

## **2.6 Student Performance and Learning Outcomes**

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

- Program Outcomes (POs): It represents the knowledge, skills and attitude that the students should have at the end of a course completion of their respective program with divisional, institutional goals at the degree level expectations established by the university.
- Course Outcomes (COs): It gives the resultant knowledge and skills the student acquires at the end of each course. It defines the cognitive processes a course provides. The course outcomes will specify what expectations a student has for the course.
- Program Specific Outcomes (PSOs ): These are statements that defines outcomes of a program which make students realize the fact that the knowledge and techniques learnt

## **DEPARTMENT OF ENGLISH**

### **B.Sc., BCA, B.Com, BBA, BA and BA Optional English**

#### **Program Specific Outcomes**

PSO-1 To enable the students to read English with the facility of a digital language lab.

PSO-2 To understand spoken English as used by the facilitator in the classroom.

PSO-3 To be able to obtain writing skills - write notes and to write well enough to use it as his/her medium of expression in examination

PSO - 4 To enable the students to use language effectively so that he/she can pursue his/her studies further.

PSO - 5 To equip the students with the communicative skills he/she is likely to need in the occupation or the vocation he/she opts for

PSO-6 The language lab established with the objective of upgrading the students' approach in gaining productive language skills.

PSO-7 The software 'Clear Pronunciation' has been helpful for the students to explore many learning methods to understand, practice and master the language

#### **Course Outcomes**

CO-1 An introduction to the scope of corpus, including its chronological and geographical breadth.

CO-2 A basic knowledge and understanding of the principal genres of literature in English including drama, short fiction novels and a variety of forms of verse.

CO-3 The course prepares the students to meet the challenges of the competitive world.

CO-4 The practical work improves their communication and writing skills and at the same time equips them with the use of the modern forms of communication to learn, speak, read and finally write well structured coherently well presented assignments.

CO-5 Develop the linguistic skills required in the close analysis of individual words and other texts. And develop vocabulary relevant to the subject.

CO-6 Demonstrates the ability to use the primary and secondary sources through independent reading as supportive documents in exploring evidence of language change and the ideology that has influenced the development of the English.

## **General English (B.SC and BCA I, II, III)**

CO-1 The main purpose of the course is to cultivate literary sensibility in students and also to sensitize them to social concerns which would help students to interpret literature as a form of cultural expression

## **General English (B.Com and BBA I, II, III)**

CO-1 The course is designed with the integrated approach to facilitate language learning, to stimulate the literary sensibility and help the students in acquiring the skills required in the global job scenario

## **General English (BA I, II, III)**

CO-1 The main purpose of this course is to equip the students with nuances of the English language which includes proficiency in grammar, its effective usage in speaking writing and to keep up with the increasing demand for English at global level

## **Optional English (BA I, II, III)**

CO-1 To familiarize the students with general trends, themes and concerns of transition period, Romantic period, Medieval period and concepts like postmodernism, literary criticism. To address the felt need of the students and enhance their spoken and written communication skills

# **DEPARTMENT OF KANNADA**

## **Program - BA**

### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in Communication Skills, Reading Skills and Writing Skills effectively as professionals and continue learning within the field of Kannada Language and Literature.

PSO-2. Gain specific knowledge of Poetry, Prose, Drama and Short Stories of the Language and Literature in the field of Kannada as a Second Language.

PSO-3. Students get expertise in Letter Writing, Note Making, Paragraph Writing, Paragraph Translation, Short note.

### **Course Outcomes**

CO-1 Expertise in the basic knowledge in kannada language and literature and to provide proficiency to the other subject students in second language kannada like B.A with opportunities for Higher Education and also employment opportunities in research.

CO-2 To provide knowledge in Regional Language Kannada in the field of arts and literature.

CO-3 Mass Communication, Journalism, Literary research and Criticism are also thought to make the students employable.

## **Program - BBA**

### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in Communication Skills, Reading Skills and Writing Skills effectively as professionals and continue learning within the field of Kannada Language and Literature.

PSO-2. Gain specific knowledge of Poetry, Prose, Drama and Short Stories of the Language and Literature in the field of Kannada as a Second Language.

PSO-3. Students get expertise in Letter Writing, Note Making, Paragraph Writing, Paragraph Translation, Short note.

PSO-4 Some article enlighten the students about entrepreneurship environmental innovations

## **Course Outcomes**

CO-1 Expertise in the basic knowledge in kannada language and literature and to provide proficiency to the other subject students in second language kannada like BBA with opportunities for Higher Education and also employment opportunities in research.

CO-2 To provide knowledge in Regional Language Kannada in the field of arts and literature.

CO-3 Mass Communication, Journalism, Literary research and Criticism are also thought to make the students employable.

## **Programm BSC**

### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in Communication Skills, Reading Skills and Writing Skills effectively as professionals and continue learning within the field of Kannada Language and Literature.

PSO-2. Gain specific knowledge of Poetry, Prose, Drama and Short Stories of the Language and Literature in the field of Kannada as a Second Language.

PSO-3. Students get expertise in Letter Writing, Note Making, Paragraph Writing, Paragraph Translation, Short note.

PSO-4 Some article enlighten the students about entrepreneurship

PSO-5 Some articles provide information about Science & Society in relation to environmental innovations

## **Course Outcomes**

CO-1 Expertise in the basic knowledge in kannada language and literature and to provide proficiency to the other subject students in second language kannada like B.Sc with opportunities for Higher Education and also employment opportunities in research.

CO-2 To provide knowledge in Regional Language Kannada in the field of arts and literature.

CO-3 Mass Communication, Journalism, Literary research and Criticism are also thought to make the students employable.

## **Programm BCA**

### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in Communication Skills, Reading Skills and Writing Skills effectively as professionals and continue learning within the field of Kannada Language and Literature.

PSO-2. Gain specific knowledge of Poetry, Prose, Drama and Short Stories of the Language and Literature in the field of Kannada as a Second Language.

PSO-3. Students get expertise in Letter Writing, Note Making, Paragraph Writing, Paragraph Translation, Short note.

PSO-4 They can learn the kannada software also.

## **Course Outcomes**

CO-1 Expertise in the basic knowledge in kannada language and literature and to provide proficiency to the other subject students in second language kannada like BCA with opportunities for Higher Education and also employment opportunities in research.

CO-2 To provide knowledge in Regional Language Kannada in the field of arts and literature.

CO-3 Mass Communication, Journalism, Literary research and Criticism are also thought to make the students employable.

## **Program - BCOM**

### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in Communication Skills, Reading Skills and Writing Skills effectively as professionals and continue learning within the field of Kannada Language and Literature.

PSO-2. Gain specific knowledge of Poetry, Prose, Drama and Short Stories of the Language and Literature in the field of Kannada as a Second Language.

PSO-3. Students get expertise in Letter Writing, Note Making, Paragraph Writing, Paragraph Translation, Short note.

PSO-4 Students learn the business rules and regulations and to draft a business letter

### **Course Outcomes**

CO-1 Expertise in the basic knowledge in kannada language and literature and to provide proficiency to the other subject students in second language kannada like B.Com with opportunities for Higher Education and also employment opportunities in research.

CO-2 To provide knowledge in Regional Language Kannada in the field of arts and literature.

CO-3 Mass Communication, Journalism, Literary research and Criticism are also thought to make the students employable.

## **DEPARTMENT OF HINDI**

### **Program - BA**

#### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in communication skills, reading skills and writing skills effectively as professionals and continue learning within the field of Hindi language and literature.

PSO-2. Gain specific knowledge on poetry, prose, drama, novel, grammar of the language and literature in the field of Hindi as a second language.

PSO-3. Students get expertise in letter writing, Note making, paragraph writing, Translation and short note.

#### **Course Outcomes**

##### **I Semester - Title : PROSE**

CO 1.To help them learn the basic and fundamental concept of prose

CO 2. To help them know the different areas of prose genres through lessons

CO 3.To gain knowledge business letter draft in Hindi language

CO 4. To be acquainted with glossary of Hindi terminologies

CO 5. To equip them with skills to meet the challenges

CO 6. To help them to impart the knowledge in Hindi language

##### **II Semester - Title : POETRY**

CO 1. To comprehend literary texts of ancient and modern poetry written by great poets

CO 2. To inculcate the ethical values of life by Hindi literature

CO 3. To emphasize the narrative resurrection of Primeval reality through myth

CO 4. To relate there thoughts with the given literature

CO 5. To develop skills in Hindi grammar

##### **III Semester - Title : DRAMA**

CO 1. To classify different forms and styles used in Hindi Drama

CO 2. To critically evaluate drama

- CO 3. To sanitize them towards the issues happening in and around them
- CO 4. Aiming at enriching human excellence
- CO 5. To enrich knowledge communication through simple and effective conversation

#### **IV Semester - Title : NOVEL**

- CO 1. To classify different forms and styles used in Hindi novels
- CO 2. To teach the students the value of self- Reliance and service
- CO 3. To familiarise students with the Hindi literature
- CO 4. To emphasize them to give forms of literature to some other forms of art and to showcase the literature in other forms of art
- CO 5. To develop their translation skills

### **Program - BBA**

#### **Program Specific Outcomes**

- PSO-1. Students gain the master knowledge in communication skills, reading skills and writing skills effectively as professionals and continue learning within the field of Hindi language and literature.
- PSO-2. Gain specific knowledge on poetry, prose, drama, novel, grammar of the language and literature in the field of Hindi as a second language.
- PSO-3. Students get expertise in letter writing, Note making, paragraph writing, Translation and short note.

#### **Course Outcomes**

#### **I Semester - Title : PROSE**

- CO 1. To help them learn the basic and fundamental concept of prose
- CO 2. To help them know the different areas of prose genres through lessons
- CO 3. To gain knowledge business letter draft in Hindi language
- CO 4. To be acquainted with glossary of Hindi terminologies
- CO 5. To equip them with skills to meet the challenges
- CO 6. To help them to impart the knowledge in Hindi language

#### **II Semester - Title : POETRY**

- CO 1. To comprehend literary texts of ancient and modern poetry written by great poets
- CO 2. To inculcate the ethical values of life by Hindi literature
- CO 3. To emphasize the narrative resurrection of Primeval reality through myth
- CO 4. To relate their thoughts with the given literature
- CO 5. To develop skills in Hindi grammar

#### **III Semester - Title : DRAMA**

- CO 1. To classify different forms and styles used in Hindi Drama
- CO 2. To critically evaluate drama
- CO 3. To sanitize them towards the issues happening in and around them
- CO 4. Aiming at enriching human excellence
- CO 5. To enrich knowledge communication through simple and effective conversation

#### **IV Semester - Title : NOVEL**

- CO 1. To classify different forms and styles used in Hindi novels
- CO 2. To teach the students the value of self- Reliance and service
- CO 3. To familiarise students with the Hindi literature
- CO 4. To emphasize them to give forms of literature to some other forms of art and to showcase the literature in other forms of art
- CO 5. To develop their translation skills

### **Program - BSC**

### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in communication skills, reading skills and writing skills effectively as professionals and continue learning within the field of Hindi language and literature.

PSO-2. Gain specific knowledge on poetry, prose, drama, novel, grammar of the language and literature in the field of Hindi as a second language.

PSO-3. Students get expertise in letter writing, Note making, paragraph writing, Translation and short note.

