



Shri Sangameshwar Education Society's  
**Sangameshwar College, Solapur [Autonomous]**  
(Affiliated to Punyashlok Ahilyadevi Holkar Solapur University, Solapur)  
Kannada Linguistic Minority Institute  
**NAAC Accredited with 'A' Grade (III Cycle CGPA 3.39)**

**UG Science Programme: B.Sc.-I to be implemented from A.Y. 2020-2021**

## **Course Outcomes**

### **Department of Chemistry**

**Chemistry (Semester-I & II)**

<b>Course Outcomes B. Sc. I Chemistry</b> <b>Semester- I</b>	
<b>Course</b>	<b>Outcomes</b>
	After completion of this course students will be able to-
<b>DSC-A Theory-I Physical Chemistry</b>	CO-1. Draw graphs by using variables. CO-1. Apply rules of differentiation and integration to various Chemical equations. CO-2. Prepare standard solutions of different concentrations. CO-3. Define and differentiate between order and molecularity of the reaction. CO-4. Derive an equation for rate constant of first and second order reaction. CO-5. Define the fundamental concepts of thermodynamics. CO-6. Calculate the efficiency of heat engine from given data. CO-7. Distinguish between ideal and non-ideal gases. CO-8. Formulate the relation between Vander waal's constant and critical constants.

	<p>CO-9. Differentiate between concentration terms normality &amp; molarity of the solution.</p> <p>CO-10. Solve numerical problems related on mole concept.</p>
<b>DSC-A Theory-II Inorganic Chemistry</b>	<p>CO-1. Define and identify various types of chemical bonds.</p> <p>CO-2. Predict shapes of molecules based on number of electron pairs with respect to VSEPR.</p> <p>CO-3. Draw the various molecular orbitals based on MOT</p> <p>CO-4. Identify and draw the geometry of molecule from hybridization</p> <p>CO-5. Calculate the bond order and stability of simple molecules like O<sub>2</sub>, N<sub>2</sub>, CO &amp; NO.</p> <p>CO-6. Apply the Hund's rule of maximum multiplicity.</p>
<p align="center"><b>Course Outcomes B. Sc. I Chemistry</b></p> <p align="center"><b>Semester-II</b></p>	
<b>DSC-B Theory-I Organic Chemistry</b>	<p>CO-1. Explain the structure of reaction intermediates and their role in reaction mechanism.</p> <p>CO-2. Differentiate between optical, geometrical and conformational isomers.</p> <p>CO-3. Draw the real 3D structure of molecules</p> <p>CO-4. Define aromaticity and apply the Huckel's rule to explain aromaticity.</p> <p>CO-5. Comment on Aromatic/Nonaromatic character of compounds.</p> <p>CO-6. Able to predict the mechanism of aromatic electrophilic substitution reactions.</p> <p>CO-7. Describe the methods of synthesis of alkanes, alkenes &amp; alkynes and their chemical properties.</p>
<b>DSC-B Theory-II Analytical and Industrial Inorganic Chemistry</b>	<p>CO-1 Explain and define the physical properties of liquids such as surface tension, viscosity and dipole moment.</p> <p>CO-2. Explain principle, reactions, procedure and calculations needed for qualitative and quantitative analysis of organic compounds.</p>

	<p>CO-3. Identify the oxidation-reduction reactions and also able to balance reactions.</p> <p>CO-4. Describe the types of catalysis and mechanism</p> <p>CO-5. Describe the factors affecting water and air pollution and health hazardous.</p> <p>CO-6. Discuss the applications of petrochemical compounds.</p>
<b>DSC-A&amp;B Physical chemistry practical's</b>	<p>CO-1. Determine the viscosity of different liquids.</p> <p>CO-2. Hands on use of eudiometer to determine equivalent weight of metal.</p> <p>CO-3. Application of reaction rates to study hydrolysis of methyl acetate.</p> <p>CO-4. Examine the study of second order reaction.</p> <p>CO-5. Establish the heat of ionization of weak acid.</p>
<b>DSC-A&amp;B Inorganic Chemistry Practical's</b>	<p>CO-1. Develop the skill for the preparation of standard solution of any concentration.</p> <p>CO-2. Apply the various synthetic skills to prepare inorganic complexes</p> <p>CO-3. Separate cations by paper chromatography.</p> <p>CO-4. Develop hands on expertise for the paper chromatographic techniques.</p>
<b>DSC-A&amp;B Organic Chemistry Practical's</b>	<p>CO-1. Estimate quantitatively the amount of given drug samples.</p> <p>CO-2. Identify the given organic compounds qualitatively by applying various simple laboratory tests.</p> <p>CO-3. Prepare benzoic acid from benzamide.</p> <p>CO-4. Determine the melting and boiling point of given organic compound.</p>

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## **BSc I Electronics**

### **DSC-A Theory-I Paper-I Title: Basic Circuit Theory and Network Analysis**

#### **· Course Outcome:**

- 1. Explore fundamental laws and elements of electrical circuits.*
- 2. Understand DC circuit, theorems, and networks.*
- 3. Reduce more complicated circuits into simpler equivalent circuits*
- 4. Understands AC circuits and related terminologies with examples.*
- 5. Design simple DC and AC circuits and solve numerical problems.*

