand</li> <li>6. Students Will understand the concept of supply</li> <li>7. Students Able to interpret equilibrium in the market</li> <li>8. Students Will understand revenue concept</li> <li>9. Students Will know economies and diseconomies of scale</li> <li>10. Students Will understand the concept and types of cost</li> <li>11. Students will know about short run and long run cost concepts</li> <li>12. Students will have knowledge about types of revenue</li> <li>13. Students will understand the concept of pure and perfect competition</li> <li>14. Students will know about the equilibrium of firm and industry in short and long run.</li> <li>15. Students Will develop ability to understand the market structures under imperfect competition</li> <li>16. Students Will be able to compare perfect and imperfect competition</li> <li>17. Students Will understand the theory of marginal productivity.</li> <li>18. Students Will understand the concept and theories in factor pricing.</li> </ol>
5.	S.Y.B.Com.	III & IV	233	Business Economics	1.To familiarize the students to the basic theories and concepts of Macro Economics and their application.



				<p>debate the effects of trade policy, trade agreements, exchange rate policies on the world economy/trade</p> <p>4. Ability to understand the concepts of international economics such as comparative cost, terms of trade, trade policies and trade agreements</p> <p>5. Ability to interpret and apply theory relating to understand international trade</p> <p>6. Ability to discuss and debate the effects of trade policy, trade agreements, exchange rate policies on the world economy/trade</p>	
			Discipline Specific Elective 2C	Public Finance	<p>1. Ability to recognize, apply and analyze concepts and theories in public economics.</p> <p>2. Ability to appraise and assess the theory of public economics in real life situations.</p> <p>3. Ability to understand, apply and analyze concepts- public debt, budget, fiscal policy in public economics.</p> <p>4. Ability to interpret the theories relating to public economics in real life situations.</p> <p>5. Ability to discuss and debate on the public finance and policies w.r.t. India</p>
		V & VI	G-III	Indian Economic Development-I	<p>1. To relate and recognize the concept and indicators of Economic Development.</p> <p>2. To describe and analyze the concept and indicators of Human Development.</p> <p>3. To explain the characteristics of Developing and Developed Countries.</p> <p>4. To describe the constraints to the process of Economic Development.</p>
		V & VI	SEC-3A	Business Management	<p>1. Management of Business.</p> <p>2. Business planning and decision making.</p> <p>3. Leadership Skills- Ability to work in teams at the same</p>





					<p>2.To study the relationship amongst broad aggregates.</p> <p>3.To impart knowledge of business economics.</p> <p>4.To understand macroeconomic concepts.</p> <p>5.To introduce the various concepts of National Income.</p>
5.	T.Y.B.Com	V & VI	353	Indian & Global Economic Development	<p>1. Students will be able to understand the concept of Human Resource Development.</p> <p>2. Students will be able to understand the role of foreign capital in Economic Development.</p> <p>3. Students will be able to critically evaluate the Indian Foreign Trade Policy.</p> <p>4. Students will be able to analyze the role of International Financial Institutions.</p> <p>5. Students will be able to evaluate the success of Regional Economic Cooperation's.</p>
5.	M.A.	I	EC-1001	Micro-Economic	<p>1. Ability to apply the concepts of micro economics such as demand, supply, revenue, cost, elasticity, etc.</p> <p>2. Ability to analyze and demonstrate knowledge of the basic theories/laws in economics- law of demand, law of supply, production function, etc.</p> <p>3. At the end of the course, the student should be able to evaluate microeconomic concepts, models and its use in real life situations.</p>
		II	EC-2001	Micro-Economic	<p>1. Ability to apply the concepts of micro economics such as demand, supply, revenue, cost, elasticity, etc.</p> <p>2. Ability to compare and contrast various market structures and understand concept of equilibrium, price determination</p> <p>3. At the end of the course, the student should be able to evaluate microeconomic</p>