### **Course Outcomes**

#### **I Semester - Title : PROSE**

CO 1. To help them learn the basic and fundamental concept of prose

CO 2. To help them know the different areas of prose genres through lessons

CO 3. To gain knowledge business letter draft in Hindi language

CO 4. To be acquainted with glossary of Hindi terminologies

CO 5. To equip them with skills to meet the challenges

CO 6. To help them to impart the knowledge in Hindi language

#### **II Semester - Title : POETRY**

CO 1. To comprehend literary texts of ancient and modern poetry written by great poets

CO 2. To inculcate the ethical values of life by Hindi literature

CO 3. To emphasize the narrative resurrection of Primeval reality through myth

CO 4. To relate their thoughts with the given literature

CO 5. To develop skills in Hindi grammar

#### **III Semester - Title : DRAMA**

CO 1. To classify different forms and styles used in Hindi Drama

CO 2. To critically evaluate drama

CO 3. To sensitise them towards the issues happening in and around them

CO 4. Aiming at enriching human excellence

CO 5. To enrich knowledge communication through simple and effective conversation

#### **IV Semester - Title : NOVEL**

CO 1. To classify different forms and styles used in Hindi novels

CO 2. To teach the students the value of self-Reliance and service

CO 3. To familiarise students with the Hindi literature

CO 4. To emphasize them to give forms of literature to some other forms of art and to showcase the literature in other forms of art

CO 5. To develop their translation skills

### **Program - BCA**

#### **Program Specific Outcomes**

PSO-1. Students gain the master knowledge in communication skills, reading skills and writing skills effectively as professionals and continue learning within the field of Hindi language and literature.

PSO-2. Gain specific knowledge on poetry, prose, drama, novel, grammar of the language and literature in the field of Hindi as a second language.

PSO-3. Students get expertise in letter writing, Note making, paragraph writing, Translation and short note.

#### **Course Outcomes**

#### **I Semester - Title : PROSE**

CO 1. To help them learn the basic and fundamental concept of prose

- CO 2. To help them know the different areas of prose genres through lessons
- CO 3. To gain knowledge business letter draft in Hindi language
- CO 4. To be acquainted with glossary of Hindi terminologies
- CO 5. To equip them with skills to meet the challenges
- CO 6. To help them to impart the knowledge in Hindi language

### **II Semester - Title : POETRY**

- CO 1. To comprehend literary texts of ancient and modern poetry written by great poets
- CO 2. To inculcate the ethical values of life by Hindi literature
- CO 3. To emphasize the narrative resurrection of Primeval reality through myth
- CO 4. To relate their thoughts with the given literature
- CO 5. To develop skills in Hindi grammar

### **III Semester - Title : DRAMA**

- CO 1. To classify different forms and styles used in Hindi Drama
- CO 2. To critically evaluate drama
- CO 3. To sensitise them towards the issues happening in and around them
- CO 4. Aiming at enriching human excellence
- CO 5. To enrich knowledge communication through simple and effective conversation

### **IV Semester - Title : NOVEL**

- CO 1. To classify different forms and styles used in Hindi novels
- CO 2. To teach the students the value of self-Reliance and service
- CO 3. To familiarise students with the Hindi literature
- CO 4. To emphasize them to give forms of literature to some other forms of art and to showcase the literature in other forms of art
- CO 5. To develop their translation skills

## **Program - BCOM**

### **Program Specific Outcomes**

- PSO-1. Students gain the master knowledge in communication skills, reading skills and writing skills effectively as professionals and continue learning within the field of Hindi language and literature.
- PSO-2. Gain specific knowledge on poetry, prose, drama, novel, grammar of the language and literature in the field of Hindi as a second language.
- PSO-3. Students get expertise in letter writing, Note making, paragraph writing, Translation and short note.

### **Course Outcomes**

#### **I Semester - Title : PROSE**

- CO 1. To help them learn the basic and fundamental concept of prose
- CO 2. To help them know the different areas of prose genres through lessons
- CO 3. To gain knowledge business letter draft in Hindi language
- CO 4. To be acquainted with glossary of Hindi terminologies
- CO 5. To equip them with skills to meet the challenges
- CO 6. To help them to impart the knowledge in Hindi language

#### **II Semester - Title : POETRY**

- CO 1. To comprehend literary texts of ancient and modern poetry written by great poets
- CO 2. To inculcate the ethical values of life by Hindi literature
- CO 3. To emphasize the narrative resurrection of Primeval reality through myth
- CO 4. To relate their thoughts with the given literature
- CO 5. To develop skills in Hindi grammar

#### **III Semester - Title : DRAMA**

- CO 1. To classify different forms and styles used in Hindi Drama

- CO 2. To critically evaluate drama
- CO 3. To sanitize them towards the issues happening in and around them
- CO 4. Aiming at enriching human excellence
- CO 5. To enrich knowledge communication through simple and effective conversation

#### **IV Semester - Title : NOVEL**

- CO 1. To classify different forms and styles used in Hindi novels
- CO 2. To teach the students the value of self- Reliance and service
- CO 3. To familiarise students with the Hindi literature
- CO 4. To emphasize them to give forms of literature to some other forms of art and to showcase the literature in other forms of art
- CO 5. To develop their translation skills

### **DEPARTMENT OF SANSKRIT**

**Program - B.A, B.Sc, B.Com, BCA**

#### **Program Specific Outcomes:**

- PSO-1 Students gain the master knowledge in communication skills, reading skills effectively as professionals and continue learning within the field of Sanskrit language and literature.
- PSO-2 Gain Specific knowledge on poetry, prose, drama, Neetisastra, grammar of the language and literature in the field of Sanskrit as a second language.
- PSO--3 Students have expertise in Grammar, comprehension, translation and short notes.

### **Course Outcome**

#### **I Semester - Title: Poetry**

- CO-1 : To comprehend literary texts of ancient poetry. Written by great poets.
- CO-2: To inculcate the ethical values of life.
- CO-3 : To emphasize a narrative resurrection of primeval reality through myth.
- CO-4 : To relate thoughts with the given literature.
- CO-5 : To develop skills in Sanskrit grammar and comprehension in Sanskrit.

#### **II Semester - Title: Prose**

- CO-1 : To help them learn the basics and fundamental concepts of prose.
- CO-2: To help them know the different areas of prose genres through lesson.
- CO-3: To be acquainted with glossary of Sanskrit terminologies.
- CO-4: To emphasize the skills in Sanskrit grammar and translation of Sanskrit passage into Kannada or English.
- CO-5: To equip them with skills to meet the challenges.

#### **III Semester - Title: Neeti Sastra**

- CO-1: to comprehend literature of ancient Neetisastra aurohoss written by different authors.
- CO-2: To help them know the different areas of Neetisastra.
- CO-3: To gain knowledge about yoga.
- CO-4: To help them know the different areas of Ayurveda.
- CO-5: to equip them with skills to meet the challenges.

#### **IV Semester - Title : Drama**

- CO-1 : to classify different forms and style used in Sanskrit drama.
- CO-2: To critically evaluate drama.
- CO-3: To sanitize them towards the issues happening in and around them.
- CO-4: To help them know the different areas of dramatic literature.
- CO-5: To equip them with Sarala Sanskrita vyakarana.



## DEPARTMENT OF PHYSICS

### Program Specific Outcome

At the end of the program:

PSO-1 Accumulation of facts, laws and principles of physics and the ability to link them to observe and discover the laws of nature i.e. develop an understanding and knowledge of the basic Physics.

PSO-2 Ability to use this knowledge to analyse new situations and learn skills and tools like mathematics, technology to find the solution, interpret the results and make predictions for the future developments.

PSO-3 Knowledge that creates different types of professionals related to the subject area of Physics, including professionals engaged in Research and Development in various sectors, Teaching and Government/Public service.

### Course Outcomes

#### SEMESTER - I & II

##### PAPER - MECHANICS AND THERMODYNAMICS

**On successful completion of the course the student will be able to**

CO-1 Understand gas laws and various terms/definitions of thermodynamics.

CO-2 Understand Laws of thermodynamics and their applications.

CO-3 Understand the concept of heat engine/refrigerator/heat pump.

CO-4 Classify various types of Engines- Petrol and diesel cycles.

CO-5 Understand phase transitions in substances.

CO-6 Identify mechanisms in real life applications.

CO-7 Perform kinematic analysis of simple mechanisms.

CO-8 Analyse velocity and acceleration of mechanisms by vector and graphical methods.

#### SEMESTER - III

##### PAPER - ELECTRICITY & MAGNETISM

**On successful completion of the course the student will be able to**

CO-1 Possess adequate knowledge to analyse electrical circuit using Kirchoff's laws and network theorems.

CO-2 Understand the phenomenon of Seebeck Effect and apply the concept of Thermo EMF wherever suitable.

CO-3 Demonstrate magnetic field of electric current/ electro magnetic induction through proper understanding.

#### SEMESTER - IV

##### PAPER - OPTICS, LASERS AND FIBER OPTICS

**On successful completion of the course the student will be able to**

CO-1 Understand principle of wave motion and super position to explain the physics of interference, diffraction and polarization.

CO-2 Explain various kinds of interaction of radiation with matter.

CO-3 Understand basic Laser principles, Properties of laser, Different types of Lasers and Laser applications.

CO-4 Understand the basics of modern optics like fibre optics (Optical Fibres) and its applications in communication systems.

## **SEMESTER - V**

### **PAPER - V : STATISTICAL, ATMOSPHERIC PHYSICS, QUANTUM MECHANICS -I AND NANO-MATERIALS**

On successful completion of the course the student will be able to

CO-1 Understand basic ideology of phase space, microstate, macrostate.

CO-2 Understand the concept of Thermodynamic Probability and equilibrium state of a system

CO-3 Apply the statistical distribution in real life problems and understand their problems.

CO-4 Gain the knowledge of wave properties of particle, deBroglie's waves and its application on the uncertainty principle.

CO-5 Explain various synthesis and Characterization Techniques for nanomaterials.

## **SEMESTER - V**

### **PAPER - VI : ASTRO, SOLID STATE AND SEMICONDUCTOR PHYSICS**

On successful completion of the course the student will be able to

CO-1 Gain a peripheral idea about astronomy and astrophysics (stars, galaxies, constellations etc.,)

CO-2 Gain understanding of the crystal lattice and how the main lattice types are described.

CO-3 Understand the use of X-ray diffraction measurements in determining crystalline structures.

CO-4 Explain the experimental facts of superconductors- zero resistivity, Meissner effect, critical field, critical current density.

## **SEMESTER - VI**

### **PAPER - VII : ATOMIC, MOLECULAR , NUCLEAR PHYSICS**

On successful completion of the course the student will be able to

CO-1 Understand different atom models and different quantum numbers associated with atoms.

CO-2 Understand different types of molecular spectra and Raman Effect.

CO-3 Explain the basic properties of the nucleus for study of the nuclear structure.

CO-4 Identify and explain experimental techniques used/or developed in nuclear physics.

CO-5 Understand nuclear and radiation physics applications in medical diagnostics and therapy, energetics, geology and archaeology.

## **SEMESTER - VI**

### **PAPER - VIII : ELECTRONICS, MAGNETIC MATERIALS , DI-ELECTRIC AND QUANTUM MECHANICS -II**

On successful completion of the course the student will be able to

CO-1 Distinguish between Analog and Digital systems.