### **DSC-A Theory-II Paper-II Title: Digital Fundamentals**

#### **· Course Outcome:**

- 1. Convert different type of codes and number systems in computers and communication.*
- 2. Describe switch model used to illustrate building blocks of digital circuits.*
- 3. Use Boolean algebra and Karnaugh maps for reduction of logic expressions and circuits.*
- 4. Perform arithmetic operation on binary numbers and design simple arithmetic logic circuits*
- 5. Introduction to TTL logic family*

### **DSC-B Theory-I Paper-III Title: Semiconductor Devices**

#### **· Course Outcome:**

- 1. Understand the basic material and properties of semiconductors*
- 2. Explore the constructional features of basic semiconductor devices.*
- 3. Describe the biasing principles of semiconductor devices like diode and transistors*
- 4. Understand basic diode circuits*
- 5. Explain the I-V characteristics of semiconductor devices like diode, BJT, UJT, JFET, MOSFET,*
- 6. SCR, DIAC, TRIAC & IGBT*

### **DSC-B Theory-II Paper-III Title: Digital Electronics**

#### **· Course Outcome:**

- 1. Introduction to PLCs*
- 2. Understand different combinational logic circuits such as decoder, encoder, multiplexers and de-multiplexers*
- 3. Understand flip flops*
- 4. Develop counters, shift registers using flip flops*

# Department of Mathematics

## Course Outcomes

Sem - I

DSC-A Theory-I Algebra

Upon successful completion of the course, student will be able to

- Solve the system of linear equations, find rank of the matrix, inverse of matrix using Cayley-Hamilton theorem.
- Evaluate modulus, argument and roots of a complex numbers.
- Derive Circular, Hyperbolic functions a complex variable with their inverses.
- Make use of algebraic structures to define a group.

DSC-A Theory-II Calculus

Upon successful completion of the course, student will be able to

- Evaluate the limits using L'Hospital rule.
- Construct the nth derivatives of  $f(x) = uv$  utilising properties and Leibniz rule.
- Find higher order partial derivatives, degree of homogeneity, p.d.s utilising Euler's and composite rules and corollaries.
- Explain the concept of vectors, scalars and vector differentiation in other branches.

Sem - II

DSC-B Theory-I Geometry

Upon successful completion of the course, student will be able to

- Classify Conics and discuss translation and rotation.
- Make use of the equations of plane line, and sphere.
- Explain the concept of cone and evaluate.
- Explain the concept of cylinder and evaluate

DSC-B Theory-II Differential Equations

Upon successful completion of the course, students will be able to

- Solve first order variable separable, homogeneous, non-homogeneous, linear, reducible differential equations and LDEs with constant coefficients.
- Evaluate IF and CF in all cases.
- Discuss the applications of Mathematics in other disciplines.
- Explain the concept of growth and decay, electric circuits and carbon dating etc.

## **COs for BSc-I Physics Syllabus (w.e.f. June 2020-21)**

### **DSC-A: Theory-I: Title: Mechanics and Properties of Matter.**

#### **Unit 1: Moment of Inertia**

- Student will acquire knowledge about Moment of Inertia, which will help him/her to analyse and evaluate MI with respect to mass, shape and dimensions of the body.

#### **Unit 2: Pendulums**

- Student will gain knowledge about oscillatory motion of a body, which will help him/her to analyse, synthesize, apply and evaluate the elastic properties of a body.

#### **Unit 3: Elasticity**

- Student will gain knowledge about elasticity of a body which will help him/her to analyse, apply and synthesize the elastic properties of a body.

#### **Unit 4: Surface Tension**

- Student will gain knowledge about pressure, temperature and ST and interrelation between them. On basis of this knowledge student will comprehend, apply, analyse and evaluate properties of fluids related to ST.

### **DSC-A Theory-II Title: Optics and LASER**

#### **Unit 1: Aberrations and Optical Instruments**

- Student will be able to comprehend, apply and evaluate the optical properties of light based on the knowledge gained on geometrical optics.

#### **Unit 2: Interference**

- Knowledge gained on interference of light will help the student to apply, analyse, synthesize and evaluate the light and medium properties.

#### **Unit 3: Diffraction**

- Student will gain knowledge about diffraction and will be able to apply, analyse and evaluate the properties of light and medium.

#### **Unit 4: LASER**

- Student will gain knowledge about LASER and will be able to apply, analyse and evaluate LASER and their properties.

### **DSC-B Theory-I Title: Heat and Thermodynamics**

#### **Unit 1: Transport Phenomenon**

- Student will be able to comprehend, apply and analyse the behaviour of gases based on temperature, viscosity and conductivity of the gases and medium.

#### **Unit 2: Liquification of Gases**

- Knowledge acquired on liquification of gases will help the student to apply, analyse, synthesize and evaluate phase change from gaseous state to liquid state.

#### **Unit 3: Thermodynamics**

- Knowledge gained about thermodynamics will help the student to comprehend, apply and evaluate the effect of temperature on the existence on physical state of body.

#### **Unit 4: Heat engines**

- Student will be able to apply, comprehend, analyse and evaluate heat engines.

### **DSC-B Theory-II Title: Electricity, Magnetism and Electronics**

#### **Unit 1: Varying Current**

- Student will apply, evaluate and analyse the functions, properties and use of DC signals.

#### **Unit 2: A.C. Circuits**

- Student will apply, analyse and evaluate the functions, properties and use of AC signals.

#### **Unit 3: Magnetostatics and Ballistic Galvanometer**

- Student will apply, analyse and evaluate the practical importance & drawbacks of magnetostatics.