				concepts, models and its use in real life situations.
	I	1002	Public Economics	<ol style="list-style-type: none"> <li>1. Ability to recognize, apply and analyze concepts and theories in public economics.</li> <li>2. Ability to appraise and assess the theory of public economics in real life situations.</li> </ol>
	II	2002	Public Economics	<ol style="list-style-type: none"> <li>1. Ability to understand, apply and analyze concepts-public debt, budget, fiscal policy in public economics.</li> <li>2. Ability to interpret the theories relating to public economics in real life situations.</li> <li>3. Ability to discuss and debate on the public finance and policies w.r.t. India</li> </ol>
	I	1003	International Trade	<ol style="list-style-type: none"> <li>1. Ability to understand the concepts of international economics such as comparative cost, terms of trade, trade policies and trade agreements</li> <li>2. Ability to interpret and apply theory relating to understand international trade</li> <li>3. Ability to discuss and debate the effects of trade policy, trade agreements, exchange rate policies on the world economy/trade</li> </ol>
	II	2003	International Finance	<ol style="list-style-type: none"> <li>1. Ability to understand and interpret the concepts such as Balance of Payments, Exchange Rates, Foreign Exchange transactions, International capital flows, etc.</li> <li>2. Ability to critically analyze the effects of deficits, exchange risk, role of foreign capital on the world economy/trade</li> <li>3. Ability to discuss and debate on subjects related to international trade and finance w.r.t the Indian Eco.</li> </ol>
	I	1004	Agricultural Economics	<ol style="list-style-type: none"> <li>1. Ability to analyze and evaluate the subject with</li> </ol>





					reference to various aspects of agrarian economies. 2. Ability to develop an understanding of agriculture with its intricacies and imperfections and to be able to construct intellectual dialogue on the challenges of agriculture
		II	2004	Rural Economics	1. Ability to analyze and evaluate the subject with reference to various aspects of rural economies. 2. Ability to develop an understanding of the rural sector with its intricacies and imperfections and to be able to construct intellectual dialogue on the challenges of agriculture w.r.t. the Indian Economy.
	M.A.-II	III	EC-3001	Macro Economics Analysis - I	1.Ability to analyze and demonstrate knowledge of the basic theories/laws in macroeconomics. 2.At the end of the course, the student should be able to evaluate macroeconomic concepts, models and its use in real life situations.
EC-3002			Growth And Development- I	1.To enable learning and understanding of the basic concepts and process to measure the growth and economic development etc. 2.To analyze and evaluate the obstacles in the process of economic growth and development	
EC-3003			Research Methodology I	1.Ability to develop, demonstrate and examine topics under Economics to pursue research. 2.Ability to evaluate and examine subject areas in economics and explore possibilities of research.	
EC-3004			Demography	1.Ability to develop, demonstrate and examine various topics under Demography. 2.Ability to evaluate and examine subject areas in	



				economics bringing out the relation to population studies and demography.
		IV	EC-4001	Macro Economic Analysis II 1.Ability to analyze and demonstrate knowledge of the basic theories/laws in economics-general equilibrium psychological law of consumption, etc. 2.At the end of the course, the student should be able to evaluate macroeconomic concepts, models and its use in real life situations.
			EC-4002	Growth & Development II 1.Ability to analyze and demonstrate knowledge of the economic growth and development theories of economic growth and development 2.Ability analyze, evaluate and apply the growth and development concepts, role of human capital, etc. in real life situations
			EC-4003	Research Project 1.Ability to develop, demonstrate and examine topics under Economics to pursue research. 2.Ability to evaluate and examine subject areas in economics and explore possibilities of research
			EC-4004	Economics of Environment 1.Ability to analyze and evaluate the subject with reference to various aspects of the economics of environment. 2.Ability to develop an understanding of the economics of environment and various analytical tools to comprehend environmental issues

**Principal**  
**S.M.B.S.T. College Sangamner**



*Neelke*  
**Co-ordinator & Head,**  
**Post Graduate Research Center in Economics**  
**S. M. B. S. T. College, Sangamner**



**S.B.V.P.Samaj's,**  
**S. M. B. S. THORAT COLLEGE OF ARTS, SCIENCE & COMMERCE, SANGAMNER,**  
**DIST-AHMEDNAGAR.**  
 DEPARTMENT OF GEOGRAPHY

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.B. A.(C.A)	I	CA-101	<b>Business Communication</b>	<ol style="list-style-type: none"> <li>1. To provide an overview of Prerequisites to Business Communication</li> <li>2. -To provide an overview of Prerequisites to Business Communication</li> <li>3. -To underline the nuances of Business communication</li> <li>4. impart the correct practices of the strategies of Effective Business writing.</li> <li>5. -identify key principles in business communication.</li> </ol>
		CA-102	<b>Principles of Management</b>	<ol style="list-style-type: none"> <li>1. able to have clear understanding of managerial functions like planning</li> <li>2. -To understand the planning process in the organization</li> <li>3. -To learn the application of the principles in an organization</li> <li>4. -Demonstrate the ability to directing ,leadership and communicate effectively</li> <li>5. -To analysis isolate issues and formulate best control methods.</li> </ol>
		CA-103	<b>C Language</b>	<ol style="list-style-type: none"> <li>1. -Explain about the basic concepts of program development statements and its syntax.</li> <li>2. -Explain the various types of arrays and its structure.</li> <li>3. -Explain the Concepts of structures and Unions.</li> <li>4. -Illustrates the various operations performed on different types of files</li> </ol>