CO-2 Identify the various digital ICs and understand their operation.

CO-3 Apply Boolean laws to simplify the digital circuits.

CO-4 Gain the concept of Eigen values and Eigen Functions.

CO-5 To find solution to Schrodinger's equation for many systems such as Particle in a Box, Hydrogen Atom etc.,

## **Department of Mathematics**

### **Program Specific Outcome:**

The objective of this course is to provide basic knowledge of mathematics and its applications

PSO-1 To enable the students to reinforce abstract mathematical ideas by using concrete objects, models, charts, graphs, pictures, posters with the help of FOSS tools on a computer.

PSO-2 To foster experimental, problem-oriented and discovery learning of mathematics.

PSO-3 To show that ICT can be a panacea for quality and efficient education.

PSO-4 Exploit techno-savvy nature in the student to overcome math-phobia and to develop mathematical skills.

PSO-5 Acquire a better understanding of concepts and problem solving skills, apply critical thinking and communication skills to solve application problems.

PSO-6 Recognize and appreciate the connection between theory and applications.

PSO-7 Ability to pursue Advanced Studies and Research in pure and applied mathematical science.

PSO-8 Provide basic knowledge of mathematics and their application in business.

### **Course Outcome**

### **Program : BSc**

#### **I SEMESTER- Paper-I**

This course will enable the students to

CO-1 Find Rank of a matrix, Solution of linear equations, Eigen values and Eigenvectors.

CO-2  $n^{\text{th}}$  derivatives of the standard functions, Leibnitz theorem, Partial differentiation , Euler's theorem.

CO-3 Reduction formulae with and without limit, Differentiation under integral sign by Leibnitz rule.

CO-4 Three-dimensional geometry, Equation of the sphere, right circular cone and right circular cylinder.

#### **II SEMESTER- Paper-II**

This course will enable the students to gain knowledge about

CO-1 Various types of groups and their properties.

CO-2 Different concepts of polar coordinates.

CO-3 Computation of arc length, area and volume of curves.

CO-4 Solutions of ordinary differential equations by different methods and Orthogonal trajectories.

### **III SEMESTER- Paper-III**

This course will enable the students to understand the concepts like

CO-1 Order of an element of a group, Cyclic groups and Lagrange's theorem.

CO-2 Assimilate the notions of limit of a sequence and convergence of a series of real numbers.

CO-3 Continuity, Differentiability of functions and Mean Value Theorem, Maclaurin's expansion, Evaluation of limits by L'Hospital's rule.

### **IV SEMESTER- Paper-IV**

This course will enable the students to understand the concepts like

CO-1 Normal subgroups, Quotient group, Permutation group, Homomorphism and Isomorphism of groups.

CO-2 Fourier series of periodic trigonometric functions.

CO-3 Continuity and differentiability of a function of two and three variables, Maxima and Minima of functions of two variable.

CO-4 Laplace transforms of different types of functions and Inverse Laplace transforms.

CO-5 Second and higher order ordinary linear differential equations with constant and variables coefficients by the various methods.

### **V SEMESTER**

#### **Paper-V**

This course will enable the students to study

CO-1 Types of Rings, Ideals, Homomorphism and Isomorphism.

CO-2 Gradient and Laplacian of a scalar field, divergence and curl of a vector field, vector identities.

CO-3 Finite differences, nth differences of a polynomial, separation of symbols, interpolation formulae and inverse interpolation, Numerical Integration.

#### **Paper-VI**

CO-1 Variational problem, Euler's equation, geodesics, minimal surface of revolution, hanging chain, Brachistochrone problem, Isoperimetric problems.

CO-2 Line integral, Double integral Triple integral and its applications and Integral Theorems.

### **VI SEMESTER**

#### **Paper-VII**

This course will enable the students to gain knowledge about

CO-1 Vector space, Basis and Standard properties, Linear transformations and its properties.

CO-2 Orthogonal curvilinear coordinates and Partial differential equation, Solution of one dimensional heat and wave equations using Fourier series.

#### **Paper-VIII**

CO-1 Complex numbers, Functions of a complex variable and Analytic function. Complex integration, Transformations and Bilinear transformation.

CO-2 Numerical solutions of algebraic, transcendental, non-homogeneous system and initial value problems.

## **BCA**

### **I SEMESTER**

#### **DISCRETE MATHEMATICS**

This course will enable the students to gain knowledge about

CO-1 Sets, Relations and Functions and Mathematical Logic.

CO-2 Matrices and Determinants, Eigen values and Eigen vectors.

CO-3 Logarithms, Permutation and Combination.

CO-4 Groups, Vectors and Scalars and its applications.

CO-5 Two dimensional coordinate system.

### **II SEMESTER**

#### **NUMERICAL AND STATISTICAL METHODS**

This course will enable the students to understand

CO-1 Floating-point representation and errors, Numerical solutions of algebraic, transcendental, non-homogeneous system and initial value problems.

CO-2 Interpolation and numerical differentiation and numerical integration.

CO-3 Basics concepts and definition of statistics, Correlation, Probability.

CO-4 Discrete and continuous random variables and Probability Distribution.

## **Program: B.Com and BBA**

### **II SEMESTER**

#### **METHODS AND TECHNIQUES FOR BUSINESS DATA ANALYSIS**

This course will enable the students to understand

CO-1 Types of Number system, HCF & LCM.

CO-2 Solve Linear, Quadratic and Simultaneous Equations

CO-3 Matrices and Determinants, indices, logarithms and its applications.

CO-4 Calculate Simple Interest and Compound Interest Percentages, Bill Discounting, Ratio and proportions.

CO-5 Arithmetic Progression and Geometric Progression and its applications.

### **DEPARTMENT OF COMPUTER SCIENCE**

#### **PROGRAM SPECIFIC OUTCOMES (PSOS)**

PSO-1 Explores technical comprehension in varied areas of Computer Applications and creates a coherent environment in cultivating skills for thriving career and higher studies with a plan of action.

PSO-2 Comprehend, explore and build up computer programs in the allied areas like Algorithms, System Software, Multimedia, Web Design and Data Analytics for efficient design of computer-based systems of varying complexity.

## **COURSE OUTCOMES**

### **Program : BCA**

#### **I Semester - Subject: Introduction to Programming – C**

- CO-1 In-depth understanding of various concepts of C language.
- CO-2 Ability to read, understand and trace the execution of programs.
- CO-3 Skill to debug a program.
- CO-4 Skill to write program code in C to solve real world problems.

#### **Subject: Computer Organizations**

- CO-1 To impart knowledge about the structure, components and functions of a computer system.
- CO-2 To understand working of basic input and output devices.
- CO-3 To learn about the binary number representation along with its operations.

#### **Subject : Office Automation Lab**

- CO-1 To give detailed knowledge of MS-Office.
- CO-2 Skill to work with MS-Word, Excel and PowerPoint.
- CO-3 Initiation into the process of writing business letters or job applications, tabulating data, preparing PPTs etc., using MS-Office.

### **II - Semester**

#### **Subject: Data Structure**

- CO-1 Skill to analyze algorithms and to determine algorithm correctness and their time efficiency.
- CO-2 Knowledge of advanced abstract data type (ADT) and data structures and their implementations.
- CO-3 Ability to implement algorithms to perform various operations on data structures.

#### **Subject: Database Management System**

- CO-1 Familiarization with Database Management System.
- CO-2 Comprehensive knowledge of database models.
- CO-3 Ability to code database transactions using SQL in Oracle.
- CO-4 Skill to write PL/SQL programs.

### **III - Semester**

#### **Subject: Introduction to Programming- C++**

- CO-1 Familiarization with a widely used programming concept – Object Oriented Programming.
- CO-2 Develop logical thinking.

CO-3 Skill to write codes in C++ by applying concept of OOP, such as Objects, Classes, Constructors, Inheritance etc., to solve mathematical or real world problems .

CO-4 Ability to isolate and fix common errors in C++ programs.

### **Subject: Operating System**

CO-1 Ability to apply CPU scheduling algorithms to manage tasks.

CO-2 Initiation into the process of applying memory management methods and allocation policies.

CO-3 Knowledge of methods of prevention and recovery from a system deadlock.

### **Subject: Financial Accounting and Management**

The students will be able to:

CO-1. Define fundamental accounting concepts, Conventions & terminologies using such information to support business processes and practices such as problem analysis and decision making.

CO-2. Describe the importance, functions & objectives of books of entry, subsidiary books, bank reconciliation statement and Final accounts.

CO-3. Prepare books of entry, subsidiary books, bank reconciliation statement and Final accounts using double entry book keeping and to rectify the errors located in books of entry & subsidiary books.

## **IV Semester**

### **Subject: UNIX Programming**

The students will be able to:

CO-1 Shell Scripts and programs will demonstrate simple effective user interfaces and System calls, Using system calls, Pipes and Filters ,Decision making in Shell Scripts (If else, switch), Loops in shell ,Functions, Utility programs (cut, paste, join, tr, uniq utilities), Pattern matching utility (grep)

CO-2 Shell Scripts and programs will demonstrate effective use of structured programming. Different modes of operation in vi editor

### **Subject: Visual Programming**

The students will be able to:

CO-1 Creating and Modifying a visual program to solve a problem and existing user interfaces in sample programming projects.

CO-2 Describing the difference between a console program and a Graphical User Interface (GUI). Creating a GUI incorporating good design principles for a programming project.

CO-3 Using the following GUI components in assignments: buttons, labels, text boxes, dialogs, picture boxes, check boxes, radio buttons, group boxes and list or combo boxes.

### **Subject: Operation Research**

The students will be able to:

CO-1 Formulate and solve problems as networks and graphs. Develop linear programming (LP) models for shortest path, maximum flow, minimal spanning tree, critical path, minimum cost flow, and transshipment problems.

CO-2 To set up decision models and use some solution methods for nonlinear optimization problems. Analyze the general nonlinear programming problems. Solve multi-level decision problems using dynamic programming methods.

## **V-SEMESTER**

### **Subject: Data Communication and Networks**

After this course, the student will be able to

CO-1 Identify the different components in a Communication System and their respective roles.

CO-2 Describe the technical issues related to the local Area Networks

CO-3 Identify the common technologies available in establishing LAN infrastructure.

### **Subject: Software Engineering**

CO-1 Familiarization with the concept of software engineering and its relevance.

CO-2 Understanding of various methods or models for developing a software product.

CO-3 Ability to analyze existing system to gather requirements for proposed system.

CO-4 Skill to design and code a software.

### **Subject: Computer Architecture**

CO-1 Ability to understand the functionality, organization and implementation of computer systems.

CO-2 Skill to recognize the instruction codes and formats.

CO-3 Knowledge of the internal working of main memory, cache memory, associative memory and various modes of data transfer.

### **Subject: JAVA Programming Language**

CO-1 Skill to write Java application programs using OOP principles and proper program structuring.

CO-2 Ability to create packages and interfaces.

CO-3 Ability to implement error handling techniques using exception handling.

### **Subject: Microprocessor and Assembly Language**

At end of the course, students will be able to:

CO-1 Describe the general architecture of a microcomputer system and architecture & organization of 8085 Microprocessor and understand the difference between 8085 and advanced microprocessor.