#### **Unit 4: Semiconductor Devices and applications**

- Student will apply, analyse and evaluate the properties, applications & precautions while handling electronic devices.

### **DSC-A & DSC-B Practical-I**

#### **Group I – General Physics, Heat**

- Student will perform and demonstrate the experiment, apply, analyses and evaluate the experimental problems. He/She will also solve, comprehend and create practical demonstrations on experiments on Properties of Matter and Heat.

#### **Group II – Optics, Electricity and Electronics**

- Student will perform and demonstrate the experiment. He/She will apply, analyses and evaluate the experimental problems. They will also solve, comprehend and create practical demonstrations on experiments in Optics, Electricity and Electronics.

**BOS Chairman**  
**Physics Dept.**



# **Department of Zoology**

## **Course outcomes (COs)**

### **B.Sc.I Sem I**

#### **Course Title- Animal Diversity- I**

**Course Outcome:** Student is able to

1. describe general taxonomic rules on animal classification
2. classify Protista up to phylum using examples from parasitic adaptation
3. classify Phylum Porifera to Echinodermata with taxonomic keys
4. describe Phylum Nematoda and give examples of pathogenic Nematodes
5. describe Phylum Annelida and give examples of segmented animals, significant of segmentation and economic importance.
6. describe Phylum Arthropoda and economic importance.
7. describe Phylum Mollusca and economic importance and skill enhancement.
8. describe Phylum Echinodermata and water vascular system

#### **Course Title- Animal Diversity II**

**Course Outcome:** Student will be able to

1. imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment
2. classify phylum Protochordata to Mammalian
3. complex Vertebrate interactions
4. economic importance of fishes
5. parental care in Amphibians, different types of snakes, flight dynamism in birds, adaptive radiations in Mammals according to habit and habitat.

### **B.Sc.I Sem II**

#### **Course Title- Comparative Anatomy of Vertebrates**

**Course Outcome:** After successfully completing this course, the students will be able to:

1. Develop an understanding of the evolution of vertebrates thus integrating structure,
2. function and development.
3. Have an overview of the evolutionary concepts including homology and homoplasy,
4. and detailed discussions of major organ systems.
5. Understand how cells, tissues, and organisms function at different levels.

6. The course content also provides the basis of understanding the functioning of organs in animals and human being.
7. Develop an understanding of the related disciplines like histology, neurophysiology, pharmacology, biochemistry etc.
8. Get a flavor of research besides improving their writing skills and making them well
9. Versed with the current trends in life sciences.
10. It will further enable the students to think and interpret individually due to different aspects chosen.
11. Undertake research in any aspect of animal physiology in future.

### **Course Title- Developmental Biology of Vertebrates**

**Course Outcome:** After successfully completing the course, the students will be able to

1. Develop critical understanding how a single-celled fertilized egg becomes an
2. embryo and then a fully formed adult by going through three important processes of cell division, cell differentiation and morphogenesis.
3. Understand how developmental processes and gene functions within a particular tissue or organism can provide insight into functions of other tissues and organisms.
4. Realize that very similar mechanisms are used in very diverse organisms; and
5. Development is controlled through molecular changes resulting in variation in the expression and function of gene networks.
6. Understand how the field of developmental biology has changed since the
7. beginning of the 19th century with different phases of developmental research
8. Predominating at different times.
9. Examine the evolutionary history of the taxa based on developmental affinities.
10. Understand the relevance of developmental biology in medicine or its role in
11. Development of diseases.



# Sangameshwar College (Autonomous), Solapur

## Department of Marathi

### COs & PSOs

#### FACULTY OF ARTS & HUMANITIES

#### B.A. MARATHI

#### Programme Specific Outcomes

After successful completion of three year B.A. Marathi Programme, the graduate will be able to:

PSO1: Develop interest to appreciate beauty of language and literature .

PSO2: Able to analyse critically the values of life and literature. .

PSO3: Effectively Communicate and create in Marathi language.

PSO1: भाषा आणि साहित्याचे आकलन आणि आस्वादन करतील.

PSO2: साहित्याची समीक्षा करण्यास सक्षम झालेले असतील.

PSO3: मराठी भाषेतून प्रभावी संवाद आणि कला निर्मिती करतील.

#### Programme : Bachelor of Arts Marathi

#### I Semester

Course Title	Course Outcome
<b>COMPULSORY MARATHI -I</b>	<ol style="list-style-type: none"><li>१ मराठी गद्य व पद्य वाङ्मयाची प्राथमिक ओळख होईल.</li><li>२ मराठी गद्य व पद्याच्या भाषेचे विविधांगी स्वरूप समजेल.</li><li>३ विद्यार्थ्यांना भाषा अभिव्यक्तीचे महत्त्व समजेल.</li><li>४ भाषण कौशल्य आत्मसात होऊन तो स्पर्धामध्ये भाग घेईल.</li><li>५ विद्यार्थ्यांमधून व्यावसायिक सूत्रसंचालक तयार होतील.</li><li>६ मराठी लेखनात विरामचिन्हांचा योग्य वापर करता येईल.</li></ol>
<b>OPTIONAL MARATHI-I</b>	<ol style="list-style-type: none"><li>१. विद्यार्थ्यांना मराठी कथा वाङ्मयाची ओळख होईल.</li><li>२. मराठी कथाकार व कथांचे विविधांगी स्वरूप समजेल.</li><li>३. व्यक्तिगत व कार्यालयीन पत्रव्यवहार करण्याचे ज्ञान मिळेल.</li><li>४. कार्यालयातील आवक जावक नोंदवहीचे लेखन करता येईल.</li><li>५. विद्यार्थ्यांना टिप्पणी लेखनाचे ज्ञान मिळेल.</li><li>६. मराठी कवितेचा परिचय होईल.</li><li>७. कवींच्या कवितांचा आस्वाद घेता येईल.</li><li>८. मराठी कवितांचे लेखन करण्याची प्रेरणा मिळेल.</li><li>९. विद्यार्थी मराठी भाषेचा संगणकीय वापर करतील.</li><li>१०. इंटरनेटच्या माध्यमातून मराठी भाषेची विविध कौशल्ये आत्मसात होतील.</li></ol>