		CA-104	<b>Database Management System</b>	<ol style="list-style-type: none"> <li>1. Describe the fundamentals of File processing and database processing system.</li> <li>2. Explain the fundamental concepts of SQL programs.</li> <li>3. Describe the concepts of Database, Writing queries</li> </ol>
		CA-105	<b>Statistics</b>	<ol style="list-style-type: none"> <li>1. Learn about Sampling Methods</li> <li>2. Familiar with Measures of Central Tendency and Measures of Dispersion Range.</li> <li>3. Design and conduct experiments, as well as to analyze and interpret data.</li> <li>4. Evaluate the probabilities and conditional probabilities</li> <li>5. Evaluate expectations and conditional expectations of random variables</li> </ol>
		CA-106	<b>Computer Laboratory Based on 103 &amp; 104</b>	<ol style="list-style-type: none"> <li>1. Explanation of design and algorithmic solution for a given problem.</li> <li>2. Construction of flowchart for the computer programs.</li> <li>3. Explains the program using Control Statements</li> <li>4. Explains the program using Arrays and Functions</li> <li>5. Explain the program using file handling with structure.</li> </ol>
		CA-107	<b>Add-On (PPA)</b>	<ol style="list-style-type: none"> <li>1. Analyze the asymptotic performance of algorithms</li> <li>2. Construction of flowchart for the computer programs.</li> <li>3. Write rigorous correctness proofs for algorithms.</li> <li>4. Demonstrate a familiarity with major algorithms and data structures</li> <li>5. Apply important algorithmic design paradigms and methods of analysis.</li> </ol>
<u>F.Y.B.B.A (C.A.)</u>	II	CA-201	<b>Organization Behavior &amp; Human Resource Management</b>	<ol style="list-style-type: none"> <li>1. To develop the understanding of the concept of human resource management</li> <li>2. To develop necessary skill set for application of various HR issues</li> <li>3. To Analyze the strategic issues and strategies required to select and develop manpower</li> <li>4. To integrate the knowledge of HR concepts to take correct business decisions.</li> </ol>
		CA-	<b>Financial Accounti</b>	<ol style="list-style-type: none"> <li>1. define bookkeeping and accounting</li> <li>2. Explain general purposes and functions of</li> </ol>





		202	ng	<p>accounting</p> <ol style="list-style-type: none"> <li>3. explain the differences between management and financial accounting</li> <li>4. describe the main elements of financial accounting information – assets, liabilities,</li> <li>5. Identify the main financial statements and their purposes.</li> </ol>
		CA-203	Business Mathematics	<ol style="list-style-type: none"> <li>1. Know the basic idea of Permutations and Combinations, and Probability Concepts.</li> <li>2. Familiar with Determinant and Matrices.</li> <li>3. Formulate Limit, Continuity and Differentiability</li> <li>4. Calculate the number of samples needed to construct confidence levels mean and</li> </ol>
		CA-204	Relational database Management System	<ol style="list-style-type: none"> <li>1. To study fundamental concepts of RDBMS (PL/Pgsql)</li> <li>2. To study database management operations</li> <li>3. To study data security and its importance</li> <li>4. To study client server architecture</li> <li>5. To study Function Procedure, Trigger ,Cursor</li> </ol>
		CA-205	Web Technology HTML-JS-CSS	<ol style="list-style-type: none"> <li>1. Students will be familiar with client server architecture and able to develop a web</li> <li>2. Students will gain the skills and project based experience needed for entry into web</li> <li>3. Resolves written HTML codes</li> <li>4. Runs the page he/she has designed using HTML codes</li> <li>5. Designs site and page via Microsoft Expression Web 4 Programme</li> </ol>
		CA-206	Computer Laboratory Based on 204 & 205	<ol style="list-style-type: none"> <li>1. Writing Procedures functions triggers on system</li> <li>2. Construction of various Procedures in system</li> <li>3. Write rigorous correctness programs</li> <li>4. Demonstrate a familiarity with major applications and data structures</li> <li>5. Apply important algorithmic design paradigms and methods on System programs</li> </ol>
		CA-207	Add-On (Advance C)	<ol style="list-style-type: none"> <li>1. Use the 'C' language constructs in the right way</li> <li>2. Design, develop and test programs written in 'C'</li> <li>3. Use different data types in a computer program</li> <li>4. Design programs involving decision structures, loops and functions</li> </ol>
<u>S.Y.B.B. A (C.A.)</u>	III	CA-	Digital Marketing	<ol style="list-style-type: none"> <li>1. Analyze the confluence of marketing, operations, and human resources in real-time</li> <li>2. Demonstrate cognitive knowledge of the skills required in conducting online research and</li> </ol>