CO-2 Understand and realize the Interfacing of memory & various I/O devices with 8085 microprocessor

CO-3 Understand and classify the instruction set of 8085 microprocessors and distinguish the use of different instructions and apply it in assembly language programming.

CO-4 Understand the architecture and operation of Programmable Interface Devices and realize the programming & interfacing of it with the 8085 microprocessor.

## **VI SEMESTER**

### **Subject: Theory of Computation**

Upon successful completion of this course, you will be able to

CO-1 Discuss key notions of computation, such as algorithm, computability, decidability, reducibility, and complexity, through problem solving.

CO-2 Explain the models of computation, including formal languages, grammars and automata, and their connections.

CO-3 State and explain the Turing thesis and its significance.

CO-4 Analyze and design finite automata, pushdown automata, Turing machines, formal languages, and grammars.

CO-5 Solve computational problems regarding their computability and complexity and prove the basic results of the theory of computation.



**Subject: System Programming**

CO-1 Detailed knowledge of Compilation process of a program.

CO-2 Knowledge of internal working of macro processor.

CO-3 Familiarization with Assembly language.

CO-4 Understanding the working of linker and loaders – components used during the process of program execution.

**Subject: Cryptography and Network Security**

CO-1 Understand various Cryptographic Techniques, apply various public key cryptography techniques

CO-2 Implement Hashing and Digital Signature techniques and to understand the various Security Applications to protect data from theft and alteration and use it for user authentication

**Subject: Web Programming**

CO-1 Ability to develop web pages using HTML and Cascading Style Sheets.

CO-2 Skill to create XML documents and Schemas.

CO-3 Knowledge of client-side (JavaScript) and server-side scripting languages to build dynamic web pages.

CO-4 Familiarization with Web Application Terminologies, Internet Tools and other web services.

CO-5 Ability to develop applications with UI Interfaces.

**PROGRAM :BSC****Semester-I****Subject: Introduction to Programming – C**

CO-1 In-depth understanding of various concepts of C language.

CO-2 Ability to read, understand and trace the execution of programs.

CO-3 Skill to debug a program.

CO-4 Skill to write program code in C to solve real world problems.

**Semester -II**

CO-1 Skill to analyze algorithms and to determine algorithm correctness and their time efficiency.

CO-2 Knowledge of advanced abstract data type (ADT) and data structures and their implementations.

CO-2 Ability to implement algorithms to perform various operations on data structures.

**Semester -III****Subject: Database Management System and Software Engineering**

CO-1 Familiarization with Database Management System.

CO-2 Comprehensive knowledge of database models.

CO-3 Ability to code database transactions using SQL in Oracle.

CO-4 Skill to write PL/SQL programs.

CO-5 Familiarization with the concept of software engineering and its relevance.

CO-6 Understanding of various methods or models for developing a software product.

CO-7 Ability to analyze existing system to gather requirements for proposed system.

CO-8 Skill to design and code a software.

## **Semester -IV**

### **Subject: Unix and Operating System**

CO-1 Ability to apply CPU scheduling algorithms to manage tasks.

CO-2 Initiation into the process of applying memory management methods

CO-3 Knowledge of methods of prevention and recovery from a system deadlock.

CO-4 Shell Scripts and programs will be accompanied by printed output demonstrating completion of a test plan.

CO-5 Different modes of operation in vi editor

CO-6 System calls, Using system calls , Pipes and Filters ,Decision making in Shell Scripts (If else, switch), Loops in shell ,Functions , Utility programs (cut, paste, join, tr , uniq utilities) , Pattern matching utility (grep)

## **Semester -V**

### **Subject: JAVA Programming Language**

CO-1 Skill to write Java application programs using OOP principles and proper program structuring.

CO-2 Ability to create packages and interfaces.

CO-3 Ability to implement error handling techniques using exception handling.

### **Subject: Visual Programming**

The students will be able to:

CO-1 Creating and Modifying a visual program to solve a problem and existing user interfaces in sample programming projects.

CO-2 Describing the difference between a console program and a Graphical User Interface (GUI). Creating a GUI incorporating good design principles for a programming project.

CO-3 Using the following GUI components in assignments: buttons, labels, text boxes, dialogs, picture boxes, check boxes, radio buttons, group boxes and list or combo boxes.

## **Semester -VI**

### **Subject: Web Programming**

CO-1 Ability to develop web pages using HTML and Cascading Style Sheets.

CO-2 Skill to create XML documents and Schemas.

CO-3 Knowledge of client-side (JavaScript) and server-side scripting languages to build dynamic web pages.

CO-4 Familiarization with Web Application Terminologies, Internet Tools, E – Commerce and other web services.

CO-5 Ability to develop applications with UI Interfaces.

### **Subject: Computer Networks**

After this course, the student will be able to

CO-1 Identify the different components in a Communication System and their respective roles.

CO-2 Describe the technical issues related to the local Area Networks

CO-3 Identify the common technologies available in establishing LAN infrastructure.

## **Department of Chemistry**

### **Program specific Outcomes:**

After completion of 3 years BSc course, the student should be able to learn

- Students will have a firm foundation in the fundamentals and application of current chemical and scientific theories including those in Analytical, Inorganic, Organic and Physical Chemistries.
- Students gain theoretical, practical knowledge and skills required to succeed in graduate school and the chemical industry like, field of food safety, health inspector, pharmacist, cement industries, agro product, Paint industries, Rubber industries, Petrochemical industries, Food processing industries, Fertilizer industries etc..
- Students will be able to design and carry out scientific experiments as well as accurately record and analyze the results of such experiments.
- Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems.
- Students will be able to clearly communicate the results of scientific work in oral, written and electronic formats to both scientists and the public at large.
- Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.
- Students will appreciate the central role of chemistry in our society and use this as a basis for ethical behavior in issues facing chemists including an understanding of safe handling of chemicals, environmental issues and key issues facing our society in energy, health and medicine.
- Students will be able to function as a member of an interdisciplinary problem solving team.

## **COURSE OUTCOME**

### **I Semester Paper- I**

CO-1 Students will understand mathematical parameters like logarithm, integration, probability, etc required from chemistry point of view for solving various problems in chemistry. They also learn about how gases can be governed by different gas laws,

CO- 2 Students will learn about different laws governing photochemistry, few interesting process like Fluorescence, phosphorescence, study about Beer-Lambert's law and its applications in colorimetric estimations. They also will study about properties of liquids, Liquid mixtures, distribution law and its practical applications.

CO-3 To make student understand the modern periodic table which stand the backbone in understanding Chemistry and the periodic properties. Students study about types of errors in experimental determination in a lab. Methods of expressing concentration. These concepts are very important as chemist working in a laboratory.

CO- 4 To make student understand different organic compounds with respect to the functional group and to understand the basics of chemical reactions, types of reagents, its effects and various electronic effects. They also study common hydrocarbons which they see in our daily life along with their preparation and properties.

### **II Semester Paper- II**

CO-1 Students will gain an understanding of the limitations of classical mechanics , the differences between classical and quantum mechanics, the connection of quantum mechanical operators to observables.

CO-2 They learn about types of bonding, lattice energy calculation, hybridization & VSEPR theory . These are very essential to know about chemical structure, reactions, properties of substances.

CO-3 Students learn about silicates, noble gases and study of d and f block elements, Their classification , Preparations , properties and their applications.

CO-4 Students will study about conditions for Aromaticity, Aromatic hydrocarbons, structure and reaction mechanism of benzene and their derivatives. Their usage in industries etc. They also learn about alkyl halides, aryl halides preparations, chemical reactions mechanisms and physical properties.

### **III Semester - Paper III**

CO-1 Students will gain an understanding of the application of mathematical tools to calculate thermodynamic and kinetic properties. They also acquire the knowledge of laws of Thermodynamics and Heat engine-Carnot's cycle.

CO-2 Students learn about Gibb's free energy, work function

CO-3 Understanding the surface phenomenon's like Adsorption, etc. Students get knowledge about types of polymerisation, with examples, structure, applications of some polymers. Importance of Ellingham diagram in choosing reducing agents in extraction of metals. Industrial Extraction of some metals from their ores are studied. Importance of Alcohols and Phenols, properties , preparation and various chemical reactions with mechanisms.

CO-4 Students get knowledge about essential plant nutrients, classification of fertilizers, manufacture of some fertilizers and fertilizer industries in India importance of ethers , Epoxide, and Organometallic compounds.

### **IV - Semester Paper –IV**

CO-1 Students learn how to apply Phase rule and its applications in various phase systems Phase diagrams of various systems helps students in analytical skills. Students study about Laws of crystallography. This is very important in structure determination point of view of chemist.

CO-2 Students will learn about sources, importance, purification methods and preservation of water. Students will gain an understanding of the fundamentals of nuclear decay, how radiopharmaceuticals are produced for the treatment of disease and understand why different radioisotopes are chosen to treat different diseases.

CO-3 Students will understand the properties of steel and the significance of temperature on the steel. Students will study about the properties and preparation of aldehydes and ketones, carboxylic acids, which will help students to apply knowledge in research field and various production industries.

CO-4 Students will study about Impact of human activities on Environment and preventive measures to protect our planet and also some chemical aspects of Tautomers and Enolates.

## **V Semester - Paper- V**

CO-1 Students will be expected to gain knowledge basic concept of symmetry and chirality in the molecules their spatial arrangement. Properties of Amines, Heterocyclic compounds and application in industrial preparations.

CO-2 Students get an introduction to the broad field of Natural Products Chemistry such as terpenes, steroids and alkaloids. Acquiring of skills to extraction, isolate and purify simple products that are derived from plants

CO-3 Students will be able to recognize different regions for different spectroscopy. Apply this knowledge in Characterization Techniques of various chemical compound and pharmaceutical drugs in research field.

CO-4 Students will be enriched with the theoretical knowledge of Drugs and Dyes synthesis

## **V Semester - Paper- VI**

CO-1 Students learn about conductance, conductometric titrations. Ionic mobility, Arrhenius theory, Debye-Huckel theory, Problems solving skills.

CO-2 Students learn about Weston-cadmium cell: Determination of emf of a cell by compensation method. Liquid junction potentials. about Hydrolysis of salts, PH of salt solutions, common ion effect, buffers and its working and applications, principle behind qualitative analysis, theory of indicators.

CO-3 Students learn about Polarisation and orientation of dipoles in an electric field, dipole moment magnetic properties, electrical properties of solids.

CO-4 Students learn about Concept of polarisability, advantages of raman spectra over IR spectroscopy, Electronic spectroscopy selection rules, Franck-Condon principle. Determination of diffusion coefficient etc., in structure determination of compounds

## **VI Semester - Paper VII**

CO-1 Students study about Basics of coordination compounds, werner's theory of structure and bonding, organometallic compounds, ligands, classification, synthesis and structure of some compounds.

