



Acharya Pathasala College of Arts & Science  
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**Department of Chemistry**

**B.Sc., (NEP Scheme) Course Outcomes (Cos) / Program Outcomes (Pos)**

**for the academic year 2023-24**

**Semester – V**

**DSC 5: Paper V (Inorganic chemistry - III & Organic chemistry - III)**

**Course Outcomes (Cos):**

1. Recognizing the reactivity of aldehydes and ketones in nucleophilic addition reactions, and explain mechanisms like acetal formation and condensation reactions with ammonia derivatives.
2. Demonstrate knowledge of reductions by  $\text{LiAlH}_4$  and  $\text{NaBH}_4$ , and understand the mechanisms of Clemmensen and Wolff-Kishner reductions.
3. Classify and understand reactions of carboxylic acid derivatives (acid chlorides, anhydrides, esters, amides) with nucleophiles, and explore ester hydrolysis mechanisms.
4. Distinguish between complex and double salts, understand ligand classification, and apply coordination number and nomenclature of coordination compounds.
5. Identify structural isomerism (ionization, linkage, hydrate, coordination) and stereoisomerism (geometrical and optical isomerism) in coordination compounds.
6. Explain Werner's theory, Valence Bond Theory (VBT), and Crystal Field Theory (CFT), and understand their limitations in describing complex formation and crystal field splitting.
7. Understand radioactive decay, nuclear reactions, and the principles of nuclear fission and fusion, and explore the applications of radioisotopes in medicine, agriculture, and food preservation.
8. Study the Bessemer process, steel treatments, and alloy classifications (ferrous and nonferrous), and understand the role of specific elements in alloy properties and applications.

### **DSC 6: Paper VI (Physical chemistry - III & Spectroscopy - I)**

#### **Course Outcomes (Cos):**

1. Analyze reaction rates using collision theory, transition state theory, and Arrhenius equation; calculate activation energy, temperature coefficients, and apply thermodynamic formulations to reaction rates.
2. Apply the concept of steady-state kinetics and analyze chain reactions, including chain length, inhibition, and the comparison of photochemical and thermal reactions.
3. Explain photochemical laws (Grotthus-Draper, Stark-Einstein), quantum yield, and the mechanisms of photochemical reactions like hydrogen halide dissociation; understand photosensitized reactions, fluorescence, phosphorescence, and biochemical processes (e.g., bioluminescence).
4. Understand and interpret phase diagrams (water, sulfur, lead-silver systems), and apply Gibb's Phase Rule to calculate degrees of freedom and explain various phase transitions and eutectic mixtures.
5. Master the common ion effect, buffer types and action, and use the Henderson-Hasselbalch equation to calculate pH of buffers. Apply solubility product concepts in qualitative analysis and understand indicator theories in acid-base titrations.
6. Study the formation of electrochemical cells, calculate EMF, understand Nernst equation, and apply the electrochemical series to predict spontaneous reactions. Master thermodynamics of reversible cells and calculate equilibrium constants and thermodynamic properties using EMF data.
7. Comprehend key quantum mechanical concepts such as operators, Schrödinger's equation, angular momentum, and quantum mechanical degeneracy, and apply these to atomic and molecular systems, such as the hydrogen atom and harmonic oscillators.
8. Analyse various types of molecular spectra (UV, IR, MW, Raman, NMR), including rotation, vibration, and electronic spectra, using quantum mechanical principles. Interpret spectroscopic data for molecular identification and apply Franck-Condon principle, Raman scattering, and NMR principles.

### **Program Outcomes (Pos):**

1. To create enthusiasm among students for analytical chemistry and its applications in various fields of life.
2. To provide students with broad and balanced knowledge and understanding of key concepts in analytical chemistry.
3. To develop in students a range of practical skills so that they can understand and assess risks and work safety in the laboratory.
4. To develop in students the ability to apply standard methodology to the solution of problems in chemistry.
5. To provide students with knowledge and skill towards employment or higher education in chemistry or multi-disciplinary areas in chemistry.
6. To provide students with the ability to plan and carry out experiments independently and assess the significance of outcomes and to cater to the demands of chemical industries of well-trained graduates.
7. To develop in students the ability to adapt and apply methodology to the solution of unfamiliar types of problems.
8. To instil critical awareness of advances at the forefront of chemical sciences, to prepare students effectively for professional environment or research degrees in chemical sciences and to develop an independent and responsible work ethics.



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## Semester – VI

### **DSC 7: Paper VII (Inorganic chemistry - IV & Physical chemistry - IV)**

#### **Course Outcomes (Cos):**

1. Define, classify, and explain the properties, uses, and manufacturing processes of industrial materials such as refractories, abrasives, glass, ceramics, and cement.
2. Demonstrate an understanding of the constituents, roles, and applications of paints, varnishes, coal, gaseous fuels, and explosives, and discuss their significance in industrial applications.
3. Describe the production processes of urea, ammonium nitrate, superphosphate, and other fertilizers, and understand their chemical processes and uses in agriculture.
4. Discuss the properties, synthesis methods, and applications of nanomaterials, conducting polymers, superconductors, and fullerenes, with emphasis on their role in emerging technologies.
5. Derive and apply key thermodynamic equations (e.g., Gibbs-Helmholtz, Clausius-Clapeyron), and interpret the concepts of fugacity, activity, and partial molar properties to real-world chemical processes.
6. Understand the principles and applications of thermal analysis techniques, such as thermogravimetry (TG), and their relevance in quantitative chemical estimations.
7. Describe the principles of flame atomic absorption spectrometry, including atomization, instrumentation, and chemical interference correction, and apply these methods in chemical analysis.



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## DSC 8: Paper VIII (Organic chemistry - IV & Spectroscopy - II)

### Course Outcomes (Cos):

1. Understand the nomenclature and aromaticity of heterocyclic compounds like pyrrole, furan, thiophene, pyridine, indole, pyrimidine, and purine.
2. Classify and differentiate carbohydrates, including monosaccharides, disaccharides, and their functional properties (e.g., mutarotation and anomeric effect).
3. Elucidate the structure and synthesis of important terpenes, alkaloids, and their biological significance, including nicotine, caffeine, and morphine.
4. Comprehend the structure and function of lipids, including fatty acids, triglycerides, phospholipids, and cholesterol, with a focus on their biological importance.
5. Analyse the structure and function of amino acids and proteins, including peptide bond formation, protein structure levels, and enzyme activity.
6. Examine enzyme kinetics and inhibition, understanding factors influencing enzyme activity and recognizing competitive, non-competitive, and uncompetitive inhibition.
7. Understand pharmaceutical chemistry, including the synthesis of drugs like aspirin, paracetamol, and sulphanilamide, and the biological roles of antibiotics.
8. Apply principles of green chemistry to design sustainable chemical processes, focusing on atom economy, toxicity reduction, and green solvents.
9. Interpret organic spectra such as UV, IR, and NMR to identify functional groups and molecular structures in organic compounds.
10. Use spectroscopy techniques like UV, IR, and NMR to analyse organic molecules, applying concepts of chemical shifts, functional group identification, and molecular interactions.



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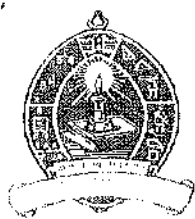
### Program Outcomes (Pos):

1. To create enthusiasm among students for analytical chemistry and its applications in various fields of life.
2. To provide students with broad and balanced knowledge and understanding of key concepts in analytical chemistry.
3. To develop in students a range of practical skills so that they can understand and assess risks and work safety in the laboratory.
4. To develop in students the ability to apply standard methodology to the solution of problems in chemistry.
5. To provide students with knowledge and skill towards employment or higher education in chemistry or multi-disciplinary areas in chemistry.
6. To provide students with the ability to plan and carry out experiments independently and assess the significance of outcomes and to cater to the demands of chemical industries of well-trained graduates.
7. To develop in students the ability to adapt and apply methodology to the solution of unfamiliar types of problems.
8. To instil critical awareness of advances at the forefront of chemical sciences, to prepare students effectively for professional environment or research degrees in chemical sciences and to develop an independent and responsible work ethics.



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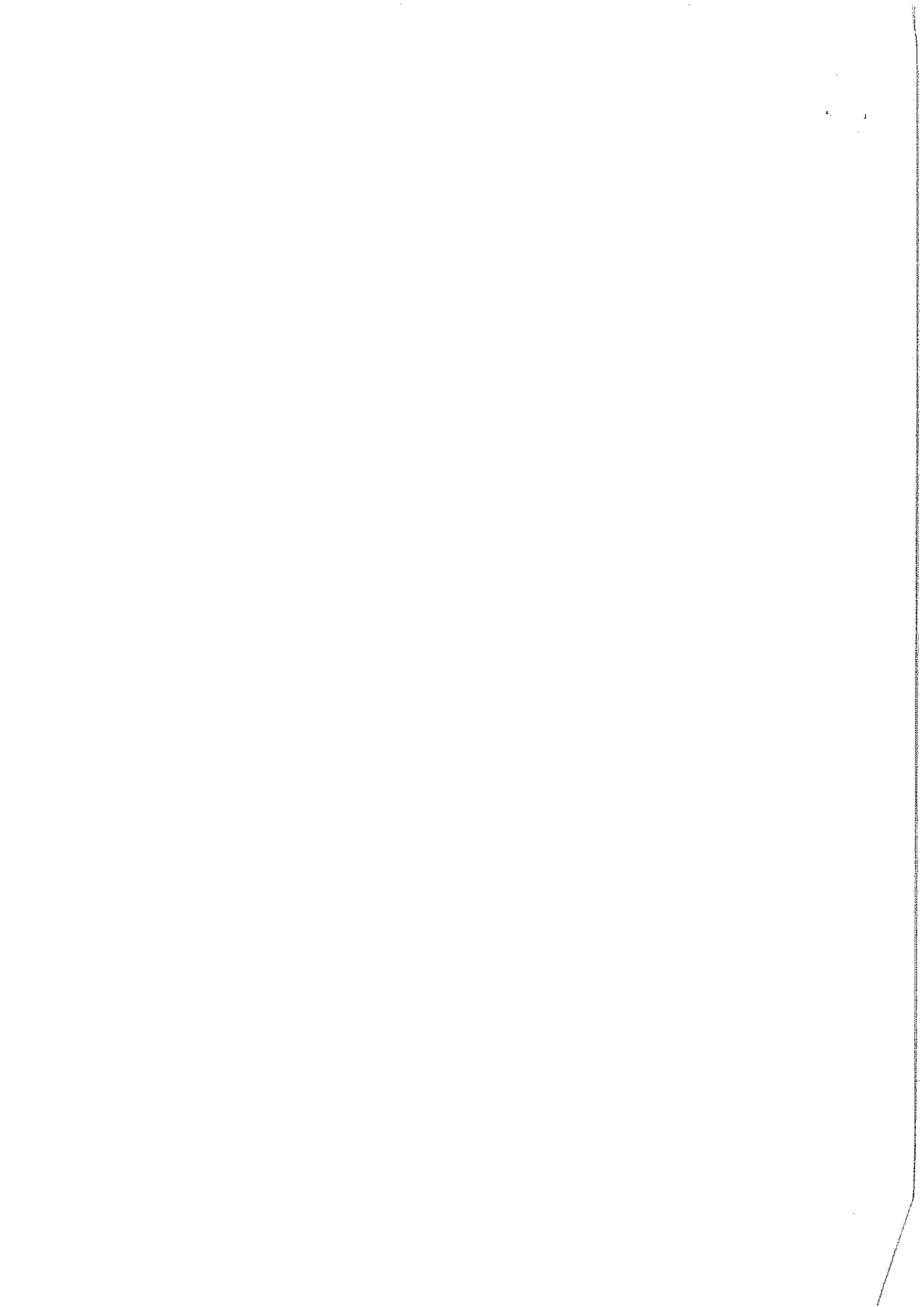


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**Department of Computer Science**

**Course Objective Outcome, Program Objective Outcome &  
Program Specific Outcome (CO, PO & PSO) of  
BCA NEP 2020**



## **BCA (Bachelor of Computer Application)**

### **Course Objectives Outcome (COS)**

#### **Course: BCA103T - Problem Solving Techniques Using C**

<b>PROGRAMME: Computer Application</b>	<b>COURSE: Problem Solving Techniques Using C</b>
<b>DEGREE: BCA</b>	<b>SEMESTER: 1 CREDITS: 2</b>
<b>COURSECODE: BCA 103 T</b>	<b>COURSE AREA/DOMAIN: NA</b>
<b>COURSE TYPE: Theory</b>	<b>CONTACT HOURS: 4 (weekly)</b>

#### **Course pre-requisites:**

Basic understanding of techniques used in Programming, algorithm and Flowchart.