		301		3. identifying, assessing and selecting digital market opportunities
		CA-302	<b>Data Structure using C</b>	<ol style="list-style-type: none"> <li>1. Implementation of different data structures efficiently</li> <li>2. Usage of well-organized data structure to handle large amount of data</li> <li>3. Usage of appropriate data structures for problem solving</li> <li>4. Design programs involving decision structures, loops and functions</li> </ol>
		CA-303	<b>Software Engineering</b>	<ol style="list-style-type: none"> <li>1. Explain the fundamental knowledge in science, mathematics, fundamental software</li> <li>2. Computer application, software engineering and multidisciplinary engineering to begin in practice as a software engineer</li> <li>3. Explain to design a system, component, or process to meet desired needs within</li> <li>4. Realistic constraints such as economic, environmental, social, political, manufacturability, sustainability, ethical, health and safety</li> </ol>
		CA-304	<b>Angular JS</b>	<p>Utilizing Angular JS formats adequately.  Questioning and adjusting information in various databases  Quickly making perplexing structures  Understanding two-way (proportional) information authoritative</p>
		CA-304	<b>PHP</b>	<ol style="list-style-type: none"> <li>1. Write PHP scripts to handle HTML forms</li> <li>2. Write regular expressions including modifiers, operators, and meta characters</li> <li>3. Create PHP programs that use various PHP library functions, and that</li> <li>4. Construct PHP scripts to create dynamic web content.</li> </ol>
		CA-305	<b>Big Data</b>	<ol style="list-style-type: none"> <li>1. Access and Process Data on Distributed File System</li> <li>2. Students will demonstrate proficiency with statistical analysis of data</li> <li>3. Students will develop the ability to build and assess data-based models</li> <li>4. Students will execute statistical analyses with professional statistical software</li> </ol>
		CA-	<b>Block</b>	<ol style="list-style-type: none"> <li>1. Understand how block chain systems (mainly Bitcoin and Ethereum) work,</li> <li>2. To securely interact with them</li> </ol>





		305	Chain	<ol style="list-style-type: none"> <li>3. Design, build, and deploy smart contracts and distributed applications</li> <li>4. Integrate ideas from block chain technology into their own projects.</li> </ol>
		CA-306	Computer Laboratory Based on 302 , 304 and 305	<ol style="list-style-type: none"> <li>1. Implementation of different data structures efficiently</li> <li>2. Usage of well-organized data structures to handle large amount of data</li> <li>3. Usage of appropriate data structures for problem solving</li> <li>4. Creating Block and block chain applications</li> <li>5. Create and Run Angular and PHP Applications</li> </ol>
<u>S.Y.B.B.A (C.A.)</u>	IV	CA-401	NETWORKING	<ol style="list-style-type: none"> <li>1. Explain the local, metropolitan and wide area networks using the Standard OSI</li> <li>2. Reference model</li> <li>3. Discussion of various networking technologies.</li> <li>4. Explain the concepts of protocols, network interfaces and design of performance issues in local area networks and wide area networks</li> <li>5. Describe about wireless networking concepts, contemporary issues in networking technologies ,network tools and network programming</li> </ol>
		CA-402	Object Oriented Concepts Through CPP	<ol style="list-style-type: none"> <li>1. Explain about the basic concepts of program development statements and its syntax</li> <li>2. Explain the various types of arrays and data structure.</li> <li>3. Discuss about the various types of Functions and String handling mechanisms.</li> <li>4. Explain the Concepts of structures .</li> </ol>
		CA-403	Operating System	<ol style="list-style-type: none"> <li>1. Describe the basic components of an operating system and their role in implementations for general purpose, real-time and embedded applications.</li> <li>2. Define the concepts of processes, threads, asynchronous signals and competitive system resource allocation</li> <li>3. Explain what multi-tasking is and outline standard scheduling algorithms for</li> <li>4. Multi-tasking.</li> <li>5. Discuss mutual exclusion principles and their use in concurrent programming including semaphore construction and resource allocation</li> </ol>
		CA-	NODE JS	<ol style="list-style-type: none"> <li>1. Understand the core flow control</li> </ol>