## II Semester

Course Title	Course Outcome
<b>COMPULSORY MARATHI -II</b>	<p>१ मराठी गद्य व पद्य वाङ्मयाची प्राथमिक ओळख होईल.</p> <p>२ मराठी गद्य व पद्याच्या भाषेचे विविधांगी स्वरूप समजेल.</p> <p>३ विद्यार्थ्यांना भाषा अभिव्यक्तीचे महत्त्व समजेल.</p> <p>४ भाषण कौशल्य आत्मसात होऊन तो स्पर्धामध्ये भाग घेईल.</p> <p>५ विद्यार्थ्यांमधून व्यावसायिक सूत्रसंचालक तयार होतील.</p> <p>६ मराठी लेखनात विरामचिन्हांचा योग्य वापर करता येईल.</p>
<b>OPTIONAL MARATHI-II</b>	<p>११. विद्यार्थ्यांना मराठी कथा वाङ्मयाची ओळख होईल.</p> <p>१२. मराठी कथाकार व कथांचे विविधांगी स्वरूप समजेल.</p> <p>१३. व्यक्तिगत व कार्यालयीन पत्रव्यवहार करण्याचे ज्ञान मिळेल.</p> <p>१४. कार्यालयातील आवक जावक नोंदवहीचे लेखन करता येईल.</p> <p>१५. विद्यार्थ्यांना टिप्पणी लेखनाचे ज्ञान मिळेल.</p> <p>१६. मराठी कवितेचा परिचय होईल.</p> <p>१७. कवींच्या कवितांचा आस्वाद घेता येईल.</p> <p>१८. मराठी कवितांचे लेखन करण्याची प्रेरणा मिळेल.</p> <p>१९. विद्यार्थी मराठी भाषेचा संगणकीय वापर करतील.</p> <p>इंटरनेटच्या माध्यमातून मराठी भाषेची विविध कौशल्ये आत्मसात होतील.</p>

# **Department of Geography**

**B. A. I**

**SEM I**

## **PAPER I- Geomorphology**

- Understand physical, social, Economic and environmental perspectives.
- Remember study the earth movements
- Compare geomorphic Processes such as weathering, mass wasting etc.
- Understand the methods of representation of relief.
- Compare the evolution of Landforms.

**B. A. I**

**SEM II**

## **PAPER II- Human Geography**

1. To Understand Origin of Human Geography
2. To study the human race.
3. To analyze the population growth and distribution.
4. To study the methods of representation of population data

**B. Sc I**

**SEM I**

## **PAPER I- Geomorphology-1**

- Demonstrate concepts of Geomorphology
  - Remember the Interior Structure of the earth.
  - Classify Rocks and explain its characteristics
  - Compare the earth movements
- ## **PAPER II- Geomorphology-2**
- Demonstrate concepts of **Geomorphic Process**
  - Remember the Concept and cycle of Erosion
  - Understand concept and Cycle of Erosion • Compare the **erosional and depositional**

**B. Sc I**

**SEM II**

## **PAPER III- Human Geography-1**

- Understand concept of Human Geography
- Classify and Compare race
- Analyze the Human Culture through religious and language group in the world

- Compare the tribes in cold desert and mountain region

#### **PAPER IV- Human Geography-2**

- Understand concept of population
- Compare growth and distribution of population
- Compare rural and urban settlements
- Classify Factors affecting on Agriculture
- Solve the Problems of Agriculture

#### **Practical paper No. 1**

- Construct proper map through cartographic techniques and tools.
  - Make use of proper Map Scale
- Construct and classify Projection of Maps

#### **Practical paper No. 2**

- Construct proper map through cartographic techniques and tools.
- Make use of proper Statistical Data and methods
- Remember the concept of Remote Sensing

# Department of BCA

## I Semester

Course Title	Course Outcomes
Fundamental of computer	CO1: Compare computer generations. CO2: Explain block diagram of CPU and its working. CO3: Describe computer memory. CO4: Use various types of Input/Output devices, Computer language ,software and its types. CO5: Explain computer network and protocol.
Logic Development with C Programming.	CO1: Design algorithms and flowcharts . CO2: Explain data types ,operators and expressions. CO3: Use IDE to write ,compile, run and test C programs.
Web Programming-I	CO 1: Analyze a web page and identify its elements and attributes. CO 2: Produce web pages using HTML and Cascading Style Sheets. CO 3: Explore examples of coding practice and web site design. CO 4: Utilize their design skills to create a professional website.
Software Engineering-I	CO1: Explain Basic Software Engineering Methods and their applications
	CO2: Find Software requirement to build an applications
	CO3: State Software Process model such as waterfall, spiral models
	CO4: Produce Reliable, robust and cost effective softwares
Discrete Mathematics	CO1: Illustrate relations between two sets and determine if the relation is a partial order relation or an equivalence relation using set operations.
	CO2 : Demonstrate the concepts of set theory, partition of sets, inclusion and exclusion principles.
	CO3: State an argument using logical notation and determine if the argument is valid or invalid.
	CO4: Examine whether the function is invertible or not and find the inverse of the
Statistical Methods-I	CO1: Explain the concepts of population and various sampling methods for data collection.