CO-2 Students study about Metal carbonyls, applications, how cis platin used in cancer therapy, Students study about refractories, manufacture, properties and uses Paints and Varnishes, Fuels, Explosives, and applications

CO-3 Students know the Importance of inorganic elements in biological systems, mechanism of haemoglobin oxygen transport diseases due to their deficiencies and ways to overcome

CO-4 Students study about Conducting polymers, Super conductors, Fullerenes, Nanomaterials

## **VI SEMESTER Paper – VIII**

CO-1 Students study about contributions of various scientists for development of biochemistry. Students study about Amino sugars, Sugar acids, Sugar phosphates, Structure and biological importance of oligosaccharides, Cholesterol, Sphingolipids

CO-2 Students study about  $\alpha$ -amino acids, Levels of organizations of Protein, Classification of proteins Types, Structure of DNA. Students study about Classification, with functions, insulin role, mediators in harmonic action. Classification of enzymes

CO-3 Students study about Principle and applications of chromatography and TLC. Students study about Catabolism and anabolism, Gluconeogenesis, Fatty acid metabolism, Protein metabolism

CO-4 Students study about Central dogma of molecular biology–semi conservative replication and mechanism of DNA replication, transcription, translation. DNA finger printing – Definition and its applications.

## **DEPARTMENT OF BOTANY**

### **Program Specific Outcome:**

After completion of 3 year program students will be able to:

PSO - 1: Identify the major groups of organisms, with an emphasis related to plants. All the applied aspects of Botany in different fields of science and other related branches are made known to students to help them in their future studies or projects.

PSO-2: Students develop practical skills-hands on expertise in Plant science. They will be able to classify plants within a phylogenetic framework.

PSO-3: Skill development program, value added projects, add on courses help them to empower in future. Use of IT for collecting data and processing for application in different fields of Botany.

PSO-4: The Program helps to focus on key areas to pursue research , teaching career and job opportunities in private and government sectors and also become an entrepreneur to address economic importance, environment and sustainability, application in agriculture.

### **Course Outcome**

#### **SEMESTER-I**

##### **PAPER-I : DIVERSITY OF NON VASCULAR PLANTS- PART-I**

Co -1. Students gain knowledge about Microbiology, its significance and applications in medical and agriculture fields of study.

Co - 2. Learn the isolation technique of microbes from soil and identification.

Co-3. Study imparts knowledge about morphology, classification and reproduction in Bacteria and Virus, disease and control measures.

CO-4. Students understand the features of Mycoplasma and acquire knowledge on their significance.

Co-5. Students study and discuss about morphology, classification, reproduction as well as lifecycle of few algal forms.

Co-6. Study of economic importance of algal forms -beneficial and harmful effects of algae ranging from SCP to agar, diatomaceous earth, biofertilizers, water treatment.

#### **SEMESTER-II**

##### **PAPER-II: DIVERSITY OF NONVASCULAR PLANTS – PART –II**

Co-1. Study helps to and impart knowledge about general characters , classification, structure , reproduction and life cycle of fungal forms ,Economic importance of fungi, Mushroom cultivation.

Co-2. Discuss about features of Lichens, Mycorrhiza and Yeasts..

Co-3. Inculcate the importance of plant fungal diseases, identify the causative organism , symptoms and know the control measures for these diseases.

Co-4. Study the morphological structure, classification, reproduction and life cycle of Bryophytes.

Co-5. Students study Plant Anatomy to Understand basic aspects of plant tissues like meristematic tissue and permanent tissue and gain knowledge about the organization in plant body.

Co-6. Students learn about anatomy of Dicot stem and Secondary growth, as well as anomalous secondary growth.

### **SEMESTER -III**

#### **PAPER-III: PTERIDOPHYTES, PALEOBOTANY, ENVIRONMENTAL BIOLOGY AND PHYTOGEOGRAPHY**

Co-1 Understand general character, classification by Sporne and study diversity in morphology, anatomy and reproduction of some genera of pteridophytes.

Co-2. To impart knowledge on stellar evolution, heterospory and seed habit.

Co-3. Significance of Geological time scale, process of fossilization and life cycle of few fossil forms.

Co-4. Understand ecological factors, edaphic factors, biotic factors, methods of soil conservation and soil reclamations. Scope of Environmental Biology helps to interconnect nature with man.

Co-5. Know the concept, components of ecosystem, interaction between abiotic and biotic components in environment and study of different ecosystems.

Co-6. Understand plant biodiversity and methods of conservation of natural resources.

Co-7. Students get to learn the knowledge of floristic regions of India and Vegetational types of Karnataka, which creates awareness about the biodiversity, its richness and uniqueness helps them to understand conservation.

### **SEMESTER-IV**

#### **PAPER-IV : GYMNOSPERMS AND EMBRYOLOGY OF ANGIOSPERMS**

Co-1. Students get knowledge on general characters, classification, morphology and reproduction of few gymnosperms along with their economic importance.

Co-2. Study of Embryology of Angiosperms emphasizing on plant reproductive parts.

Co-3. Learn the developmental stages of microspores, megaspores, microgametogenesis, megagametogenesis, endosperm and embryo of dicot and monocot plant which helps to compare different types and their significance in evolution and taxonomic study.

Co-4. Students gain knowledge on pollen morphology and its application in Aeropalynology and mellitopalynological studies.

Co-5. Understand the technique of plant tissue culture and practical application of anther, embryo and protoplast culture in agriculture, GE and BT.

### **SEMESTER-V**

#### **PAPER-V : TAXONOMY AND ECONOMIC BOTANY**

Co - 1. Understand the classical and modern taxonomy, classification and species concept and to develop a phylogenetic relationship by different families.

Co - 2. Study of biosystematics : plant nomenclature, taxonomic tools, floras, botanical gardens, cytotaxonomy, chemotaxonomy, numerical taxonomy and application of computer helps to install knowledge about the recent developments to study taxonomy and data collection for comparison.

CO - 3. Taxonomical studies of various plant families of dicot and monocot plants along with their economic importance, their distribution pattern and phylogenetic relationship..

Co - 4. Ethnobotany : Study helps to know about different regions plants and their practical use through local culture and people (TEK)

CO -5. Economic Botany study extends the knowledge of botany with a financial incentive along with taxonomic work.

## **SEMESTER –V**

### **PAPER-VI : MOLECULAR BIOLOGY, GENETIC ENGINEERING, BIOTECHNOLOGY AND PLANT PHYSIOLOGY**

Co-1. Students impart knowledge on the functioning of cells at molecular level, in and between cells.

Co-2. Learn replication of genetic material, genetic code, proteins, regulation of gene in prokaryotes helps to expand knowledge and insight into understanding Biology and expand its applications.

Co-3. Understand recombinant DNA technology, genomic libraries and application of genetic engineering in agriculture to produce genetically modified plants and their safeguards and safeguards on bioinformatics study to effectively form large data bases and use this knowledge in computer modeling.

Co-4. Use of microbes in industry and agriculture and improving the strains for higher production and safe production of products for sustainable future.

Co-5. Students gain knowledge of water relation in plants, its significance, response of plants to water, heat and salt stress which has application in agriculture improvement.

Co-6. To acquire knowledge on ascent of sap, translocation of solutes and process of transpiration from plants.

Co-7. To learn role of micro and macronutrients in plant growth and their deficiency symptoms in plants which helps in increased crop production.

## **SEMESTER –VI**

### **PAPER-VII : CYTOLOGY , GENETICS, EVOLUTION AND PLANT BREEDING**

Co - 1. Students learn cell biology fundamentals along with various applications in karyotype, cancer analysis, aging etc.

Co -2. Study of phases of cell division – mitotic and meiotic cell division and its significance.

Co -3. Interpret the Mendel's principles and acquire knowledge on modification of mendelian ratio, pedigree analysis, polygenic inheritance , sex linked disease and chromosomal mechanism of sex determination and use this expertise in breeding Program..

Co-4 Student gains knowledge on evolutionary links between organisms, significance of polyploidy in evolution, chromosomal aberrations and use it in breeding Programs.

Co -5. Students understand vegetative propagation methods, hybridization technique, significance of germ plasm maintenance and quarantine methods.

## **SEMESTER – VI**

### **PAPER-VIII : PLANT PHYSIOLOGY-III**

Co -1. Student learn the enzyme nomenclature, classification, mechanism of enzyme action and kinetics of enzyme catalyzed reactions.

Co - 2. To understand the mechanism of nitrogen metabolism.

Co -3. To gain knowledge on the structure of chloroplast, Photosystem I &II , Photophosphorelation, C<sub>3</sub> pathway, C<sub>4</sub> pathway and CAM.

Co - 4. To know the steps in Glycolysis, Krebs's cycle and Terminal oxidation to release energy .

Co -5. Get to know the mechanism of Anaerobic respiration and Photorespiration.

Co - 6. Student acquire knowledge on Plant growth and Growth regulators & their uses.

Co - 7. Understand the Physiology of flowering, Photoperiodism, Photobiology and Role of secondary metabolites in plant defence.



## **PROGRAM SPECIFIC OUTCOMES**

- PSO-1 To make our students competent in the field of biotechnology and its allied areas.
- PSO-2 To inculcate the capability to work as entrepreneurs and techno managers with strong ethics and communication skills.
- PSO-3 To equip the students to pursue higher education and research in reputed institutes at national and international level.
- PSO-4 To develop a working knowledge of biotechnology product and processes.
- PSO-5 Acquire knowledge on the fundamentals of biotechnology for sound and solid base which enables them to understand the emerging and advanced engineering concepts in life sciences.
- PSO-6 Acquire knowledge in the domain of biotechnology enabling their applications in industry and research.
- PSO-7 Empower the students to acquire technological knowledge by connecting disciplinary and interdisciplinary aspects of biotechnology
- PSO-8 Recognize the importance of Bioethics, IPR, entrepreneurship, Communication and management skills so as to usher the next generation of Indian industrialists.

## **Course Outcomes**

### **Semester-I**

- CO-1 To introduce students to basic Biology.
- CO-2 To understand Cell as a Basic unit of Living Systems.
- CO-3 To gain knowledge of various Cellular Organelles.
- CO-4 To enable the students to understand gene interactions.
- CO-5 In-depth understanding of various cell organelles & concepts of genetics. Ability to read, understand and trace the practical application of cell.

### **Semester-II**

CO-1 To familiarize the students with Scope of Microbiology , Microscopy , Microbial Techniques , Stains and staining techniques etc.

CO-2 To learn how to apply Biostatistics in research .

CO-3 To gain knowledge of Importance and applications , Tabulation and Classification of data, Frequency distribution and Graphical distribution of data - Measure of Central tendencies

CO-4 Mean, Media, mode and their properties - Measures and Dispersion

CO-5 Mean deviation, Variance, Standard deviation and Coefficient of Variation.. Hypothesis Testing

CO-6 Student T and Chi-square test Probability and Distribution

CO-7 Concepts and problems on probability, Binomial, Poisson, Normal Distribution and their applications Different Models of data presentation with special reference to biological samples

### **Semester-III**

CO-1 To introduce the students to the Biophysics.

CO-2 To learn Analytical techniques, spectroscopy, colorimetry.

CO-3 To enable the students to understand the Scope and development of Biophysics and Biochemistry

CO-4 To gain basic knowledge about biochemistry.

### **Semester-IV**

CO-1 To deliver a detailed knowledge of molecular Biology

CO-2 To familiarize the students with Molecular biology techniques.