#### **Course Objectives**

1. Learn the difference between software and hardware.
2. Learn data types, keywords and control structures of C
3. Learn to write algorithms for the given Problems.
4. Learn to write Flowcharts for the given Problems.
5. Learn to map problems to programming features of C.
6. Learn the looping concept.
7. Learn the concept of functions.
8. Learn to write good portable C programs.

#### **Course Outcomes**

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

- Co.1:- Appreciate and understand the differences between hardware and software.
- Co.2:- Analyze a given problem and develop an algorithm to solve the problem.
- Co.3:- Improve upon a solution to a problem.
- Co.4:- Use the 'C' language constructs in the right way.
- Co.5:- Design, develop and test programs written in 'C'.

### Assessment Methodologies

SL.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests Direct	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

Course: BCA103P C-Programming Lab

PROGRAMME: Computer Application	COURSE: C-Programming Lab
DEGREE:BCA	SEMESTER: 1 CREDITS: 2
COURSECODE: BCA 103 P	COURSE AREA/DOMAIN: NA
COURSE TYPE:PRACTIVCAL	CONTACT HOURS: 3 hr(weekly)

**Course: BCA104 Digital Electronics**

PROGRAMME: Computer Application	COURSE: Digital Electronics
DEGREE: BCA	SEMESTER: 1 CREDITS: 2
COURSECODE: BCA 104 T	COURSE AREA/DOMAIN: NA
COURSE TYPE: Theory	CONTACT HOURS: 4 (weekly)

**Course pre-requisites;**

Basic understanding of Number systems and Basic Electronics concepts.

**Course Objectives**

The objective of this course is to introduce the organization of a computer and its principal components, viz, ALU, Control, Memory and Input/output. The course will also enable the student to understand the design components of a digital subsystem that required realizing various components such as ALU, Control, etc.

**Course Outcomes:**

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

Co.1:-An ability to understand theory of Digital Design and Computer Organization to provide an insight of how basic computer components are specified.

Co.2:-An ability to understand the functions of various hardware components and their building blocks

Co.3:- An ability to understand and appreciate Boolean algebraic expressions to digital design

Co.4:-An in depth understanding of sequential/ Combinational circuits

Co.5:-An in depth understanding of realization of different combinational/sequential circuits

Co.6:- An in depth understanding of different stages of an instruction execution

Co.7:-An in depth understanding of how different hardware components are related and works in coordination

Co.8:-An ability to understand computer buses and input/output peripherals

### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests Direct	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

Course: BCA104P

PROGRAMME: Computer Application	COURSE: Digital Electronics
DEGREE:BCA	SEMESTER: 1 CREDITS: 1
COURSECODE: BCA 104 P	COURSE AREA/DOMAIN: NA
COURSE TYPE: Practical's	CONTACT HOURS: 3 (weekly)
CORRESPONDING LABCOURSE CODE	(IFANY): BCA104P

**Course: BCA105T -Discrete Mathematics**

PROGRAMME: Computer Application	COURSE: Discrete Mathematics
DEGREE:BCA	SEMESTER: 1 CREDITS: 3
COURSECODE: BCA 105 T	COURSE AREA/DOMAIN: NA
COURSE TYPE: Practicals	CONTACT HOURS: 3 (weekly)
CORRESPONDING LABCOURSE CODE	(IFANY): BCA104P

**Course Objectives**

To develop logical thinking and its application to computer science (to emphasize the importance of proving statements correctly and de-emphasize the hand-waving approach towards correctness of an argument). The subject enhances one's ability to reason and ability to present a coherent and mathematically accurate argument. About 40% of the course time will be spent on logic and proofs and remaining 60% of the course time will be devoted to functions, relations, etc.

**Prerequisites**

PHI 251 and MAT 295

**Course Outcomes**

After completing this course satisfactorily, a student will:

- Co.1:-Be able to construct simple mathematical proofs and possess the ability to verify them ABET[ (a, j)].
- Co.2:-Have substantial experience to comprehend formal logical arguments ABET[ (a, b, c)].
- Co.3:-Be skillful in expressing mathematical properties formally via the formal language of propositional logic and predicate logic ABET[ (a)].
- Co.4:-Be able to specify and manipulate basic mathematical objects such as sets, functions, and relations and will also be able to verify simple mathematical properties that these objects possess ABET[ (a)].
- Co.5:-Acquire ability to describe computer programs (e.g. recursive functions) in a formal mathematical manner ABET[ (a, c, i, j)]
- Co.6:-Be able to apply basic counting techniques to solve combinatorial problems ABET[ (a)].
- Co.7:-Gain experience in using various techniques of mathematical induction (weak, strong and structural induction) to prove simple mathematical properties of a variety of discrete structures ABET[ (a, c, j)].

#### Outcome Measurement

The course outcomes will be mainly measured via in-class exams, homework's, quizzes. In addition, lab assignments to restress mathematical concept will be used.

#### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests Direct	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

#### Course: BCA203T Data Structures

PROGRAMME: Computer Application	COURSE: Data Structures
DEGREE: BCA	SEMESTER: 2 CREDITS: 2
COURSECODE: BCA 203 T	COURSE AREA/DOMAIN: NA
COURSE TYPE: Theory	CONTACT HOURS: 4 (weekly)
CORRESPONDING LABCOURSE CODE	(IF ANY): BCA203P

#### Course pre-requisites:

Sound programming knowledge in C and algorithms.

#### Course Objectives

1. Notion of Abstract Data Types (ADT) & Recursive access on them
2. Relation between Data Structure operations and Amortized Complexity analysis

3. How to implement Iterated Lists and variations thereof
4. Tree data structures and how to balance them, for specific access needs
5. Understanding Graph representations, Event modeling, spatial and temporal relational data
6. Choose a Data structure, a set of access methods and determine their asymptotic efficiency

#### Course Outcomes

Upon successful completion of the course student should be able to:

- Co.1:-Analyze data structure impact on algorithms, program design and program performance.
- Co.2:-Understand and apply amortized analysis on data structures, including binary search trees, heaps, and disjoint sets.
- Co.3:- Explain & describe the applications of static and dynamic trees.
- Co.4:- Design, implement, and use advanced ADTs.

#### Course Outcomes

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

- Co.1:- Appreciate and understand the differences between hardware and software.
- Co.2:- Analyze a given problem and develop an algorithm to solve the problem
- Co.3:- Improve upon a solution to a problem
- Co.4:- Use the 'C' language constructs in the right way
- Co.5:- Design, develop and test programs written in 'C'.

#### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests Direct	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

**Course: BCA203P**

PROGRAMME: Computer Application	COURSE: Data Structures Lab
DEGREE:BCA	SEMESTER: 2 CREDITS: 1
COURSECODE: BCA 203 P	COURSE AREA/DOMAIN: NA
COURSE TYPE: Practical's	CONTACT HOURS: 3 (weekly)
CORRESPONDING LABCOURSE CODE	(IF ANY): BCA203P
LABCOURSE NAME: Data Structures Lab	CONTACT HOURS: 3P/WEEK

**Course: BCA 204 Data Base Management System**

PROGRAMME: Computer Application	COURSE: Data Structures Lab
DEGREE:BCA	SEMESTER: 2 CREDITS: 1
COURSECODE: BCA 204T	COURSE AREA/DOMAIN: NA
COURSE TYPE: Theory	CONTACT HOURS: 3 (weekly)
CORRESPONDING LABCOURSE CODE	(IF ANY): BCA204p

**Course pre-requisites:**

Fundamental concepts about data and basic programming knowledge.

**Course Objectives**

The objective of the course is to enable students to understand and use a relational database system. Introduction to Databases, Conceptual design using ERD, Functional dependencies and Normalization, Relational Algebra is covered in detail. Students learn how to design and create a

good database and use various SQL operations. The course concludes with an overview of transaction management and introduction to advanced and non-relational databases.

#### Course Outcomes

- Co.1:- Able to master the basic concepts and understand the applications of database systems.  
 Co.2:- Able to construct an Entity-Relationship (E-R) model from specifications and to transform to relational model.  
 Co.3:- Able to construct unary/binary/set/aggregate queries in Relational Algebra.  
 Co.4:- Understand and apply database normalization principles.  
 Co.5:- Able to construct SQL queries to perform CRUD operations on database. (Create, Retrieve, Update, Delete)  
 Co.6:- Understand principles of database transaction management, database recovery, security.

#### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests Direct	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

#### Course: BCA 204P Database Lab (Oracle)

PROGRAMME: Computer Application	COURSE: Data Structures Lab
DEGREE: BCA	SEMESTER: 2 CREDITS: 1
Lab COURSECODE: BCA 204P	COURSE AREA/DOMAIN: NA
COURSE TYPE: Practicals	CONTACT HOURS: 3 (weekly)

**Course: BCA 205T Numerical Analysis & Statistical Methods**

PROGRAMME: Computer Application	COURSE: Numerical Analysis & Statistical Methods
DEGREE:BCA	SEMESTER: 2 CREDITS: 3
COURSECODE: BCA 205T	COURSE AREA/DOMAIN: NA
COURSE TYPE: Theory	CONTACT HOURS: 5 (weekly)
CORRESPONDING LABCOURSE CODE	(IF ANY): BCA204p

**Course pre-requisites**

Basic knowledge of formulation of algorithms.

**Course Objectives**

The primary goal is to provide engineering majors with a basic knowledge of numerical methods including: root- finding, elementary numerical linear algebra, integration, interpolation, solving systems of linear equations, curve fitting, and numerical solution to ordinary differential equations. 'C' language software environment used for implementation and application of these numerical methods. The numerical techniques learned in this course enable students to work with mathematical models of technology and systems.