	CO2: Tabulate statistical information given in descriptive form and to use various graphical techniques to interpret the data.
	CO3: Learn the notion of measures of central tendency and dispersion.
	CO4: Describe the concept of bivariate data and its analysis.
Digital Electronics	CO1: Learn Different number systems and their conversion CO2: Explain different minimization techniques such as applying Boolean laws and K-map CO3: Learn implementation and working of combinational circuits CO4: Explain implementation and working of sequential circuits
Operating System-I	CO1: Learn the importance of OS in computer system and compare different types of OS CO2: Discuss the process and process life cycle CO3: Learn different process scheduling algorithms CO4: Understand how processes are synchronized in OS

## II Semester

Course Title	Course Outcomes
Office Automation	CO1: Create, edit ,save and print documents with list ,tables, header , footer, graphic, spellchecker and mail merge. CO2: Prepare documents and small presentations. CO3: Acquire knowledge of spreadsheets with formulas. CO4: Apply different operations on sheets such as sorting ,filtering , validation and subtotal
Advanced Programming in C	CO1: Develop reusable modules(functions) CO2: Develop programs using functions ,pointers ,and macros . CO3: Implement program by using dynamic memory allocation. CO4: Analyze the structure and union concepts by developing programs. CO5: Develop mini projects by using file handling and graphic concept.
Web Programming -II	CO1: Construct dynamic web pages using JavaScript (Client-side programming). CO2: Produce XML documents.



	CO3: Design web pages using HTML tags and JavaScript. CO4: Apply their design skills to create a professional website using Bootstrap.
Software Engineering-II	CO1:Design ERD and DFD for Any System.
	CO2:Explain different System development tool using examples
	CO3:Apply white and black block testing in their system.
	CO4:Describe the concepts of Consruction of any system.
Graph Theory	CO1:State the concept of graphs, enumerate the types of graphs and their applications in practical situations CO2:Acquire the concepts of subgraph and draw or perform union, intersection and ring sum of graphs. CO3:Demonstrate comprehension of discrete structure and their relevance within the context of computer science, in the areas of data structures and algorithms. CO4:Describe the concepts and properties of trees.
Statistical Methods-II	CO1: Explain basic difference between discrete and continuous random variables CO2: Learn fundamental aspects of probability theory with its applications CO3: Describe special discrete and continuous distributions with their properties CO4: Estimate parameters of distribution with real life data
Microprocessor	CO1: Identify a detailed software and hardware structure of the Microprocessor. CO2: Develop programs for microprocessor and microcontrollers CO3: Illustrate how the different peripheral interfaces IC 8255, 8253 are interfaced with the Microprocessor. CO4:Enhance their practical knowledge through laboratory experiments
Operating System II	CO1:Explain causes of deadlock and how to solve deadlock problems. CO2:Describe the memory management CO3:Summarize process criteria in a system CO4:implement file system, file handling and file management in OS

## Course outcomes of BBA Part I & II

BBA FIRST YEAR		
SEMESTER I		
Course Code	Course Title	CO's
AECC 1	Business Communication –I	<ul style="list-style-type: none"> <li>• Explain the process of communication, channels and barriers of communication</li> <li>• Explain the principles of effective written communication</li> <li>• Effectively use writing skills to draft Business Letters and Emails</li> <li>• Effectively use writing skills to draft reports, notice, agenda and minutes of meeting</li> <li>• Analyze a business case study and think about the best possible solution</li> </ul>
CC 1	Principles of Management – I	<ul style="list-style-type: none"> <li>• Explain the principles of management and compare contribution of managerial scientists</li> <li>• Describe the planning and decision making process</li> <li>• Explain the process of organizing and authority delegation</li> <li>• Describe the importance of decentralization and co-ordination</li> <li>• Explain the similarities and difference in business management practices applied in various countries as compared to India.</li> </ul>
CC 2	Accounting for Business - I	<ul style="list-style-type: none"> <li>• Explain the meaning and importance of Bookkeeping and Accounting</li> </ul>

		<ul style="list-style-type: none"> <li>• Explain the accounting concepts, principles, conventions and standards</li> <li>• Prepare the Trial Balance</li> <li>• Calculate the Depreciation using straight line and reducing balance method</li> <li>• Prepare the Final Accounts for Sole Proprietor</li> </ul>
CC 3	Business Economics –I	<ul style="list-style-type: none"> <li>• Understand the various business decisions and basic concepts of micro and macroeconomics</li> <li>• Explain how consumer behaviour shapes the demand curve with respect to utility</li> <li>• Measure how changes in price and income affect the behaviour of buyers and sellers</li> <li>• Analyze the relationship between inputs used in production and the resulting outputs</li> <li>• Understand pricing and output decisions under various market structures</li> </ul>
CC 4	Business Organisation & Environment- I	<ul style="list-style-type: none"> <li>• Describe the economic and social objectives of business. Explain the impact of industrial revolution.</li> <li>• Distinguish between the various forms of business organization.</li> <li>• Explain the factors that influence the choice of a suitable form of business organization.</li> <li>• Explain the different types of trade. Appreciate the services of wholesalers and retailers.</li> <li>• Examine the role of various auxiliaries in facilitating trade</li> </ul>