- CO-3 Preparation of DNA and RNA model.  
CO-4 Detergent lysis and Osmotic lysis of RBC  
CO-5 Extraction and estimation of protein from animal or plant source

### **Semester-V**

- CO-1 To learn the Tools for genetic engineering.  
CO-2 To understand the fundamentals of genetic engineering.  
CO-3 To familiarize with the concept of Application of r-DNA techniques, Bioremediation, Bio fertilizers.  
CO-4 This course gives scope of Immunology and Animal Biotechnology.  
CO-5 Students will learn immunological techniques.  
Co-6 This course introduces students to transgenic

### **Semester-VI**

- CO-1 To learn various methods in plant tissue culture.  
CO-2 To acquire fundamental skills to maintain PTC CULTURES  
CO-3 Students gain knowledge on plant culture media-MS
- Production of callus and Suspension culture
  - Plant protoplast Isolation
  - Plant propagation through Tissue culture (shoot tip and Nodal culture)
  - Preparation of Synthetic Seeds.
  - Anther Culture
- CO-4 To provide an introduction to the fundamental concepts, basic principles of fermentation technology of Industrial Biotechnology  
CO-5 To get familiarized with the basic protocols of Production of Microbial products.

## **DEPARTMENT OF COMMERCE**

### **Program : B.Com**

### **Program Specific Outcome**

The Bachelor of Commerce Program's objective is to develop graduates who exemplify the graduate attributes of SJR College for Women.

- The Program aims to equip students with necessary knowledge, skills and other attributes so as to prepare them for participating in any modern business environment, practice in any commercial profession and to pursue further academic endeavours.
- Graduates of this degree will be able to demonstrate their skills in Accounting, Auditing, Finance, Investments, Banking, Insurance, Marketing, Human resource management and Organizational Behaviour along with the knowledge of quantitative techniques and other major theories of Economics associated with these subjects.
- Students will be able to demonstrate their communication and literary skills in English and other Indian languages. The Curricular and Extracurricular activities are designed in a way so as to provide for Holistic development of an individual.

### **COURSE OUTCOMES**

#### **I Semester**

#### **1) Financial Accounting**

CO 1: Learning the basic concepts of Accounting Standards and practical knowledge on formulation of accounting equations.

CO 2: It enables that student to learn preparation of different ledger accounts and preparation of trading and profit and loss accounts and balance sheets.

CO 3: To understand basic terms under the hire purchase system and passing of journal entries and preparation of ledger accounts in the books of hire purchaser and hire vendor.

CO 4: It enables the students to learn preparation of departmental trading and profit and loss accounts to find net profit of each department and also preparation of the balance sheet to know the financial performance of the firm as a whole.

CO 5: It helps the students to learn preparation of branch accounts at invoice price method and cost price method.

## **2) Indian financial institutions and markets**

CO 1: Students will understand Meaning, Functions, Structure, Components – Financial Assets, Financial Institutions, Financial Markets, Financial Services

CO 2: Understanding of various concepts on Commercial Banks – Meaning, Definition, Classification, Role and Functions, Investment Norms

CO 3: Knowledge about regulators in India such as Reserve Bank of India – Objectives, Functions & Monetary Policy – Credit Control Methods

CO 4: Enables students to learn Objectives, Functions & Powers of Securities Exchange Board of India – Meaning, Functions of NON-BANKING FINANCIAL INSTITUTIONS

CO 5: Imparts knowledge on Money Market, Capital Market – Primary Market, Secondary Market - Stock Exchange -NSE, BSE, OTCEI

## **3) Business Dynamics and Entrepreneurship**

CO 1: It enables students to know about the basic concept of management and how to manage 21st Century Organizations.

CO 2: Students can study about the aspects of functions involved in management and theoretically as well as practically how to manage an activity.

CO 3: Students will learn the importance of Human Resource in Management and guides students on what basis the company is going to recruit Employees.

CO 4: Students can learn the importance of Entrepreneur and Entrepreneurship activity.

CO 5: Enhances students' knowledge on the support (financial supports) given by the government to entrepreneurs to run their business effectively.

## **4) Corporate structure and administration**

CO 1 - Learning the various stages in formation of a company applying the company laws. Students will understand the various types of Joint Stock Company along with its advantages and its disadvantages.

CO 2 - Enhancing the knowledge of students on various kinds of share capital to a company along with the guidelines issued by SEBI for issue of shares and debentures.

CO 3 - Students will know the various key managerial personnel in administration of the company along with their job duties and responsibilities.

CO 4 - Insights into Meetings - emphasizes on the various meetings conducted in the corporate sector.

CO 5 - Students will learn about various types of global companies along with legal formalities.

## **II Semester B.Com**

### **1) Advanced Financial Accounting**

CO 1: It guides the students to make accounting transactions to claim Fire Insurance.

CO 2: It helps students to create and maintain accounting records for consignment transactions.

CO 3: Students will learn the difference between Joint Venture and Partnership and to make accounting records for joint venture business.

CO 4: It creates a platform to know about the concepts of Royalty and guides them to make accounting records for Royalty Business.

CO 5: Students gain knowledge on recording of accounting transactions after conversion from single entry system into double entry system of bookkeeping.

### **2) Methods and Techniques for Business Data analysis**

CO 1: Students are introduced to the concepts of Natural numbers, Even numbers & Odd numbers, Integers, Prime numbers, Rational & Irrational numbers, Real numbers, HCF & LCM.

CO 2: Understanding - Types of Equations, Elimination and Substitution Methods of Quadratic Equation.

CO 3: Insights into meaning and types of matrices - Cramer's rule in two variables - Basic Laws of Indices and Laws of Logarithms

CO 4: Simple Interest, Compound Interest, Annuities, Percentages, Bills Discounting, Ratios and proportions.

CO 5: Arithmetic Progression & Geometric Progression – Finding the 'nth' term of AP & GP and Sum to 'nth' term of AP & GP.

### **3) Modern Marketing**

CO 1: Learning about the marketing concept and functions of marketing and knowing recent trends in marketing; Green marketing, grey marketing, customer relationship marketing, and social marketing.

CO 2: It gives knowledge to the students about the marketing environment and its types, marketing segmentation and consumer behaviour.

CO 3: It gives brief knowledge to the students about 4 P's of marketing mix, Product life cycle, Pricing and pricing policy- distribution channel.

CO 4: Theoretical knowledge on the concept of digital marketing and steps involved in digital marketing and the challenges and opportunities of digital marketing.

CO 5: Learning the 7P's of service marketing and difference between product marketing and service marketing and Challenges of services marketing.

#### **4) Banking Operations and Innovation**

CO 1: Students can learn the rights and obligations of a banker and a customer, types of bank account, how to open and maintain the account.

CO 2: It gives knowledge to the students about the duties and responsibilities of collecting bankers. and statutory protection of a collecting banker.

CO 3: Students get the knowledge about the banking instruments such as a cheque and crossing a cheque and types of crossing a cheque.

CO 4: It enables students to understand the terminologies under Banking Regulation Act and about the government regulations.

CO 5: It gives knowledge to the students about new technology in banking.

### **III Semester B.Com:**

#### **1) Financial Management:**

CO 1: Learning the important concepts and techniques used in business organisation while managing finance and practical importance of 3 major decisions

CO 2: Understanding concept of time value of money in computing the returns and value of investments - Present Value and Future Value

CO 3: Different sources of finance through which Business organisations acquire finance and techniques to select optimum combination of Equity and Debt.

CO 4: Techniques of evaluating investment proposals

CO 5: Importance of adequate working capital in organisations and estimating the required working capital for organisations.

#### **2) Business data analysis**

CO 1: Focuses on the basic concepts of statistics and helps the students to have conceptual knowledge on this subject.

CO 2: Students will understand various averages which includes mean, median and mode.

CO 3: Quantify the association between independent and dependent variables through Regression analysis

CO 4: It helps to identify the time based patterns existing in the data so as to determine a good model that can be used to forecast the future behaviour of business matrix

CO 5: It helps estimating the value within and beyond the given variable giving practical exposure to students

### **3) Corporate Accounting**

CO 1: To make students understand how to calculate net liability of underwriters and calculation of remuneration to underwriters.

CO 2: To enable students to learn how profit or loss are distributed before and after incorporation

CO 3: To know how companies convert their shares into stocks, buyback of shares, employee stock option and valuation of shares.

CO 4: To make students understand the types of valuing goodwill.

CO 5: To make students understand the principles and regulations in preparation of final accounts and presentation of financial statements in business organisation.

### **4) Public Relations and Corporate Communications**

CO 1: Students will learn concepts of attitude, ways to build positive attitude, effects of negative attitude and measures to overcome them.

CO 2: Insights on goal setting, methods to achieve set goals, principles of stress management and time management.

CO 3: Understanding the concept, importance, elements and factors influencing creativity.

CO 4: Knowledge on significance and forms of communication, concept of communication gap – resume building and preparation for Group Discussion and interview.

CO 5: Students will get to know the importance of career planning, different career options, choosing a career and career counselling

### **5) Business Ethics**

CO 1: Concept and importance of Ethics and Business Ethics - CSR

CO2: Helps students to educate about Personal Ethics, Karma yoga, flexibility and purity of mind, honesty and how to promote happiness among people.

CO 3: To understand the different aspects of financial management and the difference between personal ethics and professional ethics.

CO 4: Enables the learners to know about the corporate culture in business and its impact, cross cultural issues concept.

CO 5: Learning about Corporate governance basic concepts, and different types of Committees. Enhances knowledge regarding preparation of reports on corporate governance, benefits and limitation of corporate governance.

## **IV Semester B.Com**

### **1) E-Business and Accounting:**

CO 1: Importance of E Business and Traditional Commerce Vs. E Commerce and different types of E Business models.

CO 2: Understanding Hardware and Software requirements for conducting E Business.

CO 3: Hardware and software requirements for installation of Tally and creation of company on Tally and understanding the features available on Tally.

CO 4: Different types of configuration/modification that can be made in tally according to the requirements of the business organisations. Learning how to create Groups, Ledgers and Vouchers using Tally including voucher entries.

CO 5: Understanding how to generate reports in Tally

### **2) Advanced Corporate Accounting:**

CO 1: Understanding types of preference shares and procedure for repayment of preference shares with journal entries.

CO 2: Learning methods of amalgamation with journal entries.

CO 3: Knowing importance of subdivision of shares and process of reconstruction in case of a company suffering heavy loss.

CO 4: Preparation of liquidator's final statement of account and payment of liability as per order of preference.

CO 5: Importance of HR accounting, Social Responsibility accounting and understanding methods in valuing intangible assets.

### **3) COST ACCOUNTING**

CO 1: Understanding Cost Accounting and comparison between Financial Accounting, Management Accounting and Cost Accounting. Understanding the Elements of Cost.

CO 2: Students will understand the Nature of Materials - Direct & Indirect - Purchase Procedure - Store Keeping Functions - Fixation of Levels, Inventory Control and Methods of Pricing of Issue.

CO 3: Students will understand the Direct Labor - Indirect Labor - Labor Cost - Labor Cost Control - Time Keeping.

CO 4: Students will understand the Collections and Classification of Overheads - Absorption of Overheads and Activity Based Costing.

CO 5: Students will understand the Need for Reconciliation and Preparation of Reconciliation Statement.

#### **4) Principles of Event Management**

CO 1: It enables students to know the policies and procedures of event management.

CO 2: It enhances knowledge on principles of event, policies and permissions granted by government and local authorities.