**Course Outcomes**

- Co.1:- An ability to apply knowledge of mathematics, science, and engineering.
- Co.2:- An ability to design and conduct experiments, as well as to analyze and interpret data.
- Co.3:- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- Co.4:- An ability to function on multidisciplinary teams

### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests Direct	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

**Course: BCA303T Object Oriented Programming using C++**

PROGRAMME: <b>Computer Application</b>	COURSE: Object Oriented Programming using C++
DEGREE: <b>BCA</b>	SEMESTER: <b>3</b> CREDITS: <b>2</b>
COURSECODE: <b>BCA 303 T</b>	COURSE AREA/DOMAIN: <b>NA</b>
COURSE TYPE: <b>Theory</b>	CONTACT HOURS: <b>4 (weekly)</b>
CORRESPONDING LABCOURSE CODE	(IF ANY): <b>BCA303P</b>

### Course pre-requisites

Fundamental programming knowledge about C language.

### Course Objectives

The fundamental point in learning programming is to develop the critical skills of formulating programmatic solutions for real problems. It will be based on basic knowledge of algorithms and procedural programming language. Once the basic skill of writing programs using loop, methods and arrays will be clear then the student can develop object oriented software using class encapsulation and inheritance.

To impart the basic concepts of Java Programming and to develop understanding about Basic Object oriented Design.

#### Course Outcomes

Co.1:- Understand fundamental constructs of OOP.

Co.2:- Get the knowledge of UML with skills to draw UML diagrams.

Co.3:- Get the knowledge of different forms of OO Implementation.

Co.4:- Apply object oriented programming concepts in problem solving through C++.

Co.5:- Design and implement Applet and event handling mechanisms in programs

#### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests Direct	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

Course: BCA303P - OOP using C++ Lab

PROGRAMME: Computer Application	COURSE: OOP in C++ Lab
DEGREE:BCA	SEMESTER: 3 CREDITS: 1
COURSECODE: BCA 303 P	COURSE AREA/DOMAIN: NA
COURSE TYPE: Practical's	CONTACT HOURS: 3 (weekly)

**Course: BCA 303T -Operating System**

PROGRAMME: Computer Application	COURSE: OOP in C++ Lab
DEGREE:BCA	SEMESTER: 3 CREDITS: 3
COURSECODE: BCA 303 T	COURSE AREA/DOMAIN: NA
COURSE TYPE: Theory	CONTACT HOURS: 5hr (weekly)

**Course pre-requisites:**

Basic knowledge of working principle of computer. Familiarity with working with WINDOWS operating system.

**Course Objectives**

1. To understand the services provided by and the design of an operating system.
2. To understand the system programs, system components.
3. To understand the structure and organisation of the file system.
4. To understand what a process is and how processes are synchronized and scheduled.
5. To understand different approaches to memory management.
6. Students should be able to use system calls for managing processes, memory and the file system.
7. Students should understand the data structures and algorithms used to control deadlock.
8. To understand disk scheduling, protection and security.

**Course Outcomes**

- Co.1:- Analyse the concepts of processes in operating system and illustration of the scheduling of processor for a given problem instance.
- Co.2:- Understand the evolution of operating system.
- Co.3:- Identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.
- Co.4:- Analyze memory management techniques, concepts of virtual memory and disk scheduling.
- Co.5:- Understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.

**Assessment Methodologies**

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

**Course: BCA 304T -Financial Accounting & Management**

<b>PROGRAMME: Computer Application</b>	<b>COURSE: Financial Accounting &amp; Management</b>
<b>DEGREE:BCA</b>	<b>SEMESTER: 3 CREDITS:2</b>
<b>COURSECODE: BCA 304 T</b>	<b>COURSE AREA/DOMAIN: NA</b>
<b>COURSE TYPE: Theory</b>	<b>CONTACT HOURS: 4hr (weekly)</b>

**Course pre-requisites:**

Fundamental concepts about account.

**Course Objectives**

The objective of the course is to strengthen the fundamentals of accounting and provide strong foundation for other accounting courses. The course will intensify knowledge on all the basic components by using double entry book keeping perspective.\

**Course Outcomes**

**The students will be able to:**

- Co.1:- Define fundamental accounting concepts, Conventions & terminologies.
- 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.
- Co.4:- To rectify the errors located in books of entry & subsidiary books.

**Assessment Methodologies**

SL.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: <b>Financial Accounting &amp; Management</b>	Semester : 3 CREDITS: 1
COURSECODE: BCA 304P	COURSE TYPE: Theory
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 4 (weekly)
CORRESPONDING LABCOURSE CODE (IFANY): BCA 304P	LABCOURSE NAME: TALLY Lab

**Course: BCA 403 T Visual Programming**

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: Visual Programming	Semester : 4 CREDITS: 2
COURSECODE: BCA 403T	COURSE TYPE: Theory
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 4 (weekly)
CORRESPONDING LABCOURSE CODE (IFANY): BCA 403P	LABCOURSE NAME: Visual Programming Lab

**Course pre-requisites:**

Basic knowledge of Programming and basic user interface design.

**Course Objectives**

1. Learn basics of visual Basic programming
2. Learn how to design a given problem
3. Learn to use various paradigms of programming and user interface designing.
4. Learn Visual Basic as a programming language
5. Learn how to implement data structures and functions available in Visual Basic to solve problems

6. To explore the Microsoft Foundation Class programming concepts

#### Course Outcomes

After this course, the student will be able to

CO1. Analyze a given problem and implement an algorithm to solve the problem

CO2. Improve upon a solution to a problem

CO3. Implement the Visual Basic language constructs in the right way

CO4. Design, develop and test Applications written in Visual Basic.

CO5: Implement and innovate commands using the basic tool kit.

CO6: Develop the practice of writing windows applications through Object Oriented concepts

#### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examinations	Direct
4	Student Feed Back	Indirect

#### Course: BCA 403P Visual Programming Lab

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: Visual Programming	Semester : 4 CREDITS: 1
COURSECODE: BCA 403 P	COURSE TYPE: Practical
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 3 (weekly)

#### Course: BCA 404 UNIX and Shell Programming

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: Unix and Shell Programming	SEMESTER: 4 CREDITS: 2
COURSECODE: BCA 404T	COURSE TYPE: Theory
COURSE AREA/DOMAIN: Operating system	CONTACT HOURS: 4 (weekly)
CORRESPONDING LABCOURSE CODE: BCA404P	LABCOURSE NAME: Unix Lab

### Course pre-requisites

Basic knowledge about Operating System.

### Course Objectives

1. The aim of this course is to make you aware of the functioning of a multi-user operating system.
2. This course serves as a foundation course for other higher level course in UNIX.
3. The course will help you to learn commands while doing practical and it emphasizes more on those switches/options and flags which are most frequently used in real life.
4. To understand Unix Operating System
5. To explore the Basic Shell Commands

### Course Outcomes:

After this course, the student will be able to

- CO1: Discuss the architecture, networking and basic commands of UNIX. (Understand)  
CO2: Implement various file processing commands used in UNIX. (Apply)  
CO3: Apply Regular expression to perform pattern matching using utilities like grep, sed and awk. (Apply)  
CO4: Construct various shell scripts for simple applications. (Apply)  
CO5: Explain the process management using system calls UNIX environment (Understand)  
CO6: Implement and innovate commands using the basic tool kit  
CO7: Develop shell programs in vi/vim editor.

### Assessment Methodologies

SL. NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

### Course: BCA404 P UNIX Lab

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: Unix Lab	SEMESTER: 4 CREDITS: 1
COURSECODE: BCA404P	COURSE TYPE: Practical
COURSE AREA/DOMAIN: NA	CONTACT HOURS: 6 P/WEEK

**Course: BCA 501T - : Data Communication and Networks**

<b>PROGRAMME:</b> Computer Application	<b>COURSE TYPE:</b> Theory
<b>DEGREE :</b> BCA	<b>COURSE AREA/DOMAIN:</b> NA
<b>COURSE :</b> Data Communication And Networks	<b>CONTACT HOURS:</b> 4 (weekly)
<b>SEMESTER:</b> 5	<b>CORRESPONDING LABCOURSE CODE (IFANY):</b> NA
<b>CREDITS:</b> 3	

**Course pre-requisites:**

Fundamental knowledge about analog and digital communication. Basic knowledge about computer network and communication.

**Course Objectives**

1. To provide an introduction to the fundamental concepts on data communication and the design of computer networks.
2. To get familiarized with the basic protocols of computer networks and Networks Standards like LAN, MAC etc.

**Course Outcomes**

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.
- Co.4:- Understand computer network basics, network architecture, and TCP/IP and OSI reference models.
- Co.5:- Identify and understand various techniques and modes of transmission
- Co.6:- Describe data link protocols, multi-channel access protocols and IEEE 802 standards for LAN
- Co.7:- Describe routing and congestion in network layer with routing algorithms and classify IPV4 addressing scheme
- Co.8:- Discuss the elements and protocols of transport layer
- Co.9:- Understand network security and define various protocols such as FTP, HTTP, Telnet, and DNS.
- Co.10:- Understand about Telephone network.
- Co.11:- Understand about Peer to peer communication, ARQ protocols, LAN, MAC and LAN Standards. Packet Switching Network

### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

### Course: BCA 502: Software Engineering

PROGRAMME: Computer Application	COURSE TYPE: Theory
DEGREE : BCA	COURSE AREA/DOMAIN: NA
COURSE : Software Engineering	CONTACT HOURS: 4 (weekly)
SEMESTER: 5	CORRESPONDING LABCOURSE CODE (IF ANY): NA
CREDITS: 3	

### Course pre-requisites:

Basic knowledge about Software Development life cycle.

### Course Objectives

To develop an understanding of software engineering, software crisis, SDLC. Understanding the concept of software project planning – feasibility analysis, requirement analysis, SRS documents. Come to know the software designing strategies – structured analysis, structured design, DFD, structure chart. Understand concept of Project Management along with software testing, maintenance, back-up..

### Course Outcomes

- Co.1:- Evaluate and analyze the SDLC and basic architecture SRS documents.
- Co.2:- Help to understand the software design and coding techniques.
- Co.3:- Understand the software testing principles.
- Co.4:- Understand the concept project management.
- Co.5:- Identify various concepts of Advanced UML techniques.

### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

### Course: BCA503 T - : Computer Architecture

PROGRAMME: Computer Application	COURSE TYPE: Theory
DEGREE: BCA	COURSE AREA/DOMAIN: NA
COURSE: Computer Architecture	CONTACT HOURS: 4 (weekly)
SEMESTER: 5	CORRESPONDING LABCOURSE CODE (IFANY): NA
CREDITS: 3	
COURSECODE: BCA 503T	LABCOURSE NAME: NA

### Course pre-requisites

Basic knowledge of Digital electronics.

### Course Objectives

The objective of this course is to introduce the organization of a computer and its principal components, viz, ALU, Control, Memory and Input/output. The course will also enable the student to understand the design components of a digital subsystem that required realizing various components such as ALU, Control, CPU, IOP, Memory etc.

### Course Outcomes

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

Co.1:- An ability to understand theory of Digital Design and Computer Organization to provide an insight of how basic computer components are specified.