		404		<ol style="list-style-type: none"> <li>2. Understand the core flow control patterns in Node.js and know when it is appropriate</li> <li>3. Create and manipulate buffers efficiently.</li> <li>4. Create Node Applications</li> </ol>
		CA-404	Advance PHP	<ol style="list-style-type: none"> <li>1. Implement Simple PHP programs to solve simple problems</li> <li>2. Prepare detailed statement of problem for the selected mini project</li> <li>3. Identify suitable process model for the same.</li> </ol>
		CA-405	Project	<ol style="list-style-type: none"> <li>1. An ability to apply knowledge of mathematics, computer science and management in</li> <li>2. An ability to enhance not only comprehensive understanding of the theory but its application</li> <li>3. Capability to assist in the creation of an effective Project plan</li> <li>4. Learn developing methodology of software project</li> <li>5. Develop Software Requirement Specification for the project.</li> <li>6. Identify scenario and develop UML Use case</li> </ol>
		CA-406	Computer Laboratory Based on 402,404	<ol style="list-style-type: none"> <li>1. Implement Simple PHP/CPP programs to solve simple problems</li> <li>2. Prepare detailed statement of problem for the selected mini project</li> <li>3. Identify suitable process model for the same.</li> </ol>
<u>T.Y.B.B.A (C.A.)</u>	V	<u>CA-501</u>	Cyber Security	<ol style="list-style-type: none"> <li>1. Have a good understanding of Cyber Security and the Tools.</li> <li>2. Identify the different types of Cyber Crimes.</li> <li>3. Have a good understanding of Cyber laws</li> <li>4. To develop Cyber forensics awareness.</li> <li>5. Identify attacks, security policies and credit card frauds in mobile and Wireless Computing Era.</li> </ol>
		<u>CA-502</u>	Object Oriented Software Engineering	<ol style="list-style-type: none"> <li>1. Students will be able to give Design Specifications for Project.</li> <li>2. Students will acquire Knowledge in Basic Modeling.</li> <li>3. Students will acquire Project Management Skills</li> </ol>
		<u>CA-503</u>	<u>Core Java</u>	<ol style="list-style-type: none"> <li>1. Able to solve real world problems using OOP techniques.</li> <li>2. Able to understand the use of abstract classes.</li> <li>3. Able to solve problems using java collection framework and I/O classes.</li> <li>4. Able to develop multithreaded applications with synchronization.</li> <li>5. Able to develop applets for web applications.</li> <li>6. Able to design GUI based applications.</li> </ol>





		<u>CA-504</u>	<b>Python</b>	<ol style="list-style-type: none"> <li>1. On completion of the course, student will be able Define and demonstrate the use of built-in data structures "lists" and "dictionary". Design and implement a program to solve a real world problem. Design and implement GUI application and how to handle exceptions and files.</li> </ol>
		<u>CA-504</u>	<b><u>Mongo DB</u></b>	<ol style="list-style-type: none"> <li>1. Learned to work with Mongo DB shell and Mongo DB tools.</li> <li>2. Able to do Schema design, Data modeling and all sorts of CRUD Operations.</li> <li>3. Learned to optimize query performance.</li> <li>4. Become capable to analyze the data stored in Mongo DB.</li> </ol>
		<u>CA-507</u>	<b><u>Internet of Things (IOT)</u></b>	<ol style="list-style-type: none"> <li>1. Students will be able</li> <li>2. To explain key technologies, smart objects, IOT Architecture and security in Internet of Things.</li> <li>3. To illustrate the role of IOT protocols for efficient network communication.</li> <li>4. To understand IOT platform such as Arduino Uno.</li> </ol>
	VI	<u>CA-601</u>	<b><u>Recent Trend in IT</u></b>	<ol style="list-style-type: none"> <li>1. On completion of the course, student will be able</li> <li>2. To discuss the basic concepts AI.</li> <li>3. To apply basic, intermediate and advanced techniques to mine the data</li> <li>4. To provide an overview of the concept of Spark programming</li> </ol>
		<u>CA-602</u>	<b><u>Software Testing</u></b>	<ol style="list-style-type: none"> <li>1. Students will be introduced to testing tools.</li> <li>2. Students will acquire Knowledge of Basic SQA.</li> <li>3. Students will be able to design basic Test Cases</li> </ol>
		<u>CA-603</u>	<b>Advanced Java</b>	<ol style="list-style-type: none"> <li>1. Students will know the concepts of JDBC Programming.</li> <li>2. Students will know the concepts of Multithreading and Socket Programming.</li> <li>3. Students will know the concepts of Spring and Hibernate.</li> <li>4. Students will develop the project by using JSP and JDBC.</li> <li>5. Students will develop applications in Spring and hibernate</li> </ol>