CO 3: Students will have the overall view on planning schedule, organizing tables, assigning responsibilities and roles and responsibilities of event manager.

CO 4: Helps the students to learn about different types of media and their management.

CO5: Students will know about the arrangements, budgeting, safety of guests and participants and also the need of creating a blueprint.

#### **5) Stock and Commodity Markets**

CO1 – Enhances knowledge of students on Financial Market and its components, Capital Market, Commodity market and its functions.

CO 2 - Students will acquire the knowledge on Stock market, how to trade, under whose regulations, and also about some major stock exchanges.

CO 3 - Students practically study how to trade in stock exchanges with some procedures.

CO 4 - Students acquire the basic theoretical knowledge of Commodity Market the Functions and transactions to be dealt in Commodity markets.

CO 5 - Students will get some practical knowledge of the pattern of Trading and Settlement in the Commodity Market.

### **V Semester B.Com**

#### **1) Advanced Accountancy:**

CO 1: Important concepts in Banking Company accounts and preparation of Bank Final Accounts.

CO 2: Types of Insurance business viz. Life Insurance and General Insurance and Preparation of Revenue Account, P & L Account and Balance Sheet.

CO 3: Impact of inflation in Accounting and Techniques of Inflation Accounting

CO 4: Preparation of Crop Account, Live Stock Account and Final Accounts.



CO 5: Types of Investment and methods of interest/dividend payment and preparation of investment Account.

## **2) Goods and service tax**

CO 1: Knowing the basic framework of goods and service tax, benefits of GST and importance of GST council and its formation, power and functions of GST council.

CO 2: Learning the salient features of CGST act, SGST act and IGST act and various definitions under GST Act 2017.

CO 3: Gaining knowledge on procedure for registration under GST and turnover limit, levy of CGST, SGST and IGST - Calculation of time value of supply and place of supply.

CO 4: Calculation of annual tax liability and assessment of tax - Calculation of ITC and treatment of IGST on import of goods.

CO 5: Enables the students to learn theoretical aspects of GST Network- structure, basic framework, vision and mission and its powers, GSP guidelines and architectures to integrate with GST.

## **3) Entrepreneurship development**

CO 1: Defining the concepts of *entrepreneur* and *entrepreneurship* and applying the general venturing script to the study of entrepreneurship

CO 2: Problems faced by small scale industries and Governmental assistance to small industries.

CO 3: Understanding various Business opportunities available for entrepreneurs and evaluation of alternatives - Steps involved in the formation of small-scale industries

CO 4: Understanding on purposes of business planning and development of business plan.

CO 5: Various financial assistance provided by Financial Institutions and Non Financial Institutions.

## **4) International Financial Reporting Standards**

CO 01: To understand the concept and need of Accounting standards and International Financial Reporting Standards in preparation of Accounting Financial Statements.

CO 02: It enables students to know about the recognition and measurement criteria of various assets and Liabilities in accordance with Ind AS

CO 03: It enables students to know how to present Financial Statements of companies in accordance with the requirement of Companies Act, 2013.

CO 04: It enables students to study the importance of Business Combination(Ind As-103) and also study how to calculate Goodwill of the company and Non Controlling Interest of the company.

CO 05: Knowledge of Accounting Disclosure with reference to Earning Per Share, Interim Financial Reporting and Operating segments.

## **5) Costing methods**

CO 1: To familiarise the students about different methods of costing that are applied in ascertaining cost and revenue.

CO 2: To make students understand applications of Job Costing and Batch Costing and ascertaining cost and profit.

CO3: Students will understand practical applications of Process Costing and Preparation of Process Accounts, treatment of abnormal loss and gain and ascertaining cost per unit and cost per process.

CO 4: Students will get to know the nature of business in which Contract Costing is applied and Preparation of Contract account – a. Completed contract b. Incomplete contract.

CO 5: Applications of Operating Costing and Preparation of operating cost sheet in transport services.

## **6) Income tax-I**

CO 1: To provide working knowledge about the framework of taxation system in India and to collect the basic concepts and definition of Income Tax Act 1961.

CO 2: To enable students to know about exempted income under Income Tax Act.

CO 3: It gives practical knowledge on determination of residential status and incidence of tax.

CO 4: To enable the student to acquire an understanding of the terminologies under salary and determining income from salary and basis of charge.

CO 5: It helps knowing the basic framework of income from house property and computation of Income from House Property.

## **VI Semester B.Com**

### **1) Business regulations**

CO 1: Helps the students to learn essentials of valid contract and classification of contract under Indian contract act under ICA 1872 and the remedies to breach of contract.

CO 2: To understand the concept of conditions and warranties and knowing the importance of rights and duties of buyers under Indian sale of goods act.

CO 3: It gives knowledge to students on the basic framework of competition act; Competition Appellate tribunal and its operations, Rights of consumer under COPRA 1986 and consumer redressal agencies functions and limitations.

CO 4: Learning the procedure to obtain Patent rights for inventions. and Provisions of FEMA and know the offence and penalties under FEMA 1999.

CO 5: Knowing the basic provisions of the Environment Act 1986 - Powers of the central government to protect the environment in India - concept of Cyber law in India.

## **2) Cost management**

CO 1: It emphasizes the various covered by cost control and cost reduction and also focuses on the techniques adopted.

CO 2: It gives practical exposure on how to assess the cost volume profit analysis using CVP analysis along with breakeven analysis

CO 3: Interpreting the various variances which include material, labour and overhead variances. Practical exposure to various variances.

CO 4: Preparation of cash and flexible budget in an organisation

CO 5: Formulate overhead using predetermined rates and Activity-Based costing. Problems on activity based costing

## **3) Business Taxation**

CO 1: Understand calculation of custom duty and IGST calculation and Procedure for customs and levy of duty

CO 2: Students will gain information regarding filing of IT and online payment and calculation of TDS and advance tax

CO 3: Learn computation of business income and Calculation of TTI and liability of firm

CO 4: Students learn problems on computation of total income of companies and learn computation of tax liability and Minimum Alternative Tax.

## **4) Principles And Practices Of Auditing**

CO 1: It enhances the students' knowledge regarding the audit Programs and fundamental concepts of auditing and different aspects of tax.

CO2: It helps the students to learn about internal checks regarding wages payments. Cash sales, cash purchase.and Internal Audit.

CO 3: It enables students to gain knowledge on methods of vouching and deferred revenue expenditure.

CO 4: It helps the students to gain knowledge about verification and valuation of assets and liabilities.

CO 5: Students can learn about the eligibility criteria of an auditor and auditing process in different sectors.

## **5) Management accounting**

CO 01: It enables students to understand the concepts and importance of management accounting with various branches of Accounting.

CO 02: It enables the students to know about the concept of Ratio Analysis and Different types of Ratios.

CO 03: It leads students to understand the concept of Fund Flow Statement and procedure of preparing and analysing Fund Flow statements of the company.

CO 04: Knowledge of analysing a Cash Flow Statement leads Company to manage its cash in an effective manner.

CO 05: It leads students to know how to draft a company's report.

## **6) Income tax II**

CO 1: It gives students a practical knowledge in determination of income under business or profession.

CO 2: To enable the students to acquire an understanding of terminologies under capital gains and basis of charge.

CO 3: It provides the students information regarding income from other sources and practical knowledge in determining income from other sources.

CO 4: Students will gain knowledge on Set off and carry forward of losses and deduction from Gross total income and Deductions u/s 80.

CO 5: It enables students to determine the total income and tax liability of an individual Assessee.

## **DEPARTMENT OF MANAGEMENT**

### **Program Specific Outcomes**

PSO-1 Acquiring Conceptual Clarity of Various Functional Areas

PSO-2 Ability to analyze various functional issues affecting the organization

PSO-3 Demonstrating ability to evolve strategies for organizational benefits

PSO-4 Analysis and interpretation of the data which is used in Decision Making

PSO-5 Demonstrate the ability to develop models / frameworks to reflect critically on specific business contexts

PSO-6 Demonstrate Effectively Oral and Written Communication

PSO-7 Demonstrate Ability to work in Groups

PSO-8 Demonstrate understanding of social cues and contexts in social interaction

PSO-9 Develop Ethical Practices and Imbibe Values for Better Corporate Governance.

PSO-10 Understand ethical challenges and choices in a business setting

PSO-11 Demonstrate understanding of sustainability related concerns in varied areas

PSO-12 Analyze Global Environment and its Impact on Business

PSO-13 Understand the ecosystem of start up in the country

PSO-14 Demonstrate the ability to create business plans

### **Course Outcome**

## **SEMESTER-1**

CO-1 Financial Accounting: Show proficiency in basic accounting concepts, conventions and understanding of the accounting process. Understand the process and preparation of financial statements for Sole Proprietorship and Company and Departmental Business Organizations

CO-2 Principles of Management: Students will get familiar with the basic concepts applied in contemporary management practice and many of the concepts learnt will form the foundation for subsequent courses in strategy, operations and HRM in subsequent semesters.

CO-3 Quantitative Techniques - I :At the end of the course module, the students should be able to understand the various issues involved in the collection, analysis and arriving at conclusive decisions regarding quantitative data. And to understand and appreciate the practical relevance of various basic statistical tools in the field of finance, economics, marketing, human resources, manufacturing and so on.

## **SEMESTER-2**

CO-1 Cost Accounting: To enable students to conceptualize various methods and techniques of cost accounting and its application

CO-2 Quantitative Techniques - II :Appreciate the significance and the value of the application of the principles of Quantitative Techniques in the use of scientific methodology of management To understand the various issues involved in the collection, analysis and arriving at conclusive decisions regarding quantitative data To understand and appreciate the practical relevance of various basic statistical tools in the field of finance, marketing, human resources, manufacturing and so on.

CO-3 Principles of Marketing : On successful completion of the course, students will be able to: Have an in depth understanding of the marketing planning process Develop and implement integrated marketing strategies for products.

CO-4 Effective Communications : Students will be able to communicate their ideas through different modes and mediums. They will be able to make memorable presentations professionally. Students will understand different strategies to adopt while communicating with different personalities with different goals. Students will be able to handle job opportunities successfully

CO-5 Banking and Insurance : To provide an understanding of the Indian Banking & Insurance Sector. To make the students comprehend, the latest offerings and the day to day operations in Banking & Insurance.

CO-6 Retail Management : Gain a conceptual understanding of the various retail concepts. Build student appreciation of current trends-- like role of internet in retailing, newer ways to sell and communicate with customer, greater emphasis on environment and social responsibility of retail sector, use of technology and analytical methods in retailing

CO-7 Human Resource Management : Through this course student will be able to explore various dimensions of Human Resource Management and will find new career opportunities in the same It will provide hands on experience to work on industry assignments and gain practical knowledge Case Study discussions will provide simulations to think as an HR strategist and design an appropriate solution

## **SEMESTER-4**

CO-1 Financial Management: Students should be able to show analytical skills in short term and long term decision making.

CO-2 Business Law : Students will understand the basic provisions of Company and Industrial Law and therein after the completion of the course, Students will be able to – Understand the legal system prevailing into practice.

CO-3 Management Accounting : Students should acquire the basic knowledge required for application of tools for decision making.