- Co.2:- An ability to understand the functions of various hardware components and their building blocks.
- Co.3:- An ability to understand and appreciate Boolean algebraic expressions to digital design.
- Co.4:- An in depth understanding of sequential/ Combinational circuits.
- Co.5:- An in depth understanding of realization of different combinational/sequential circuits.
- Co.6:- An ability to understand computer buses and input/output peripherals.
- Co.7:- An ability to understand memory hierarchy and design of primary memory and DMA.
- Co.8:- An ability to understand digital components in organisation like logic gates, combinational circuits, Flip Flop and sequential circuits.
- Co.9:- An ability to understand digital components.
- Co.10:- An ability to understand data representation and various binary codes.
- Co.11:- An ability to understand designs an elementary basic computer.
- Co.12:- An ability to understand organization and architecture of central processing unit.
- Co.13:- An ability to understand the organization and architecture of IOP.

#### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

#### Course: BCA 504 T Java Programming

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: Visual Programming	Semester : 4 CREDITS: 2
COURSECODE: BCA 504 T	COURSE TYPE: Theory
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 4 (weekly)
CORRESPONDING LABCOURSE CODE (IFANY): BCA 504 P	LABCOURSE NAME: Java Programming Lab

#### Course pre-requisites:

Basic knowledge about C, C++.

**Course Objectives**

The fundamental point in learning programming is to develop the critical skills of formulating programmatic solutions for real problems. It will be based on basic knowledge of algorithms and procedural programming language. Once the basic skill of writing programs using loop, methods and arrays will be clear then the student can develop object oriented software using class encapsulation and inheritance.

To impart the basic concepts of Java Programming and to develop understanding about Basic Object oriented Design using UML and Applet.

**Course Outcomes**

Co.1:- Understands fundamental constructs of OOP.

Co.2:- Get the knowledge of UML with skills to draw UML diagrams.

Co.3:- Gets the knowledge of different forms of OO Implementation.

Co.4:- Apply object oriented programming concepts in problem solving through JAVA.

Co.5:- Design and implement Applet and event handling mechanisms in programs

Co.6:- Ability to create packages and interfaces.

Co.7:- Ability to implement error handling techniques using exception handling

**Assessment Methodologies**

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examinations	Direct
4	Student Feed Back	Indirect

**Course: BCA 504 P Java Programming Lab**

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: Java Programming Lab	Semester : 5 CREDITS: 2
COURSECODE: BCA 504 P	COURSE TYPE Practical
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 3 (weekly)

**Course: BCA 505T Microprocessor and Assembly Language**

<b>PROGRAMME:</b> Computer Application	<b>COURSE TYPE:</b> Theory
<b>DEGREE:</b> BCA	<b>COURSE AREA/DOMAIN:</b> NA
<b>COURSE:</b> Assembly Language And Microprocessor	<b>CONTACT HOURS:</b> 4 (weekly)
<b>SEMESTER:</b> 5	<b>CORRESPONDING LABCOURSE CODE (IF ANY):</b>  BCA 505 P
<b>CREDITS:</b> 3	
<b>COURSECODE:</b> BCA 505T	<b>LABCOURSE NAME:</b> NA

**Course Objective:**

- To introduce students with the architecture and operation of typical microprocessors and Microcontrollers.
- To familiarize the students with the programming and interfacing of microprocessors and Microcontrollers.
- To provide strong foundation for designing real world applications using microprocessors and microcontrollers.

**Course Outcomes:**

*At the end of the course, a student will be able to:*

1. **Assess and solve** basic binary math operations using the microprocessor and explain the Microprocessor's and Microcontroller's internal architecture and its operation within the area of manufacturing and performance.
2. **Apply** knowledge and demonstrate programming proficiency using the various addressing modes and data transfer instructions of the target microprocessor and microcontroller.
3. **Compare** accepted standards and guidelines to select appropriate Microprocessor (8085 & 8086) and Microcontroller to meet specified performance requirements.
4. **Analyze** assembly language programs; select appropriate assemble into machine a cross Assembler utility of a microprocessor and microcontroller.
5. **Design** electrical circuitry to the Microprocessor I/O ports in order to interface the processor to external devices.
6. **Evaluate** assembly language programs and download the machine code that will provide solutions real-world control problems.

**Course Objectives and Role in Program**

The objectives of this course include:

Teach principles of instruction set architecture and assembly language Programming

- Co.1:- Teach basic procedures of how a compiler translates C/C++ code to assembly Language and perform simple optimizations
- Co.2:- Explore in detail a simple hardware CPU implementation that supports a small Instruction subset; introduce students to computer organization

Co.3:- Show how C/C++ constructs use hardware resources, and introduce concepts of efficiency and performance below the algorithmic level Students will translate a number of small C/C++ programs into assembly language, and learn to trace and debug at the assembly level. They will extend the simple CPU Implementation introduced in class to support additional instructions

Co.4:- The knowledge of how C/C++ constructs are translated to execute on hardware, simple hardware operations and interrupt handling are crucial building blocks for the Operating Systems and Computer Architecture courses.

#### Learning Outcomes

- At the end of this course students will be able to
- Translate C/C++ code into assembly language
- Perform simple optimizations by hand
- Trace and debug at the assembly level
- Understand and extend simple CPU implementations
- Understand basic interrupt/exception handling
- Make simple performance estimates for assembly code

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

#### Course: BCA 505T Microprocessor and Assembly Language

PROGRAMME: Computer Application	DEGREE:BCA
COURSE Assembly Language And Microprocessor Lab	Semester : 5 CREDITS: 2
COURSECODE: BCA 505 P	COURSE TYPE Practical
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 3 (weekly)

#### Course: BCA 506 P Project Work

PROGRAMME: Computer Application	DEGREE:BCA
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COURSE: PROJECT WORK	Semester : 5 CREDITS: 1
COURSECODE: BCA 506 P	COURSE TYPE Practical
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 8 (weekly)

### Course Objectives

- To learn languages to code front end and back end of a software
- To initiate into the process of designing, coding and testing a software module.
- To develop a complete software module

### Course Outcomes

Skill to apply Software Development Cycle to develop a software module.

Co.1:- Ability to use the techniques, skills and modern engineering tools necessary for software development.

Co.2:- Develop a software product along with its complete documentation

### Course: BCA601T Theory of Computation

PROGRAMME: Computer Application	COURSE TYPE: Theory
DEGREE: BCA	COURSE AREA/DOMAIN: NA
COURSE: Theory Of Computation	CONTACT HOURS:4 (weekly)
SEMESTER:6	CORRESPONDING LABCOURSE CODE (IF ANY): NA
CREDITS: 3	
COURSECODE: BCA 601T	LABCOURSE NAME: NA

### Course pre-requisites:

Basic knowledge about fundamental concepts of Mathematics like Set algebra, elementary formal logic, constructing proofs, recurrence relations.

### Course Objectives:

Introduction to finite automata, regular expressions and languages; push-down automata and context-free languages; selected advanced language theoretical topics; emphasis on technique.

### Course Outcomes

- Co.1:- Master regular languages and finite automata.
- Co.2:- Master context-free languages, push-down automata, and Turing recognizable languages.
- Co.3:- Be exposed to a broad overview of the theoretical foundations of computer science.
- Co.4:- Be familiar with thinking analytically and intuitively for problem-solving situations in related areas of theory in computer science.
- Co.5:- Review definitions and notations for sets, relations and functions.
- Co.6:- Introduction to formal languages and Kleene's Theorem.
- Co.7:- Mathematical formal proofs are including proof by induction and by contradiction.
- Co.8:- The recursive definitions of regular languages, regular expressions and the use of
- Co.9:- Regular expressions to represent regular languages.
- Co.10:- Detailed knowledge and the relationship between regular expressions and finite automata.
- Co.11:- Nondeterminism.
- Co.12:- Minimal finite automata in terms of equivalence classes of strings and associated algorithm for finding minimal DFA.
- Co.12:- Pumping lemma for proving that languages are not regular.
- Co.13:- Context-free grammars and how to prove properties of context-free grammars.
- Co.14:- Pushdown automata.
- Co.15:- Application of the pumping lemma for CFL to demonstrate that a language is not context-free.
- Co.16:- Turing machines (deterministic and non-deterministic) and Church-Turing Thesis.
- Co.17:- Brief introduction to recursively enumerable languages.
- Co.18:- Brief introduction to computability including the halting problem and related Problems and PCP

### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

**Course: BCA602 - System Programming**

<b>PROGRAMME:</b> Computer Application	<b>Course Type:</b> Theory
<b>DEGREE:</b> BCA	<b>COURSE AREA/DOMAIN:</b> NA
<b>COURSE:</b> System Programming	<b>CONTACT HOURS:</b> 4 (weekly)
<b>SEMESTER:</b> 6	<b>CORRESPONDING LABCOURSE CODE</b>  <b>(IF ANY):</b> NA
<b>CREDITS:</b> 3	
<b>COURSECODE:</b> BCA 602T	<b>LABCOURSE NAME:</b> NA

**Course pre-requisites:**

Basic knowledge of data structures, computer organization and architecture, operating system, and Programming skills.

**Course Objectives**

1. Learn basic concepts of operating systems and system software's.
2. Design of operating systems and system software's.
3. Learn the functioning of the principal parts of an operating system.

**Course Outcomes**

- Co.1:-To understand the basics of system programs like editors, compiler, assembler, linker, loader, interpreter and debugger.
- Co.2:-Describe the various concepts of assemblers and macro processors.
- Co.3:-To understand the various phases of compiler and compare its working with assembler.
- Co.4:-To understand how linker and loader create an executable program from an object module created by assembler and compiler.
- Co.5:-To know various editors and debugging techniques.
- Co.6:-To know about assembly language.
- Co.7:-To know about Hypothetical machine structure.

**Assessment Methodologies**

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct

4	Student Feedback	Indirect
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Course: BCA603 - Cryptography

PROGRAMME: Computer Application	Course Type: Theory
DEGREE: BCA	COURSE AREA/DOMAIN: NA
COURSE: Cryptography	CONTACT HOURS: 4 (weekly)
SEMESTER:6	CORRESPONDING LABCOURSE CODE (IF ANY): NA
CREDITS: 3	
COURSECODE: BCA 603T	LABCOURSE NAME: NA

#### COURSE OBJECTIVES

1. To understand basics of Cryptography and Network Security.
2. To be able to secure a message over insecure channel by various means.
3. To learn about how to maintain the Confidentiality, Integrity and Availability of a data.
4. To understand various protocols for network security to protect against the threats in the networks.

#### COURSE OUTCOMES:

After successful completion of the course, the learners would be able to

- Co.1:- Provide security of the data over the network.
- Co.2:- Do research in the emerging areas of cryptography and network security.
- Co.3:-Implement various networking protocols.
- Co.4:-Protect any network from the threats in the world.

#### Assessment Methodologies

S.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct

2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

**Course: BCA604 - Web Programming**

<b>PROGRAMME:</b> Computer Application	<b>Course Type:</b> Theory
<b>DEGREE:</b> BCA	<b>COURSE AREA/DOMAIN:</b> NA
<b>COURSE:</b> Web Programming	<b>CONTACT HOURS:</b> 4 (weekly)
<b>SEMESTER:</b> 6	<b>CORRESPONDING LABCOURSE CODE</b>  (IF ANY): NA
<b>CREDITS:</b> 3	
<b>COURSECODE:</b> BCA 603T	<b>LABCOURSE NAME:</b> NA

**Course Objective:**

- Demonstrate competency in the use of common HTML code.
- Demonstrate competency using FTP to transfer web pages to a server.
- Construct pages that meet guidelines for efficient download.
- Construct pages that meet the needs of an identified audience.
- Construct efficient file structure for web sites.
- Demonstrate proficiency in the use of WYSIWYG design software.
- Evaluate the functions of specific types of web pages in relationship to an entire web site.
- Design electronic text and web pages that include the standard textual components needed on web pages.
- Create web pages that meet accessibility needs of those with physical disabilities.
- Understand how CSS will affect web page creation.
- Understand the role of JavaScript in web page creation.
- Modify CSS and JavaScript for use on a web site.
- Understand the function of copyright in relationship to web design and coding.
- Utilize graphic design to enhance web pages.