		CA-604	<b><u>Android Programming</u></b>	<ol style="list-style-type: none"> <li>1. Student will be able to write simple GUI applications, use built-in widgets and components, work with the database to store data locally, and much more.</li> <li>2. Demonstrate their understanding of the fundamentals of Android operating systems Demonstrate their skills of using Android software development tools</li> </ol>
		CA-604	<b><u>VB.Net Programming</u></b>	<ol style="list-style-type: none"> <li>1. Use the features of Dot Net Framework along with the features of VB, C# and ASP</li> <li>2. Design and develop window based and web based .NET applications.</li> <li>3. Design and develop a Website.</li> <li>4. Design and Implement database connectivity using ADO.NET for VB, C# and ASP.</li> </ol>
		CA-607	<b><u>Soft Skill</u></b>	<ol style="list-style-type: none"> <li>1. Understand the significance and essence of a wide range of soft skills</li> <li>2. Learn how to apply soft skills in a wide range of routine social and professional settings.</li> <li>3. Learn how to employ soft skills to improve interpersonal relationships.</li> </ol>

Programme and course outcomes of the Programme offered to the instruction

*(Signature)*

**HEAD**  
Department of BBA(CA)/BCA  
S.M.B.S.T. College, Sangamner



*(Signature)*

**Principal**  
S.M.B.S.T. College, Sangamner



**S.B.V.P.Samaj's,**  
**S. M. B. S. THORAT COLLEGE OF ARTS, SCIENCE & COMMERCE, SANGAMNER,**  
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**DEPARTMENT OF GEOGRAPHY**

Programme and course outcomes of the programme offered to the instruction

Programme Class	Semester	Course code	Name of the course	Course out comes
F.Y.B.A.	I	Discipline Specific Elective - 1	Physical Geography	<ol style="list-style-type: none"> <li>1. To recognize the basic concepts in Physical geography.</li> <li>2. To discuss the utility and application of Physical geography in different regions and environment.</li> <li>3. To acquaint with Earth system (Lithosphere, Atmosphere, Biosphere and Hydrosphere).</li> <li>4. To identify the principles and applications of Hydrology and Oceanography to address water resource and environment related problems.</li> </ol>
	II	Discipline Specific Elective - 2	Human Geography	<ol style="list-style-type: none"> <li>1. To describe the basic and latest concepts in Human Geography</li> <li>2. To demonstrate applications of Human Geography in different regions of environment.</li> <li>3. To define the Settlement pattern and rural and urban settlement.</li> <li>4. To describe the Agriculture types and pattern.</li> </ol>
F.Y.B.Sc.	I	Gg 110	Introduction to Physical Geography-I (Geomorphology)	<ol style="list-style-type: none"> <li>1. Students will understand the basic concepts of Physical Geography.</li> <li>2. Students will understand the applications of Geomorphology.</li> </ol>



				<p>3. Students will understand the theories regarding Origin of Continents and oceans.</p> <p>4. Students will be sensitizing with urgent need of protection and conservation of different aspects of Earth and its environment.</p> <p>5. Students will be able to understand various geographical phenomenon, their origin, distribution and effect on life.</p>
		Gg120	Introduction to Physical Geography - II (Geography of Atmosphere and Hydrosphere)	<p>1. Students will gain knowledge of the fundamentals of the Atmosphere so that they will be able to understand its uniqueness in among the planets in the galaxy.</p> <p>2. Students will understand insolation and heat budget of the Earth. This is essential to understand causes and effects of global warming.</p> <p>3. Students will be acquainted with atmospheric pressure and wind system. With this scientific knowledge they would understand intricacies of monsoon system that affects on Indian economy and polity.</p> <p>4. Students will gain knowledge of hydrosphere to appreciate how water resource is precious</p>
		Gg 101	Practicals in Physical Geography	<p>1. Students will get acquainted with basics of maps.</p> <p>2. Students will understand map scales and its types.</p> <p>3. Students will acquire skills of drawing various</p>