### **SEMESTER-5**

CO-1 Strategic Management : To provide students with the fundamentals of strategic management in a comprehensive fashion and relate its concepts and techniques to the Indian as well as International Context

CO-2 International Business : The student will be able to understand the trade dynamics and the country's position in the international markets. The students will be able to appreciate the impact of multilateral organizations and present day status of the Indian economy and also the international financial markets. The students will learn to evaluate and apply business strategies in International market conditions.

CO-3 Investment Analysis and Portfolio Management : Students should be able to construct a passive and active strategy portfolio using domestic and international diversification

### **SEMESTER-6**

CO-1 Entrepreneurship and Business Plan : The students will be able to design a successful Business Plan in order to set up a venture in future. The students will become more capable in self-employment.

CO-2 Financial Modeling : To develop Financial Models in reference to different aspects of Finance, Accountancy, Taxation, Stock Markets and Valuation To make students aware of business intricacies through simulation software with multiple variable scenarios. To develop the intensive usage of MS Excel and its advanced commands

CO-3 Customer Relationship Management and Rural Marketing : Have an in depth understanding of CRM & its Contribution to Business growth Design appropriate CRM programs relevant to varied business sector To equip the students with the unique perspective of rural marketing which is endemic to Rural India.

CO-4 Strategic Brand Management : The students will understand the various consumer Behaviour associated to Luxury goods To help them strategize the luxury products in different sectors

## **DEPARTMENT OF ECONOMICS**

### **Program - BA**

#### **Program Specific Outcome**

PSO-1 Through organizing guest lectures, workshops, seminars, industrial visit and extension activities it enables students to learn economics, particularly its applications and foster the development of their own skills in economic reasoning and understanding.

#### **Course Outcomes**

##### **CO-1 Microeconomics**

Students will be able to apply supply and demand analysis to examine the impact of government regulation and it also enables them to explain determinants of demand, responses of the market and the benefits of exchange.

##### **CO-2 Macroeconomics**

It provides knowledge regarding the formulation of broad economic policies that maximize the level of national income, providing economic growth to achieve sustainability, full employment, price stability, external balance, increasing productivity in the long run.

### **CO-3 Money and banking**

It attempts to impart an understanding of monetary economics. It describes carefully the basics of monetary economics like money, value of money, theories of money, banking and international financial institutions.

### **CO-4 International trade and public finance**

Enable the students the pattern and nature of international trade and their contribution to economic development. It also enables learners to know the role of public authorities in raising revenue and its spending.

### **CO-5 Economic thought**

Gives ideas to the students about the systematic development of economic theories beginning from pre-modern and modern era.

### **CO-6 Economics of development**

It makes the students understand the aspect of the development process in low income countries. Its focus is on improving the potential for the mass of population through health and education.

### **CO-7 Indian economy**

It makes learners understand the economic functioning and conditions of our country in the context of past, present and future.

### **CO-8 Environmental economics**

As environmental problems are the burning issues of the present day, the study of environmental economics helps them to know the methods of controlling environment pollution and thereby to achieve sustainable development.

## **DEPARTMENT OF POLITICAL SCIENCE**

### **Program : BA**

#### **Program Specific Outcome**

PSO-1 Political Science opens up job opportunities in both public and private sectors. Political science graduates can find employment in Indian Administrative Service, Indian Foreign Service, Banks, Secretaries (assistance) to ministers/pepts, Organisations.

PSO-2 Political Science graduates can tune their career in law, Social service, Career in journalism and media, As politician, political analyst, campaign manager etc., Political Scientist can apply for internship for others position at various organisation

PSO -3 Helps to understand the concept, origin of power and relationships.

PSO-4 Helps in understanding the origin and nature of state government, political institutions, activities taking place in political systems and its impact on one's Nation.

PSO -5 Enables the study of national & International political affairs , knowledge about political system of the nation, government mechanismà Its functions and responsibilities interconnection between local, state, national and international politics.

PSO-6 This program helps the student to develop & be able to demonstrate proficiency in public administration, Political Theory, International relations

#### **Course Outcome**

CO-1 Political Theory : To understand the concepts of political science and its importance, enables students to apply theoretical framework to contemporary cases, outline and defend a vision of politics in areas such as justice, Liberty, equality, democracy, community.

CO-2 Government and Political system : Acquiring the knowledge of constitutions, Awareness on one's rights, duties, Information about political parties, parliamentary process and system of justice and makes them aware challenges and problems in Indian politics

Co-3 Western and Eastern political Thought : To Gain Information about Western thinkers and their thought , Enables students to have comparative knowledge of ancient, mediaeval and modern thought.

CO-4 Modern Government: Students can learn about information about world government institutions and their processes.

CO-5 Public administration : Enables the students to have knowledge about budget preparing and its execution, Students study the administrative system, organization, management techniques and tools in administration, Study of mechanism for the solution of problems in administration

CO-6 International politics : Study of international political system, International Regional organization, relations with neighboring countries, Foreign policy of nations, approaches, theories –Realism, Idealism and its role, state and sovereignty, Inculcating the knowledge of various concepts of International Relations- Collective security, Balance of power, peace and security issues

## **DEPARTMENT OF PSYCHOLOGY**

### **Program Specific Outcome**

PSO-1 Introduce students to the concepts, theories and research which define the discipline of Psychology.

PSO-2 This course aims at providing conceptual understanding of healthy development and practical understanding of how to help children, adolescents and adults address the challenges they face across the lifespan.

PSO-3 Discuss the basic physical, cognitive & social development during each age period.

### **Course Outcome**

CO- 1 Assess the biological, cognitive, cultural, environmental and social factors that influence development throughout the lifespan.

CO-2. Evaluate current & past research study of the lifespan guided by theories within the field of psychology.

CO-3 Apply the principles of psychology to daily life throughout the lifespan.

## **DEPARTMENT OF SOCIOLOGY**

### **PROGRAM SPECIFIC OUTCOMES**

PSO-1 Critical Thinking: The Program seeks to develop in students the sociological knowledge and skills that will enable them to think critically and imaginatively about society and social issues.

PSO-2 Sociological Understanding: The ability to demonstrate sociological understandings of phenomena, for example, how individual biographies are shaped by social structures, social institutions, cultural practices, and multiple axes of difference and inequality.

PSO-3 Written and Oral Communication: The ability to formulate effective and convincing written and oral arguments. · Better understanding of real life situation: The ability to apply sociological concepts and theories to the real world and ultimately their everyday lives.



PSO-4 Analytical thinking: Field survey and preparation of dissertation paper is an inseparable part of Sociology Hons Program. Students have to collect primary data for census as well as his/her research topic and analyse the data to draw conclusions. So, qualitative and quantitative analytical skills are enhanced.

PSO-5 Observation power: a sensible observation power is necessary to identify the research problems in field study. So a perception about human society slowly grows up.

PSO-6 Communication skills and Social interaction power: Students of Sociology stream have to work beyond the class room boundary at the time of field study activities. As a result good communication skill develops while interacting with local people.

PSO-7 Ethical and Social Responsibility: Students have to learn about institutions, folkways , mores, culture, social control ,social inequality, population composition, population policy, society and culture of India. All these help to instill among the students of Sociology a sense of ethical and social responsibility.

PSO-8 Professional and Career Opportunities: Students will have the opportunity to join professional careers in Sociology and allied fields. Sociology provides an intellectual background for students considering careers in business, social services, public policy government service, nongovernmental organizations, foundations, or academia. This Program lays foundation for further study in Sociology, Social work, Rural Development, Social Welfare and in other allied subjects.

## **COURSE OUTCOME**

### **COURSE-I: INTRODUCTION TO SOCIOLOGY**

CO-1 Acquaint themselves with the basic concepts of Sociology like society, community, association, culture, social change, social stratification etc.

CO-2 Know the basic social institutions like family, marriage, kinship in a scientific way.

CO-3 Understand and demonstrate how self develops through various process of interaction. Demonstrate how societal and structural factors influence individual behaviour.

CO-4 Explain social change and the factors affecting social change. Realize the importance of cultural lag to understand social change.

### **COURSE-III: INDIAN SOCIETY AND CULTURE IN INDIA**

CO-1 Explore the roots of Indian civilization.

CO-2 Know the economy, polity and society of ancient, medieval and modern India.

CO-3 Understand and analyze the key concepts of Hinduism, Jainism, Buddhism, Islam and impact of these religions on society.

CO-4 Understand and analyze the areas of interrelations between India and South Asia.

CO-5 Realize the basic issues of Indian society like unity in diversity, problems of nationalism and principles of Indian Constitution.

CO-6 Globalization and analyze its impact on social, economic, political, cultural spheres.

### **COURSE-VII: SOCIAL PROBLEMS IN INDIA**

CO-1 The course also addresses various problems of Indian society and measures taken to eradicate these problems.

CO-2 Studying the course students will gather knowledge on various social problems in India like poverty, illiteracy, domestic violence, violence against women and measures taken to eradicate the problems.

## **COURSE-VIII: SOCIAL RESEARCH METHODOLOGY**

CO-1 The course emphasis on formulating research design, methods of data collection, and data analysis, it will provide students with some elementary knowledge on how to conduct both, quantitative and qualitative research. Field work is an applied part of social research methods.

CO-2 To acquaint students with empirical field data collection, analysis and writing analytical and standard dissertation or research report in sociology. From the course students will able to learn about

### **DEPARTMENT OF HISTORY**

#### **PROGRAM SPECIFIC OUTCOME**

PSO-1 It presents basic information on the main stages of human historical development.

PSO-2 Understand the background of our religion, customs, institutions, administration and so on.

PSO-3 Understand the present existing social, political, religious and economic conditions of the people.

PSO-4 Analyse the relationship between the past and the present is lively presented in history.

PSO-5 Develop practical skills helpful in the study and understanding of historical events. they - draw historical maps, charts, etc.

PSO-6 Develop interests in the study of history and activities relating to history.

PSO-7 The study of history helps to impart moral education

PSO-8 History instills the feeling of patriotism in the hearts of yhe pupils.

PSO-9 It illustrates the interrelationship among history events through an understanding of the process of change, continuity, & causation over time

PSO-10 It offers opportunities to analyze the implications of broad range of social, economic, political, & cultural problems & developments over time

PSO-11 It offers to master historical comprehension

#### **COURSE OUTCOMES**

CO-1 Produces written work that incorporates consideration of the relevant historiography along with the theory that informs it.

CO-2 Develop an ability to convey verbally their thesis research and relevant historiography and theory.

CO-3 Classifies the nature of prehistoric societies.

CO-4 Identify cultural synthesis

CO-5 Appreciate art & architecture

CO-6 Analyse social religious consciousness in india

CO-7 Identify challenges within the nation

CO-8 It gives opportunity to think about the nature of historical enterprise within society

CO-9 Identify history as scientific discipline

CO-10 It helps to compete successfully in appropriate educational & professional markets

#### **History of Modern India**

CO-1 To Learn the details of advent of europeans British Land Revenue System, classification and characteristics of Introduction of English Education

#### **HISTORY OF EUROPE 1500 -1945**

CO-1 Learn in details with application of Introduction of French Revolution, the concept of Nationalism and Movements for Unification

CO-2 Rise of Dictatorships.

**INDIA AFTER INDEPENDENCE**

CO-1 Acquaint them selves with the details of Indian Independence

CO-2 Characteristics of Political Parties

CO-3 The Assertion of Regional identities

CO-4 The application of Religion and Politics