**Course Outcomes:**

Each course outcome is followed in parentheses by the Program Outcome to which it relates.

**Programming Environment** - Install and configure an Apache 2 server with PHP5 module, MySQL database and the tool PhpMyAdmin. (BS-CS I currency, )

**Server-side** - Write a large array of programs in PHP with some of the most important functionalities the language provides. (BS-CS I currency, )

**MySQL** - Use a MySQL database with PHP to create database applications. (BS- CS I currency, )

**Client-side** - Write HTML pages and use basic JavaScript code to enhance the pages. (BS- CS I currency )

**Advanced Client-side** - Learn and use DHTML and AJAX. Learn the basics of JQuery. (BS- CS I currency,)

**Security** - Learn about the major vulnerabilities facing web sites and some simple ways to reduce their likelihood. (BS-CS E responsibility, )

**Project** - Write a complete market-ready database-driven website with PHP and JavaScript and go through the basic phases of the software life cycle (like project proposal, non- technical presentation (CEO), technical presentation (final presentation)). The project is done in groups of at least 2. (BS-CS F communication, MS-MEM A development,)

#### Assessment Methodologies

Sl.NO	DESCRIPTION	TYPE
1	Student Assignment	Direct
2	Tests	Direct
3	University Examination	Direct
4	Student Feedback	Indirect

#### Course: BCA 605 P Project Work

PROGRAMME: Computer Application	DEGREE:BCA
COURSE: PROJECT WORK	Semester : 6 CREDITS: 1
COURSECODE: BCA 605 P	COURSE TYPE Practical
COURSE AREA/DOMAIN:NA	CONTACT HOURS: 8 (weekly)

#### Course Objectives

- To learn languages to code front end and back end of a software
- To initiate into the process of designing, coding and testing a software module.
- To develop a complete software module

## Course Outcomes

Skill to apply Software Development Cycle to develop as software module.

Co.1:-Ability to use the techniques, skills and modern engineering tools necessary for software development.

Co.2:-Develop a software product along with its complete documentation

## Program Specific Outcomes (PSO)

After the completion of the course, a student is able

• To pursue further studies to get specialization in Computer Science and Applications,,  
Mathematics

• To pursue the career in corporate sector can opt for MBA.

• To Working the IT sector as programmer, system engineer, software tester, junior programmer, web developer, system administrator, software developer etc.

• To working public sector undertakings and Government organizations.

• For teaching in Schools and Colleges.

## Programme Outcomes (PO)–BCA

PO1: Acquire and Apply Knowledge: Ability to understand and apply the fundamental principles, concepts and methods in key areas of Computer Applications and multidisciplinary fields.

PO2: Problem Analysis: Ability to analyze real-time problems using various tools and techniques.

PO3: Design and Development: Ability to design and develop solutions to meet the desired needs.

PO4: State-of-art Technologies: Ability to adapt and apply emerging tools and technologies.

PO5: Entrepreneurship and Innovation: Ability to provide sustainable and innovative solutions for real-time problems.

PO6: Lifelong Learning: Ability to engage in continuous reflective learning in the context of technological advancement.

PO7: Communication and Teambuilding: Ability to demonstrate effective communication and interpersonal skills.

PO8: Ethics and Social Responsibility: Ability to integrate ethical and human values to become a socially responsible citizen.

PO9: To provide thorough understanding of nature, scope and application of computer and computer languages

PO10: To develop interdisciplinary approach among the students

  
Head of the Department

Head of the Dept. of ...  
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Principal

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**Department of Economics - UG**  
**BA ECONOMICS , NEP-2023-24**  
**Semester-I**  
**DSC – 1 Economic Analysis -I**

**Course Outcomes:**

By the end of the course the student will be able to:

- i. Identify the facets of an economic problem.
- ii. Learn basic economic concepts and terms.
- iii. Explain the operation of a market system;
- iv. Analyse the production and cost relationships of a business firm;
- v. Evaluate the pricing decisions under different market structures; and
- vi. Use basic cost-benefit calculations as a means of decision making (i.e., thinking like an economist)

**DSC -2 Contemporary Indian Economy**

**Course Outcomes (COs):**

At the end of the course the student should be able to:

- i. Understand the current problems of Indian Economy
- ii. Identify the factors contributing to the recent growth of the Indian economy
- iii. Evaluate impact of LPG policies on economic growth in India
- iv. Analyse the sector specific policies adopted for achieving the aspirational goals
- v. Review various economic policies adopted

## **OEC 1.3.2 Indian Economy Prior to Economic Reforms (OEC)**

### **Course Outcomes (COs):**

At the end of the course the student should be able to:

- i. Trace the evolution of Indian Economy
- ii. Identify the structural features and constraints of the Indian economy
- iii. Evaluate planning models and strategy adopted in India
- iv. Analyse the sector specific problems and contributions towards overall economic growth
- v. Review various economic policies adopted

## **SEMESTER-II**

### **DSC- 3 Economic Analysis - II**

### **Course Outcomes (COs):**

At the end of the course the student should be able to:

1. Understand the operation of the overall economic system;
2. Calculate national income and related aggregates
3. Explain the relationship between macroeconomic aggregates;
4. Analyse the nature of business cycles and policies towards controlling them;
5. Evaluate the macroeconomic policies for solving major problems like poverty and unemployment

### **DSC-4 Karnataka Economy**

### **Course Outcomes (COs):**

At the end of the course the student should be able to:

1. Understand the nature of economic growth and problems of Karnataka state.

2. Explain the process of structural growth in Karnataka economy;
3. Evaluate the policies and programmes undertaken by the Govt. of Karnataka for bringing about socio-economic development

### **OEC 2.3.1 Contemporary Indian Economy**

#### **Course Outcomes (COs):**

At the end of the course the student should be able to:

- i. Understand the current problems of Indian Economy
- ii. Identify the factors contributing to the recent growth of the Indian economy
- iii. Evaluate impact of LPG policies on economic growth in India
- iv. Analyze the sector specific policies adopted for achieving the aspirational goals
- v. Review various economic policies adopted

### **SEMESTER-III**

#### **DSC – 5 Microeconomics**

#### **Course Outcomes (COs):**

After successfully completing the course, the student will be able to:

1. Understand introductory economic concepts.
2. Recognize basic supply and demand analysis.
3. Recognize the structure and the role of costs in the economy.
4. Describe, using graphs, the various market models perfect competition, monopoly, monopolistic competition, and oligopoly.
5. Explain how equilibrium is achieved in the various market models.

6. Identify problem areas in the economy, and possible solutions, using the analytical tools developed in the course.

### **DSC-6 Agriculture Economics**

#### **Course Outcomes (COs):**

After completing the course, the student will be able to:

- i. Acquire knowledge of the role of agriculture in economic development
- ii. Acquire the theoretical and application knowledge of agricultural growth and development
- iii. To enable the students to understand the Strategy of Agricultural Development in India,
- iv. To make the students aware of institutional and non-institutional sources of agricultural Finance

### **SEMESTER-IV**

#### **DSC-7 Macro Economics**

#### **Course Outcomes (COs):**

After the successful completion of the course, the student will be able to:

- i. Acquire knowledge on the circular flow of income in two sectors, three and four-sector model
- ii. Understand and learn the calculation of national income
- iii. Appreciate the classical and Keynesian theory of Employment
- iv. Understand the concepts of multiplier and accelerator and learning the simple Calculation on the working of Multiplier and Accelerator
- v. Acquire knowledge of the determinants of the Investment function

## **DSC-8 Monetary Economics**

### **Course Outcomes (COs):**

After the successful completion of the course, the student will be able to:

- i. Acquire knowledge of the supply and demand of Money
- ii. Understand and interest in determination theories.
- iii. Appreciate the Implications for Monetary Management
- iv. Understand the relationship between inflation and unemployment
- v. Acquire knowledge of the working of business cycles

## **SEMESTER- V**

### **DSC-09 Public Economics**

#### **Course Outcomes (COs):**

After the successful completion of the course, the student will be able to:

CO1. Understand introductory Public Finance concepts.

CO2. Study the causes of market failure and corrective actions

CO3. Understand the impact, incidence and shifting of tax

CO4. Study the Economic Effects of tax on production, distribution and other effects

CO5. Enable the students to know the Principles and Effects of Public Expenditure

CO6. Understand the Economic and functional classification of the budget; Balanced and Unbalanced budget

CO7. Understand the Burden of Public debt and know the Classical/ Ricardian views, Keynesian and post-Keynesian views

CO8. To acquaint with the advantages and disadvantages of Deficit Financing

## **DSC- 10 Development Economics**

### **Course Outcomes (COs):**

After the successful completion of the course, the student will be able to:

- CO1. Understand the basic concepts and measurements of Development.
- CO2. Learn some classical and partial theories of Development economics and identify the difference.
- CO3. Identify the difference between Developed and Developing Countries.
- CO4. Analyse and tackle the Development issues effectively.

## **DSC-11 Economics of Human Resource Management**

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the meaning, nature, scope and value of the contemporary approach to human resource management with reference to Economics.
- CO2. To describe an organisation of a human resource management functionary in an establishment, and to identify attributes of a successful personnel manager.
- CO3. To impart knowledge and techniques in human resource planning, Job-Analysis, and Job Design.
- CO4. To explain various methods of recruitment, selection, induction and placement.
- CO5. To develop the importance and methods adopted for training and development of employees in two days environment in the workplace.

## **Semester – VI**

### **DSC-12 Indian Banking and Finance**

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the structure of Indian banking and the role of banks in monetary policy.
- CO2. Analyse the functioning of banks and different types of accounts and other services offered by banks.
- CO3. Evaluate recent developments in the Indian banking sector, including digital banking, payment banks, and non-performing assets.
- CO4. Describe the overview of the Indian financial system, including financial markets, financial instruments, and financial regulation.
- CO5. Analyse the challenges faced by Indian banks and the implications of banking reforms for the Indian economy.
- CO6. Develop critical thinking and analytical skills in evaluating various financial products and services banks and capital markets offer.