		<ul style="list-style-type: none"> <li>• Elaborate the applications of technology in business. Examine the scope of outsourcing and appreciate its need.</li> </ul>
CC 5	IT for Management – I	<ul style="list-style-type: none"> <li>• Explain the input, output devices of computer and know the internal and external memory components.</li> <li>• Describe the functions of operating systems and know the concept of application software.</li> <li>• Draft a document in Word file by applying various formatting tools.</li> <li>• Use the Excel Sheet for drawing customized tables by applying various tools.</li> <li>• Prepare PowerPoint Slides for presentation using various tools</li> </ul>
<b>BBA Sem II</b>		
AECC 2	Business Communication – II	<ul style="list-style-type: none"> <li>• Explain the principles of effective oral communication.</li> <li>• Effectively use oral skills during interviews and group discussions.</li> <li>• Effectively apply oral skills during presentations.</li> <li>• Observe and apply the non-verbal modes of communication.</li> <li>• Explain the various technologies used in communication</li> </ul>
CC 1	Principles of Management – II	<ul style="list-style-type: none"> <li>• Explain the process of staffing and the importance of directing and supervising.</li> <li>• Explain the process and techniques of motivation.</li> </ul>

		<ul style="list-style-type: none"> <li>• Describe the importance of leadership and various leadership styles.</li> <li>• Explain the process and techniques of controlling.</li> <li>• Justify the importance of doing business ethically</li> </ul>
CC 2	Accounting for Business - II	<ul style="list-style-type: none"> <li>• Prepare the Cost Sheet by classifying various cost elements.</li> <li>• Calculate stock levels of Materials, prepare the stock ledger.</li> <li>• Compute wages under various Remuneration system &amp; Incentive schemes.</li> <li>• Compute the Machine Hour Rate in the process of overhead distribution.</li> <li>• Understand the usefulness of Marginal Costing in calculating Break-even point</li> </ul>
CC 3	Business Economics –II	<ul style="list-style-type: none"> <li>• Explain the basics of Macro Economics with its objectives.</li> <li>• Describe the challenges faced by Indian economy in its Economic Development.</li> <li>• Describe the functions of commercial banks, central bank and the objectives of monetary policy.</li> <li>• Understand the management of public revenue and expenditure.</li> <li>• Explain the importance of investment in human capital for economic growth and development.</li> </ul>
CC 4	Business Organisation & Environment- II	<ul style="list-style-type: none"> <li>• Brief out an overview about the environment in which the business works.</li> </ul>

		<ul style="list-style-type: none"> <li>• Explain how the economic environment affects the working of a business.</li> <li>• Explain how the technological environment affects the working of a business.</li> <li>• Explain how the social and cultural environment affects the working of a business. Elaborate the concept of Corporate Social Responsibility.</li> <li>• Explain how the political and legal environment affects the working of a business and what are the benefits of good corporate governance</li> </ul>
CC 5	IT for Management – II	<ul style="list-style-type: none"> <li>• Explain the data communication channels and basics of networking in business environment.</li> <li>• Describe the importance of Management Information System in business.</li> <li>• Understand the various types of information systems with their applications.</li> <li>• Identify how the information system is applied in business.</li> <li>• Explain the applications of E-commerce and M-Commerce in business.</li> </ul>
<b>BBA SECOND YEAR</b>		
<b>SEMESTER III</b>		
CC 6	Statistics for Business Research – I	<ul style="list-style-type: none"> <li>• Explain the meaning, process and the criteria required for good research.</li> <li>• Develop understanding about types of research, research designs and how good research design Should be.</li> </ul>

		<ul style="list-style-type: none"> <li>• Explain what a sample is, what are the various methods of sampling and also, he will be able to Identity primary &amp; secondary sources of data.</li> <li>• Develop the understanding of scaling techniques and its usefulness.</li> <li>• Prepare their own research report.</li> </ul>
CC 7	Foundation of Human Skills – I	<ul style="list-style-type: none"> <li>• Understand the importance of Soft skills and how to practice soft skills.</li> <li>• Understand SWOT analysis and its importance.</li> <li>• Understand the factors affecting individual behavior.</li> <li>• Understand the importance of Emotional intelligence.</li> <li>• Do effective time management and will also be able to manage stress effectively.</li> </ul>
CC 8	International Business – I	<ul style="list-style-type: none"> <li>• Students will develop real expertise in one of the basic areas of business.</li> <li>• Students will develop knowledge of international politics, economics, and culture.</li> <li>• Explain business expansion abroad and key issues related to their operations in other countries.</li> <li>• Be able to indicate problem issues within international business and/or innovation and entrepreneurship, analyze these issues, draw conclusions.</li> <li>• Students will have an understanding of global perspectives</li> </ul>