				<p>map projections with their advantages and limitations.</p> <p>4. The students would develop the skills of representing geographical, meaning thereby spatial and temporal, data.</p> <p>5. Exposure will be given to students about the field-based studies and data collection.</p>
F.Y.B.Sc.	II	GG 121	Introduction to Human Geography	<p>1. The students' understanding of basic concepts of Human Geography would help them for application of the same to local issues.</p> <p>2. Students will acquire knowledge of the history and evolution of humans and their races.</p> <p>3. Students will learn and respect cultural diversity through various theories.</p> <p>4. Students will explore man-environment relationship or man within environment in different geographical regions.</p> <p>5. Students will acquire knowledge of various economic activities</p>
		GG 122	Population and Settlement Geography	<p>1. With a knowledge base of Population Geography students would be able to understand issues related to population growth and related issues.</p> <p>2. Students would understand the applications and sources of Population data.</p> <p>3. Students would familiarize with the different types of Man-Environment relationship in different periods and areas.</p>



				<p>4. Students would be able to understand the issues and solutions related to settlements using concepts in Settlement Geography.</p> <p>5. Students would understand the concept and process of urbanisation in view of problems related to urban sprawl, rural urban divide and conflicts between human beings and environment.</p>
		GG 123	Practical's in Human Geography	<p>1. Students would understand the Population Indices and Projection with appropriate examples.</p> <p>2. Students would be able to understand and apply notions of Population Geography in various field.</p> <p>3. Students would develop their skills for using techniques used in Agriculture Geography.</p> <p>3. Students would acquire the skills of computer aided presentation techniques.</p> <p>4. They would get the idea of conducting social survey project which could surface the issues of particular social and economic sections of the society</p>
S.Y.B.A.	III	Core Course -1C	Environmental Geography I	<p>1. Create awareness about dynamic environment among the student.</p> <p>2. To acquaint the students with fundamental concepts of environment geography for development in different areas.</p> <p>3. The students should be able to integrate various factors of economic development and dynamic</p>





				<p>aspect of economic geography.</p> <p>4. To make aware the students about the problems of environment, their utilization and conservation in the view of sustainable development.</p>
		Discipline Specific Elective – 1A	Geography of Maharashtra - I	<p>1. Learn the geography of Maharashtra state.</p> <p>2. Aware about problems and prospects of Maharashtra.</p> <p>3. Understand the relationship between geographic variations and society in Maharashtra.</p> <p>4. Learn the recent trends in regional studies</p>
		Discipline Specific Elective – 2A	Practical Geography – I (Scale and Map Projections)	<p>1. Learn the basic concepts in practical geography.</p> <p>2. Able to develop and use of survey and mapping skills.</p> <p>3. Aware of the new techniques, accuracy and map making skills.</p> <p>needs a separate question paper.</p>
		Skill Enhancement Course -2A	Applied Course of Disaster Management	<p>1. The basic concepts and fundamentals in disaster management.</p> <p>2. The problem solving abilities on disaster management.</p> <p>3. To assess the situation and design plan for disaster management.</p>
	IV	Core Course -1C	Environmental Geography II	<p>1. Create awareness about dynamic environment among the students.</p> <p>2. To acquaint students with the fundamental concepts of Environmental Geography.</p> <p>3. To acquaint students about the past, presents and future utility and potentials of natural resources.</p>