### **DSC-13 International Economics**

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the international trade theories and their application in international trade

- CO2. Explain the concept of terms of trade and demonstrate the effect of trade barriers; and display
- the ability to analyse the stages of economic integration
- CO3. Understand the concept of BoP and assess the BoP position and examine the changes in forex
- rate
- CO4. Analyse the role of international trade and financial institutions
- CO5. Demonstrate good inter-personal and communication skills through class participation and contributing to critical discussion on trade issues

### **DSC-14 Indian Public Finance**

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1. Understand the structure of Indian Public Finance
- CO2. Enable the students to know the Source and nature of public revenue and expenditure
- CO3. Understand the Budget and different concept of deficits
- CO4. Know the Public debt and its management
- CO5. Understand the fiscal and monetary policy and their tools and importance
- CO7. To enable the students to know the Indian federal financing system and Financial Commission



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**Department of English**

**B.A., B.Sc., & B.C.A. (NEP Scheme) Course Outcomes (Cos) / Program Outcomes (Pos)**

**for the academic year 2023-24**

**B.A, I Semester: L2 – Generic English (RESONANCE - I)**

Course outcomes (Cos):

By the end of the course the student will be able to:

1. Acquire the LSRW (Listening, Speaking, Reading, Writing) skills.
2. Learn to appreciate literary art.
3. Obtain the knowledge of literary devices and genres.
4. Acquire the skills of creativity to express one's experiences.
5. Know how to use digital learning tools.
6. Be aware of their social responsibilities.
7. Develop their ability as critical readers and writers.
8. Increase their reading speed.
9. Be able to give presentations.
10. Increase their analytical skills.

**B.Sc. / B.C.A. I Semester: L2 – Generic English (IMPRINTS - I)**

Course outcomes (Cos):

By the end of the course the student will be able to:

1. Develop skills in answering the comprehension.
2. Increase their reading speed.

3. Cultivate speaking and writing skills through reported speech, dialogue writing, and verbal/non-verbal communication.
4. Practice essential speaking skills including self-introduction, making requests, and seeking permission.
5. Learn to give clear instructions and directions.
6. Master the use of question forms and question tags.
7. Achieve proficiency in subject-verb agreement and word derivatives.
8. Analyse literary works to understand deeper themes and enhance interpretive skills.

### **B.A. II Semester: L2 – Generic English (RESONANCE – II)**

Course outcomes (Cos):

By the end of the course the student will be able to:

1. Develop comprehensive reading skills and analytical skills.
2. Enhance vocabulary through synonyms, antonyms, prefixes, suffixes, homonyms and homophones.
3. Improve grammar proficiency with cloze tests focusing on articles, prepositions, linkers, verbs, and adverbs.
4. Master the use of various tenses in writing and speaking.
5. Cultivate speaking and writing skills through reported speech, dialogue writing, and verbal/non-verbal communication.
6. Expand creativity and narrative skills with story writing and outline expansion.
7. Build confidence in public speaking by crafting and delivering welcome speeches and votes of thanks.
8. Gain insights from literature to enhance analytical and interpretative abilities.

### **B.Sc. / B.C.A. II Semester: L2 – Generic English (IMPRINTS - II)**

Course outcomes (Cos):

By the end of the course the student will be able to:

1. Focus on transforming direct speech into reported speech.
2. Practice writing dialogues, understanding character interactions.
3. Explore the nuances of both verbal and non-verbal communication.
4. Learn to craft formal speeches for events.
5. Discussion on the complexities of the English language.
6. Reading and analyzing the Shakespeare's play.
7. Master the use of various tenses in writing and speaking.
8. Cultivate speaking and writing skills.
9. Gain insights from literature to enhance analytical and interpretative abilities.

### **B.A, III Semester: Generic English-L2**

Course outcomes (Cos):

At the end of the course the students will have:

1. Acquired enhanced LSRW (Listening, Speaking, Reading, Writing) skills.
2. Equipped themselves with interpersonal communication skills.
3. Augmented presentation and analytical skills.
4. Ability to critically analyse, interpret and appreciate literary texts.
5. An awareness of social, cultural, religious and ethnic diversities.
6. Facilitated employability in emerging sectors such as – content writers, interpreters, translators, transcribers.
7. Acquired language skills for competitive examinations.

### **B.Sc. / B.C.A. III Semester: Generic English-L2**

At the end of the course the students will have

1. Acquired enhanced LSRW (Listening, Speaking, Reading, Writing) skills.
2. Equipped themselves with interpersonal communication skills.
3. Augmented presentation and analytical skills.
4. Ability to critically analyse, interpret and appreciate literary texts.
5. An awareness of social, cultural, religious and ethnic diversities.

6. Facilitated employability in emerging sectors such as – content writers, interpreters, translators, transcribers.
7. Acquired language skills for competitive examinations.

### **B.A, IV Semester: Generic English-L2**

Course outcomes (Cos):

By the end of the course the students will have:

1. Acquired creative, interpretative and critical thinking.
2. Skills to communicate confidently and effectively.
3. Obtained persuasive and creative social media writing skills.
4. Developed analytical and evaluative skills.
5. Learnt to identify and understand social contexts and ethical frameworks in the texts.
6. Ability to articulate their views with clarity and confidence.
7. Eligibility to take up jobs such as content writing, journalism and such other jobs with proficiency in English.

### **B.Sc. / B.C.A. IV Semester: Generic English-L2**

Course outcomes (Cos):

By the end of the course the students will have

1. Acquired creative, interpretative and critical thinking.
2. Skills to communicate confidently and effectively.
3. Obtained persuasive and creative social media writing skills.
4. Developed analytical and evaluative skills.
5. Learnt to identify and understand social contexts and ethical frameworks in the texts.
6. Ability to articulate their views with clarity and confidence.
7. Eligibility to take up jobs such as content writing, journalism and such other jobs with proficiency in English.

  
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N.R. Colony, Bangalore-560 012

**APS COLLEGE OF ARTS AND SCIENCE**

**N.R. COLONY, BENGALURU- 560019**

**2023-2024**

**DEPARTMENT OF HISTORY**

**I- semester**

**DSC Paper 1: - Political history of Karnataka (BCE-300 to CE 1000) Part-1**

**Course Outcomes**

At the end of the course the student should be able to:

- Co 1: -Understand the continuity of Political developments and strategies.
- Co 2:- Analysis the importance of causes for the rise of regional political dynasties.
- Co 3:- Understand contextual necessities which influenced the era of Political supremacy.
- Co 4: -Understand and describe the contemporary political history.
- Co 5: -Appreciate the confluence of diverse political elements.

**DSC Paper 2: - Cultural Heritage of India**

**Course Outcomes**

At the end of the course the student should be able to:

- Co 1: - Provide an insight about an extensive survey of heritage of India
- Co 2: - Familiarize Indian history and culture
- Co 3: - Expertise to analyses further development of culture of India
- Co 4: - Analyze the factor responsible for origin and decline of culture
- Co 5: - Provide the opportunity to understand the process of cultural development.

**II- semester**

**DSC Paper 3: -: Political History of Karnataka (CE 11-CE 1750) Part 2**

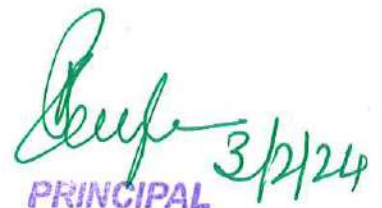
**Course Outcomes:**

At the end of the course the student should be able to:

- Co1: - Understand the rise and fall of Political dynasties in Karnataka.
- Co2: - Familiarize with the patterns of administration.
- Co1: - Analyze the traditional values and ethos of political development.
- Co1: - Understand the rise and fall of regional variations.
- Co1: - Study the complexities involved in polity of the time.

**II- semester**

**DSC Paper 4: Cultural Heritage of Karnataka**

  
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### **Course Outcomes:**

At the end of the course the student should be able to:

- Co1: - Understand the concept of cultural heritage of Karnataka
- Co2: - Study various cultural factors which influence the flow of culture
- Co3: - Familiarize the factors which influence in influencing culture and society
- Co4: - Analyze the factors responsible for formation of pluralistic society
- Co5: - Understand the concept "Unity in diversity".

### **III- semester**

#### **DSC Paper 5: - Political History of India (From Indus Culture upto1206)**

### **Course Outcomes**

At the end of the course the students should be able to:

(Write 3-7 course outcomes. Course outcomes are statements of observable student's actions that serve as evidence of knowledge, skills and values acquired in this course)

- Co 1: - Understand the history and culture of Political History of India region.
  - Co 2: - Analyze the importance of causes for backwardness of this region.
  - Co 3: - Understand the influence of political influence on the people and culture of this region.
  - Co 4: - Understand the political, Social, Religious and Cultural history of the region.
  - Co 5: - Appreciate the divergent cultural and communal harmony of this region.
- Course Articulation Matrix: Mapping

### **III- semester**

#### **DSC Paper 6: - BANGALORE IN TIME AND SPACE**

### **Course Outcomes**

- Co1: -Explain the history and evolution of Karnataka in Bangalore.
- Co2:-understand the Geographical features in Karnataka.
- Co3: - Able to understand the Hindu, Muslim, Christian, Sikh, Buddhist Jain and Anglo Indian society.
- Co4: - Able to understand the social, economic and cultural history of Karnataka under the Hoysala to Kempegowda.
- Co5: - Understand the trade and Commerce Advent of outside.
- Co6: - Understand the impact of Urbanization.
- Co7: - Understand the new towns and small towns.
- Co9: - Explain the Development of science and Technology.

#### IV- semester

#### DSC Paper 7: - History of Medieval India

##### Course Outcomes:

- Co1: -Understand the concept and meaning of culture.
- Co1: - Establish the relationship between culture and civilization.
- Co1: - Establish the link between culture and heritage.
- Co1: - Discuss the role and impact of culture in human life.
- Co1: - Describe the distinctive features of Indian culture.
- Co1: - Identify the central points and uniqueness of Indian culture.
- Co1: - Explain the points of diversity and underlying unity in it.
- Co1: - Trace the influence and significance of geographical features on Indian culture.

#### IV- semester

#### DSC Paper 8: - History of Medieval India

##### Course Outcomes:

- Co1: - Understand the concept and meaning of culture.
- Co1: - Establish the relationship between culture and civilization.
- Co1: - Establish the link between culture and heritage.
- Co1: - Discuss the role and impact of culture in human life.
- Co1: - Describe the distinctive features of Indian culture.
- Co1: - Identify the central points and uniqueness of Indian culture.
- Co1: - Explain the points of diversity and underlying unity in it.
- Co1: - Trace the influence and significance of geographical features on Indian culture.

#### V- semester

#### DSC Paper 10: - Colonialism and Nationalism in Asia (1900 to1970)

##### Course Outcomes:

- Analyze the main theories and interpretations on colonialism and nationalism.
- Understand the emergence of the Modern World System and its impact on Asia.
- Analyze the dynamics and dimensions in the colonial perspectives and nationalist movements in the five countries of Asia.
- Understand the concepts of decolonization and neo-colonialism in the context of Asia.

*Signature* 3/2/24

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### V- semester

#### DSC Paper 11: - History of Europe from 1789 to 1945 AD

##### Course Outcomes:

After studying this course, students will be able to

- To make the students learn major issues and current issues during the period under study.
- To make the students understand the reaction to Nationalism and Liberalism.
- To understand the impact of World wars on Global Society.
- To estimate the role of UNO in maintaining World Peace.
- Evaluate the contributions of great philosophers and leaders to the transformation of Society and economy of Europe.
- To appreciate Europe of today this occupies a place of vital importance in world affairs.
- To examine the impact of dictatorships on the events of Europe and the World.

### V- semester

#### DSC Paper 12: - Contemporary History of India From 1947-1990s

##### Course Outcomes:

This chapter will discuss the political legacies of colonialism in India. After studying this lesson, the students will be able to

- Know the meaning of legacy of Colonialism
- Understand the legacy of Colonialism.
- Assess the political legacy of Colonialism
- Identify the important legacies in the form of political legacy of British Colonialism in India.