CC 9	Entrepreneurship Development -I	<ul style="list-style-type: none"> <li>• Aware of different opportunities and successful growth stories.</li> <li>• Learn how to start an enterprise and design business plans those are suitable for funding by considering all dimensions of business.</li> <li>• Understand entrepreneurial process by way of studying different case studies and find exceptions to the process model of entrepreneurship.</li> <li>• Run a small enterprise with small capital for a short period and experience the science and art of doing business.</li> </ul>
CC 10	Management Accounting - I	<ul style="list-style-type: none"> <li>• Understand the meaning and scope of Management Accounting.</li> <li>• Understand the role of Management in Decision- Making Process.</li> <li>• Understand the most powerful tool in management accounting; how changes in both fixed, variable cost and change in volume affects the organization profit.</li> <li>• Prepare various types of budgets which will be a helpful method in financial business planning for future.</li> </ul>
GE 1A	Financial Services	<ul style="list-style-type: none"> <li>• Describe the importance of financial literacy add list out institutions providing financial services.</li> <li>• Open, avail and manage/operate services offered by banks.</li> <li>• Open, avail and manage/operate services offered by Post office.</li> </ul>



		<ul style="list-style-type: none"> <li>Plan for life insurance and property insurance</li> </ul>
GE 1 A	English	<ul style="list-style-type: none"> <li>Knowing the role that each word has in a sentence structure clearly helps to understand sentences and also to construct them properly.</li> <li>Demonstrate an understanding of more complex grammatical structures in conversations and discussions. In addition, students will begin to initiate and sustain conversations and discussions.</li> <li>Identify the verb and tense in a sentence, also be able to speak and write a sentence using the past, present, or future tense.</li> <li>Articulate how adverbs modify verbs, also helps to frame common everyday words with the help of phrasal verbs.</li> <li>Helps the learner to write error-free text and also helps to understand the message that is being conveyed. Punctuation refers to all the symbols that enhance sentences and add clarity.</li> </ul>
SEC 1	Business Plan Project	<ul style="list-style-type: none"> <li>Project work</li> </ul>
<b>Semester IV</b>		
CC 6	Statistics for Business Research – II	<ul style="list-style-type: none"> <li>Classify, prepare, and present the data in tabular format.</li> <li>Do Graphical presentation of data by locating mode on histogram &amp; median on Ogive.</li> <li>Explain the various measures of central tendencies and their properties.</li> </ul>

		<ul style="list-style-type: none"> <li>Find the degree &amp; direction of correlation between comparable variables which will help them to predict, plan &amp; control business activities in future</li> </ul>
CC 7	Foundation of Human Skills – II	<ul style="list-style-type: none"> <li>Understand the importance of body language &amp; etiquette.</li> <li>Develop a good attitude &amp; understand types of Organizational Attitude.</li> <li>Understand the importance of group behavior &amp; team building.</li> <li>Develop problem solving techniques &amp; understand difference between Bio data &amp; CV.</li> <li>Understand the concept, dimensions &amp; determinants of organizational climate.</li> </ul>
CC 8	International Business – II	<ul style="list-style-type: none"> <li>Students will develop real expertise in one of the basic areas of business.</li> <li>Students will develop knowledge of international politics, economics, and culture.</li> <li>Explain business expansion abroad and key issues related to their operations in other countries.</li> <li>Be able to indicate problem issues within international business and/or innovation and entrepreneurship, analyze these issues, draw conclusions.</li> <li>Students will have an understanding of global perspectives</li> </ul>
CC 9	Entrepreneurship Development -II	<ul style="list-style-type: none"> <li>Have the ability to discern distinct entrepreneurship traits.</li> </ul>

		<ul style="list-style-type: none"> <li>• Know the parameters to assess opportunities and constraints new business.</li> <li>• Understand the systematic process to select and screen a business idea.</li> <li>• design strategies for successful implementation of ideas.</li> <li>• To write a business plan</li> </ul>
CC 10	Management Accounting - II	<ul style="list-style-type: none"> <li>• Understand the meaning of standard costing as a control device highlighting activities that are not according to the plan and alerting management for corrective measure.</li> <li>• Prepare statement showing change in working capital and prepare of funds flow statement.</li> <li>• Classify the Cash Flow into Operating Activity, Financing Activity &amp; Investing activity. Also, the students will be able to prepare a Cash Flow Statement.</li> <li>• Understand the importance of Management Information System, type of reports, various levels of management.</li> </ul>
GE 2	Taxation	<ul style="list-style-type: none"> <li>• Understand the various concepts in taxation, tax slabs and deductions available.</li> <li>• Evaluate the residential status of an Individual. Compute the taxable income of an individual. Understand the meaning of Short term &amp; Long-term Capital Gains.</li> <li>• Understand the genesis/meaning of GST and the Four tier GST rate structure.</li> </ul>

GE 2 B	Mind Management	<ul style="list-style-type: none"> <li>• Understand importance of body management techniques-asanas, Pranayama, Kriya.</li> <li>• Demonstrate postures of Hatha Yoga, Raja Yoga and Laya Yoga.</li> <li>• Interpret the significance of Meditation in business context.</li> <li>• Demonstrate asanas, pranayama and kriya with proficiency.</li> <li>• Summarize the importance of Ayurveda in modern lifestyle</li> </ul>
SEC 2	Market Survey Project	<ul style="list-style-type: none"> <li>• Project work</li> </ul>