				4. To make aware students about the problems of environment, its utilization and conservation in the view of sustainable development.
		Discipline Specific Elective – 1B	Geography of Maharashtra – II	<ol style="list-style-type: none"> <li>1. Aware about the problems and prospects of agriculture in Maharashtra.</li> <li>2. Learn the distribution of population and patterns of settlements in Maharashtra.</li> <li>3. Learn the concepts in rural development.</li> <li>4. Understand the prospectus of tourism activities in Maharashtra with role of MTDC in development.</li> <li>5. Understand the role of MIDC in industrial development in rural Maharashtra.</li> </ol>
		Discipline Specific Elective – 2B	Practical Geography – II (Cartographic Techniques, Surveying and Excursion / Village / Project Report)	<ol style="list-style-type: none"> <li>1. Learn the basic concepts in practical geography.</li> <li>2. Able to develop and use of map scale and projections.</li> <li>3. Aware of the new techniques, accuracy and map making skills.</li> </ol>
		Skill Enhancement Course -2B	Course of Travel & Tourism	<ol style="list-style-type: none"> <li>1. Perform online as well as offline booking and cancellation procedures for different available modes of travel and tourism.</li> <li>2. Acquire earning skills in tourism industry.</li> </ol>
T.Y.B.A.	V	Core Course 1E	Geography of Disaster Management-I	<ol style="list-style-type: none"> <li>1. Describe concepts of Disaster and its relations with Geography.</li> <li>2. Explain terminology and concepts of Disaster Management.</li> <li>3. Implement concepts of hazards in different areas and its Management.</li> <li>4. Explain standard operating procedure on</li> </ol>



				government for disaster management
		Discipline Specific Elective 1 C	Geography of India -I	<ol style="list-style-type: none"> <li>1. Explain the importance of geography of our Nation.</li> <li>2. Make the aware of the magnitude of problems and Prospects at National level.</li> <li>3. Identify the inter relationship among the subject and the society.</li> <li>4. Understand the current trends in regional studied</li> <li>5. Realize about diversity of our nation i.e. Religious, Languages, Tribes etc</li> <li>6. Acquaint the knowledge about different types of resources and their utility</li> </ol>
		Discipline Specific Elective 2 C	Practical Geography - I (Techniques of Spatial Analysis)	<ol style="list-style-type: none"> <li>1. Interpret and analysis of survey of India's Toposheet/ map</li> <li>2. Identify different methods of Relief Representation</li> <li>3. Describe and analysis of Indian Daily weather maps and their applications</li> <li>4. Apply Remote Sensing Techniques in Geography</li> </ol>
		Skill Enhancement Course 2C	Research Methodology -I	<ol style="list-style-type: none"> <li>1. To develop the understanding of the basic concept of research</li> <li>2. To develop the understanding of the basic framework of sampling and data collection</li> <li>3. To develop the understanding of various sampling methods and techniques</li> <li>4. To identify various sources of information about data collection.</li> <li>5. Understanding of the conducting survey on various issues and develop the Report writing skill</li> </ol>



	VI	Core Course 1F	Geography of Disaster Management-II	<ol style="list-style-type: none"> <li>1. Describe concepts of anthropogenic disaster, its types, causes and management.</li> <li>2. Explain important global level disasters i.e, acid rain, ozone depletion and global warming.</li> <li>3. Demonstrate Disaster Management at local level.</li> <li>4. Suggest methods of protection from disaster and will be able to do disaster management.</li> </ol>
		Discipline Specific Elective 1D	Geography of India -II	<ol style="list-style-type: none"> <li>1. Explain the importance of geography of our Nation.</li> <li>2. Make the aware of the magnitude of problems and Prospects at National level.</li> <li>3. Identify the inter relationship among the subject and the society.</li> <li>4. Understand the current trends in regional studied</li> <li>5. Realize about diversity of our nation i.e. Religious, Languages, Tribes etc</li> <li>6. Acquaint the knowledge about different types of resources and their utility</li> </ol>
		Discipline Specific Elective 2D	Practical Geography – II (Techniques of Spatial Analysis, Surveying and Excursion / Village / Project Report	<ol style="list-style-type: none"> <li>1. Create the awareness about the open source software and techniques of visualization</li> <li>2. Describe basic of Statistical data and the skill of data representation</li> <li>3. Calculate Central Tendency, Variance and Standard Deviation, Correlation and Regression, and Testing of Hypothesis</li> <li>4. Conduct Survey of socio-economic conditions of a village/ field investigation and report writing</li> </ol>



		Skill Enhancement Course 2D	Research Methodology -II	<ol style="list-style-type: none"> <li>1. To develop the understanding of the basic concept of research</li> <li>2. To develop the understanding of the basic framework of sampling and data collection</li> <li>3. To develop the understanding of various sampling methods and techniques</li> <li>4. To identify various sources of information about data collection.</li> <li>5. Understanding of the conducting survey on various issues and develop the Report writing skill</li> </ol>
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