Learning Outcome:

- Analyze the main theories and interpretations on Contemporary History of India from 1947-1990s
- Analyze the dynamics and dimensions in the Contemporary History of India from 1947-1990s

VI- semester

**DSC Paper 13: - HISTORY OF FREEDOM MOVEMENT AND UNIFICATION OF KARNATAKA**

**Course Outcomes:**

- Student will be able to understand the historical background of the freedom struggle in Karnataka
- The students shall be able to analyses the struggle of Rani of Kittur, Sangolli Rayanna and Bedas of Halagali.
- Students will be able to analyses the Gandhian movements in Karnataka

**Learning Outcome**

- To get familiarized with impact of the rebellion of 1857on Karnataka
- To get acquainted with National Movement in Karnataka
- To know about Belgaum Congress Session
- To understand about Origin and development of unification movement in Karnataka.
- To know about Contributions of Various Kannada Organizations

VI- semester

**DSC Paper 14: - HISTORY OF INDIA. (CE 1761-CE 1857)**

**Course Outcomes:**

Course Objectives:

This course is designed to:

  
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- Student will be able to formulate basis of modern India through different concepts
- like modernity, Rule of Law etc. Students will be able to analyze the process of rise modern India and its
- foundation made by social reformer and freedom fighters. Students will be able to analyze social background of Indian Nationalism
- Students will be able to categorize different school of thoughts about Modern India history
- Students will be able to illustrate rise and growth of Economic Nationalism in India.

### **Learning Out come**

- At the end of the course, the students shall-
- Be in opposition to understand and the Dynamics of expansion, with special reference to Bengal, Mysore, Awadh, and Punjab.
- Be familiar with Land revenue systems-Permanent, Ryotwari and Mahal Wari systems, Commercialization of Agriculture-Consequences.
- Be in a position to understand the Drain of Wealth- causes and consequences, Growth of modern industry

### **VI- semester**

#### **DSC Paper 15: -: PROCESS OF URBANIZATION IN INDIA**

### **Course Outcomes:**

#### **Course Objectives:**

- They should understand that the urban centers due to their production and mercantile activities.
- They should be able to understand the historical process of urbanization. Learning Outcome:
- Enable students to critically engage with the concept to urbanization through both texts and audio-visual media.
- Help to connect with the earliest planned urban settlements.

- Enable students to understand that they are the engines of economic growth.
- They should understand that they are centers of innovation, knowledge and political power.

  
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## ಅರ್ಜಿಯ ಪಾಠಶಾಲಾ ಕಲೆ ಮತ್ತು ವಿಜ್ಞಾನ ಕಾಲೇಜು

ಎನ್. ಆರ್ ಕಾಲೋನಿ, ಬೆಂಗಳೂರು -೧೯

### ಕನ್ನಡ ವಿಭಾಗ

೨೦೨೩-೨೪ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನ

### Programme Outcomes ಮತ್ತು Course Outcomes

PO's : ಬಿ.ಎ., ಬಿ.ಎಸ್ಸಿ., ಮತ್ತು ಬಿ.ಸಿ.ಎ ಪದವಿ ತರಗತಿಗಳಲ್ಲಿ ಕನ್ನಡ ಭಾಷಾ ಪತ್ರಿಕೆಗಳ ಮತ್ತು ಐಚ್ಛಿಕ ಕನ್ನಡ ಪತ್ರಿಕೆಗಳ ಅಭ್ಯಾಸದಿಂದಾಗುವ ಪ್ರಯೋಜನಗಳು

- ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಭಾಷಾ ಬಳಕೆ ಮತ್ತು ಐಚ್ಛಿಕ ವಿಷಯದಲ್ಲಿ ಹಿಡಿತವನ್ನು ತಂದುಕೊಡುತ್ತದೆ.
- ಪದವಿಯ ನಂತರದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಉನ್ನತ ಶಿಕ್ಷಣವನ್ನು ಪಡೆಯಲು ಕೇಂದ್ರ ಮತ್ತು ರಾಜ್ಯ ಸಿವಿಲ್ ಸರ್ವಿಸ್ ಪರೀಕ್ಷೆಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳಲು ಅನುಕೂಲವಾಗುತ್ತದೆ.
- ರಾಜ್ಯ ಮಟ್ಟದ ಪರೀಕ್ಷೆಗಳಾದ ಎನ್.ಡಿ.ಎ, ಎಫ್.ಡಿ.ಎ, ಪೋಲೀಸ್ ಪರೀಕ್ಷೆ ಇನ್ನಿತರ ಪರೀಕ್ಷೆಗಳಲ್ಲಿ ಕನ್ನಡ ಪತ್ರಿಕೆ ಐಡ್ಡಾಯವಾಗಿರುವುದರಿಂದ ಅದಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಜ್ಞಾನವನ್ನು ನೀಡುತ್ತದೆ.
- ಸಂವಹನ ಕೌಶಲ್ಯಕ್ಕೆ ಭಾಷಾ ಪ್ರೌಢಿಮೆ ಅಗತ್ಯವಿರುವುದರಿಂದ ಭಾಷೆಯನ್ನು ಓದುವುದು, ಅಲಿಯುವುದು ಅತ್ಯಗತ್ಯ.
- ವಿದ್ಯಾರ್ಥಿಗಳು ಮಾಧ್ಯಮಗಳಲ್ಲಿ ಕಾರ್ಯನಿರ್ವಹಿಸಲು ಅತ್ಯುತ್ತಮ ಬುನಾದಿಯಾಗುತ್ತದೆ.

ಬಿ.ಎ., ಬಿ.ಎಸ್ಸಿ., ಮತ್ತು ಬಿ.ಸಿ.ಎ ಪದವಿ ಮೊದಲ ಸೆಮಿಸ್ಟರ್

CO's : ನಾಡು- ನುಡಿ ಚಿಂತನೆ, ಪ್ರಕೃತಿ, ಬಾಲ್ಯ, ಆಕಾಶ, ಸಂಕೀರ್ಣ ಲೇಖನಗಳು ಮತ್ತು ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ

- ಕನ್ನಡ ನಾಡಿನ ಕುರಿತು ಕನ್ನಡದ ಪ್ರಾಚೀನ ಕವಿಗಳು ಇರಿಸಿಕೊಂಡಿದ್ದ ಅಭಿಮಾನ, ಗೌರವಗಳನ್ನು ಸಾಕ್ಷೀಕರಿಸುವ ಕಾವ್ಯಗಳಿಂದ ಸಾಹಿತ್ಯ ಇತಿಹಾಸದ ಪರಿಚಯವಾಗುತ್ತದೆ. ಮತ್ತು ಪ್ರಾಚೀನ ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯದ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳುತ್ತಾರೆ.
- ಎಲ್ಲಾ ಪದವಿ ವಿಭಾಗಗಳಲ್ಲಿ ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಪರಿಚಯಾತ್ಮಕವಾಗಿದ್ದು ಅದರ ಸಾಮಾನ್ಯ ಅರಿವು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಉಂಟಾಗುತ್ತದೆ.
- ಕನ್ನಡ ಭಾಷೆಯ ಸಾಹಿತ್ಯ ಪರಂಪರೆಯ ಕಾವ್ಯದಲ್ಲಿ ಕನ್ನಡ ಕವಿಗಳು ಪ್ರಕೃತಿಯನ್ನು ಪರಿಭಾವಿಸಿದ ಬಗೆಯನ್ನು ತಿಳಿದುಕೊಳ್ಳಲಾಯಿತು.
- ಸಾಮಾನ್ಯವಾಗಿ ಬಿ.ಎಸ್ಸಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಈ ಲೇಖನ ಪಠ್ಯಕ್ರಮವನ್ನು ಅಳವಡಿಸಲಾಗಿದ್ದು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಸುಲಭವಾಗಿ ತಲುಪುತ್ತದೆ.

ಬಿ.ಎ., ಬಿ.ಎಸ್ಸಿ., ಮತ್ತು ಬಿ.ಸಿ.ಎ ಪದವಿ ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್

CO's : ಜಾಗತೀಕರಣ, ಸಮಾಜ, ಜೀವನ ಕಲೆ, ಸಂಕೀರ್ಣ ಲೇಖನ ಮತ್ತು ಆಧುನಿಕ ಪೂರ್ವ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ

- ಪ್ರತಿಯೊಂದು ಪಾಠವು ಹಿಂಥಿನ ಪಾಠದ ಮುಂದುವರಿಕೆಯಾಗಿ ಬರುವಂತೆ ಪಾಠಗಳನ್ನು ಜೋಡಿಸಲಾಗಿದೆ.
- ಸಂಶೋಧನೆ, ವಿಮರ್ಶೆ, ಸೃಜನಶೀಲ ಸಾಹಿತ್ಯ, ಮೌಢಿಕ, ಗಣಕ, ವಿಜ್ಞಾನ ಸಂಬಂಧಿಸಿದ ಕೃತಿಗಳು ಕೊಡಲಾಗಿದೆ.
- ಪರಿಸರ ಕಾಳಜಿಯ ಕಾದಂಬರಿಯ ಓದುವಿಕೆ.
- ಆತ್ಮಕತೆ ಓದುವುದರಿಂದ ವ್ಯಕ್ತಿಯ ಬದುಕಿನ ಗಟನೆಯ ಸತ್ಯಾಸತ್ಯತೆಯನ್ನು ತಿಳಿಯುವ ಉದ್ದೇಶ

ಬಿ.ಎ., ಬಿ.ಎಸ್ಸಿ., ಮತ್ತು ಬಿ.ಸಿ.ಎ ಪದವಿ ತೃತೀಯ ಸೆಮಿಸ್ಟರ್

CO's : ರಾಷ್ಟ್ರೀಯತೆ, ಕೃಷಿ, ಆಟ, ಮಾನವೀಯತೆ, ಪ್ರವಾಸ, ವಿಚಾರ ಕ್ರಾಂತಿ, ಸಂಕೀರ್ಣ ಲೇಖನಗಳು ಮತ್ತು ಭಾರತೀಯ ಮತ್ತು ಪಾಶ್ಚಾತ್ಯ ಕಾವ್ಯಮೀಮಾಂಸೆ

- ಹಳೆಗನ್ನಡ ಕಾವ್ಯ, ಹೊಸಗನ್ನಡ ಕಾವ್ಯದ ಅಧ್ಯಯನದ ಮೂಲಕ ಭಾವನೆಗಳ ಸೂಕ್ಷ್ಮತೆ, ಬದುಕಿನ ಸೂಕ್ಷ್ಮತೆಗಳ ಚಿಂತನೆ
- ಹೊಸಗನ್ನಡ ಗದ್ಯವನ್ನು ಓದುವುದರಿಂದ ವೈಚಾರಿಕ ಚಿಂತನೆ.
- ಗಣಕ ಮತ್ತು ವಿಜ್ಞಾನ ಸಂಬಂಧಿ ಲೇಖನಗಳಿಂದ ಅಂತರ್ ಶಿಸ್ತೀಯ ಅಧ್ಯಯನದೊಂದಿಗೆ ವಿದ್ಯಾರ್ಥಿಯು ಸಾಹಿತ್ಯ ಓದುವುದು.
- ಐಚ್ಛಿಕ ವಿಷಯ ಓದುವಿಕೆಯಿಂದ ಕನ್ನಡ ಆಳವಾದ ಅಧ್ಯಯನ