## Department of ECS

Course Title	Course Outcomes
Fundamental of computer	CO1. Understand the History of Computers.
	CO2. Understand What is Computer and Basic concepts of computer.
	CO3. Aware about various types of Computers, types of input and output devices.
	CO4. Understand the basics of Computer Networks
	CO5. Awareness of Internet and Search Engines
Office Automation	CO1.Students will learn computer applications from basics to advance
	CO2.Office Automation Will help the students in documenting the reports.
	CO3.With the help of Office automation students can perform accounting operations
	CO4.It will help to learn presentation skills
	CO5.Using open source applications
Logical Development with 'C' Programming	CO1.Acquire the knowledge of how to write algorithm, flowchart and pseudo code of given problem
	CO2.Acquire the basic knowledge of data types, operators and expressions.
	CO3.Implement the Program by using conditional Statement and looping Statement.
	CO4.Describe the concept of Array and it's types and develop the program by using Array.
	CO5.Perform operations on String by using String handling functions.
Advanced Programming in 'C'	CO.1 Acquire the knowledge of functions and types of functions and develop the Illustrate the different types of storage classes.
	CO2.Explain pointer and it's types and Develop the program by using pointer.
	CO3.Implement the program by using dynamic memory allocation.
	CO4.Develop mini-project by using File handling and graphics concepts.
Discrete Structure	CO1.Seek the knowledge of set theory, partition of sets, inclusion and exclusion principles.
	CO2.State the concept of graphs, enumerate the types of graphs and their applications in practical situations.
	CO3.Acquire the concepts of subgraph and draw or perform union, intersection and ring sum of graphs.
	CO4.Demonstrate comprehension of discrete structure and their relevance within the context of computer science, in the areas of data structures and algorithms.
	CO5.Describe the concepts and properties of trees.
Numerical Methods	CO1.Solve the system of linear equations by using Gauss elimination and Jordan method.
	CO2.Investigate and find the solution of nonlinear equations using different numerical methods (Bisection method, Regula Falsi method, Newton Raphson method) under different conditions and Compare

	different methods in numerical analysis w.r.t accuracy and efficiency of solution.
	CO3.Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
	CO4.Demonstrate the ability to interpret a differential equation qualitatively and Solve a variety of differential equations analytically and numerically. Using appropriate numerical methods determine the approximate solution of ODE and system of linear equations.
Linear Electronics - I	CO1.Acquire concepts of Basic Electrical signals
	CO2.Describe the working of basic electronics components
	CO3.Classify the different networks theorems and use of it
	CO4.Acquire basic knowledge on the working of various semiconductor devices
	CO5.Develop analysis capability in BJT and FET Amplifier Circuits
Digital Electronics	CO1.Covert one number system into another Number system
	CO2.Write the working of different Logic gates and construction universal building blocks using NAND and NOR gates
	CO3.Describe the use of Boolean and K Map simplification methods
	CO4.Construct basic combinational circuits and verify their functionalities
	CO5.Differentiate between combinational and sequential logic circuits C
	CO6.Design of Counters and Register

## Semester II

Course Title	Course Outcomes
Web Technology-I	CO1.Understand the basic principles and standards of standard web design
	CO2.Understand how to design websites with different website development models.
	CO3.Know the different page types on websites and its navigations.
	CO4.Designing websites using HTML and CSS
Web Technology-II	CO1.understand Javascript and increase the interactivity of their website.
	CO2.understand how to solve practical web design problems.
	CO3.understand how to use jQuery to create effective scripts to improve the end-user experience.
	CO4.understood how to publish and host the developed websites
Object Oriented Programming - I	CO1.Acquire the knowledge of object Oriented Concept.
	CO2.Explain the difference between Procedure oriented Programming and Object Oriented programming.
	CO3.Describe the concept of function overloading, Parameter passing methods

	C04.Acquire the knowledge of access specifier,static data member, static member function and Write the effective program with the help of these concepts.
	co5. Demonstrate the use of constructor and destructor with the help of program.
Object Oriented Programming - II	C01.Acquire the knowledge of operator overloading and overload different types of binary and unary operators in Program.
	C02.Develop reusable programs using the concepts of Inheritance and Polymorphism.
	C03.Classify the different types of inheritance and use them in Program.
	C04.Demonstrate the concept of virtual function and pure virtual function with the help of Program.
	C05.Handle the run time error by using exception handling mechanism and develop Generic Programming with the help of class and function template.
Mathematical Algebra	C01.Prove formulas that are valid for all $n \in \mathbb{N}$ by using the principle of mathematical induction.
	C02.Illustrate relations between two sets and determine if the relation is partial order relation or equivalence relation using set operations.
	C03.Determine whether the function is one-one, onto and inverse of function.
	C04.State an argument using logical notation and determine if the argument is valid or invalid.
Operational Research	C01.Explicate the Operations Research, Linear Programming Problem and explain the methods of solving Solution of LPP using Graphical Method, Simplex method.
	C02.Solve Transportation and Assignment problems.
	C03.Develop linear programming (LP) models for shortest path, assignment problem and transportation problems.
	C04.Discern the mathematical tools that are needed to solve optimization problems.
Linear Electronics - II	C01.Describe the types of Multivibrator,Oscillators
	C02.Illustrate operational amplifiers characteristics and its various applications
	C03.Identify and describe various Audio and video devices and its applications
	C04.Describe various sensors working and uses of it in real world
	C05.Identify different brush and brushless motors
Digital Electronics and Microprocessor	C01.Describe basic building of PLD devices
	C02.Describe basic principles of analog-to-digital (AD) - and digital-to-analog (DA) conversion
	C03.Classify different memory devices in context to speed, Storage capacity and working principle
	C04.Explain Internal blocks and architectures of microprocessors
	C05.Use various instruction of 8085 in ALP programming
	C06.Write Data transfer, Arithmetics and Logical ALP programming