ಬಿ.ಎ., ಬಿ.ಎಸ್ಸಿ., ಮತ್ತು ಬಿ.ಸಿ.ಎ ಪದವಿ ನಾಲ್ಕನೇ ಸೆಮಿಸ್ಟರ್

CO's : ಕಾಯಕ, ಬಡತನ, ಕಾಲ, ಸಂಕೀರ್ಣ ಲೇಖನ, ಸಂಶೋಧನೆ ಹಾಗೂ ವಿಮರ್ಶೆ ಮತ್ತು ಜಾನಪದ ಸಾಹಿತ್ಯ

- ಜಂಪು, ವಚನ, ಪಟ್ಟಣ, ತ್ರಿಪದಿ ಇನ್ನೂ ಮುಂತಾದ ಸಾಹಿತ್ಯ ಪ್ರಕಾರಗಳ ಪರಿಚಯ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಆಗುತ್ತದೆ. ಇದರಿಂದ ಪದವಿ ಮುಗಿದ ನಂತರ ಸಾಮಾನ್ಯ ಪರೀಕ್ಷೆಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳಲು ಅನುಕೂಲವಾಗುತ್ತದೆ.
- ವೈಜ್ಞಾನಿಕ ಬರಹಗಳನ್ನು ಸ್ಥಳೀಯ ಭಾಷೆಗಳಲ್ಲೂ ಓದುಗರಿಗೆ ತಲುಪುವ ಲೀಡಿಯಲ್ಲಿ ಅಭಿವ್ಯಕ್ತಿಸಬಹುದು ಎಂಬುದನ್ನು ವೈಜ್ಞಾನಿಕ ಮತ್ತು ವೈಜ್ಞಾನಿಕ ಬರಹಗಳ ಮೂಲಕ ತಿಳಿಸಬಹುದಾಗಿದೆ.
- ಹೊಸಗನ್ನಡ ಕಥೆಗಳು ಮತ್ತು ಹೊಸಗನ್ನಡ ಕಾವ್ಯದ ಬಗ್ಗೆ ಸಂಕ್ಷಿಪ್ತ ಅರಿವುಂಟಾಗುತ್ತದೆ. ಇದರಿಂದ ಜೀವನ ಅನೇಕ ಮೌಲ್ಯಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮನದಟ್ಟಾಗುತ್ತದೆ.
- ಹೊಸಗನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯ ವಿವಿಧ ಪಂಥಗಳ ಹುಟ್ಟು ಬೆಳವಣಿಗೆ ಹಾಗೂ ಪ್ರೇರಣೆ ಮತ್ತು ಪ್ರಭಾವಗಳನ್ನು ಅಧ್ಯಯನ ಮಾಡುತ್ತಾರೆ.

ಬಿ.ಎ ಐಚ್ಛಿಕ ಕನ್ನಡ ಐದನೇ ಸೆಮಿಸ್ಟರ್

CO's : ಕನ್ನಡ ವ್ಯಾಕರಣ ಪರಂಪರೆ, ಕನ್ನಡ ಛಂದಸ್ಸು ಮತ್ತು ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ

- ಕೇಶಿರಾಜನ ಇತಿವೃತ್ತ ವ್ಯಾಕರಣದ ಮಹತ್ವ, ವ್ಯಾಕರಣ ಅಧ್ಯಯನದ ಅಭ್ಯಾಸ
- ವರ್ಣ, ಜಾಕ್ಷುಷ, ಶ್ರಾವಣ ಪಲಕಲ್ಪನೆಗಳು, ಸ್ವರಗಳು, ವ್ಯಂಜನಗಳು, ಯೋಗವಾಹಗಳು, ದೇಶೀಯ ವರ್ಣಗಳು, ಮಹಾಪ್ರಾಣಗಳು ಅಧ್ಯಯನ
- ಛಂದಸ್ಸು ಬೆಳೆದು ಬಂದ ದಾಲಿ, ಮಹತ್ವ, ಇತಿಹಾಸ, ಛಂದೋಗ್ರಂಥಗಳ ಪರಿಚಯ ಮಾಡಲಾಗಿದೆ.
- ಪ್ರಾಚೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯದಲ್ಲಿ ಪ್ರಭುತ್ವ ಪಲಕಲ್ಪನೆ, ಜೈನ ಧರ್ಮದ ಪ್ರಭಾವ, ಹೆಣ್ಣಿನ ನಿರೂಪಣೆ, ಮಾನವೀಯ ಮೌಲ್ಯಗಳ ಅರಿವು ಮೂಡಿಸಲಾಗಿದೆ.

ಬಿ.ಎ ಐಚ್ಛಿಕ ಕನ್ನಡ ಆರನೇ ಸೆಮಿಸ್ಟರ್

CO's : ಕನ್ನಡ ವ್ಯಾಕರಣ ಪರಂಪರೆ, ಸಾಂಸ್ಕೃತಿಕ ಅಧ್ಯಯನಗಳು ಪಠ್ಯಗಳ ಬಹುಶಿಸ್ತೀಯ ಅಧ್ಯಯನ ಮತ್ತು ಮಧ್ಯಕಾಲೀನ ಕನ್ನಡ ಸಾಹಿತ್ಯ

- ಕನ್ನಡ ವ್ಯಾಕರಣ ಪರಂಪರೆಯನ್ನು ಮುಂದುವರಿಸಿದಂತೆ ಸಮಾಸ ಪ್ರಕರಣ ಸ್ವರೂಪ, ಸಮಾಸ ಕಾರ್ಯ, ಸಮಾಸದ ವಿಧಗಳನ್ನು ಅಧ್ಯಯನದಿಂದ ವಿವಿಧ ಸ್ವರೂಪಗಳ ಪರಿಚಯಕ್ಕೆ ಅನುಕೂಲವಾಗುತ್ತದೆ.
- ಸಾಂಸ್ಕೃತಿಕ ಅಧ್ಯಯನದ ಮೂಲಕ ವಚನ ಸಾಹಿತ್ಯದ ಬಗೆಗೆ ಮತ್ತು ತತ್ವಪದಕಾರರ ಬಗೆಗೆ ತಿಳಿಸಲಾಗಿದೆ.
- ಪರಿಸರ ಬಗೆಗೆ ಲೇಖನಗಳು ಪರಿಸರದ ಅವಶ್ಯಕತೆ ಮತ್ತು ಮಹತ್ವವನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಿಳಿಸಲಾಗಿದೆ.
- ವಚನ, ದಾಸ ಸಾಹಿತ್ಯ ಮತ್ತು ಮಧ್ಯಕಾಲೀನ ಸಂದರ್ಭದ ಸಾಹಿತ್ಯ ಸಾಮರಸ್ಯದ ನೆಲೆಗಳನ್ನು ತಿಳಿಸಲಾಗಿದೆ ಈ ಮೂಲಕ ದೇಶೀಯ ಪ್ರಕಾರಗಳನ್ನು ಅರಿಯಬಹುದಾಗಿದೆ.

  
ಕನ್ನಡ ವಿಭಾಗದ ಮುಖ್ಯಸ್ಥರು

Head of the Department of Kannada  
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ಪ್ರಾಂಶುಪಾಲರು

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## **PROGRAM OUTCOME – M.A. ECONOMICS**

M.A in Economics program offers various courses which are indispensable for understanding the economy in various facets. Students can become sound economists and able to tackle various problems of the economy and they can become managers, teachers, professors, and also can work for the different sectors of the economy like banking, marketing, production, human resources, data analytical scientists in the changing economy.

- \* Studying economics can make the students to understand the theoretical background of the economy.
- \* They can bridge the gap between the theory and practical related to the real economic situations.
- \* Acquire a sound knowledge related to key sectors of the economy and policy making at the macro level.
- \* The policy frame work including Monetary and Fiscal policies and also other policies can be understood in a better way.
- \* Can work as teachers, Professors, officers at RBI, Banks and Managers at various business houses, IES officers, Insurance officers etc.
- \* They further go through research such as Ph.D.

  
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- Can work as teachers, Professors, officers at RBI, Banks and Managers at various business houses, IES officers, Insurance officers etc.
- They further go through research such as Ph.D. and M. Phil courses.

### **PROGRAM SPECIFIC OUTCOME – M.A ECONOMICS**

The study of economics gives an idea about the proper utilization of resources by the individual and collective manner. It looks into the various contents such as consumption, production, investment, income, money and so on. And it helps the people who learned about behaviour of these elements in the economy.

Economic helps to build models on various economic variables such as demand, supply, money, business, production costs etc. on the grounds of theoretical and practical knowledge. Economists can able to formulate the policies based on the theoretical information which are essential for the smooth functioning of the economy. Now a day there are very much scope for the policies for economic wellbeing of the people and drawing the attention of the economists including all the sectors of the economy.

**COURSE OUTCOME**  
**ADVANCED MICROECONOMICS-I**

**Course Objectives**

- To provide detailed information on the behaviour of consumers.
- To give an insight on the behaviour of the firms in the economy.
- To understand the functioning of the market and price determination.

**COURSE OUTCOME**

- ✓ It provides detailed information about the methodological issues in Economics.
- ✓ It helps the students to understand about equilibrium conditions in the economic system.
- ✓ It gives an insight on the behaviour of the consumers under single good model and two goods model under Utility and Indifference curves techniques.
- ✓ It helps to know about the behaviour of the firms related to the production costs, revenues and profits.
- ✓ It helps in understanding the empirical production functions and to estimate the producer's surplus.
- ✓ Also able to provide theoretical and practical insights on the price determination under various market conditions.

**ADVANCED MACROECONOMICS-I**

**Course Objectives**

- To provide clear picture on the functioning of the macro economy.
- To give an insight on the aggregate concepts such as National income, savings, investments, consumption, employment, balance of payments, foreign trade, interest rates etc.

**COURSE OUTCOME**

- ✓ It enables the students to understand the concepts of aggregate demand and supply and behaviour of these elements in the macro level.
- ✓ Students can easily examine the trends in the macro economic variable like aggregate

income, savings, consumption, investment and employment.

- ✓ Fundamentals of macro economic factors such as static and dynamics can be assessed.
- ✓ The determination of interest rates can be easily assessed with the help of classical and neoclassical models and derivation of IS-LM curves.
- ✓ Provides information on the aggregate investments and various theories of investments.
- ✓ Helps in a better way to understand price fluctuations with various theories of inflation.
- ✓ Can be evaluate the formulations of macroeconomic policies such as Monetary and Fiscal policies in stabilizing the economy.

### **MATHEMATICAL METHODS IN ECONOMICS**

#### **Objectives:**

- To familiarize the basic mathematical methods like linear algebra, geometry, integral calculus and linear programming.
- To develop the mathematical application in economic theories.
- To improve the computational skills.

#### **Course outcomes:**

- Improve the number crunching skills and helps to understand the basic arithmetic.
- The concept of number system and geometry helps to measure the consumer surplus, producer surplus, profit and loss.
- The application of linear algebra improves the skill of calculation of equilibrium output, market stability and Input-Output model.
- The practical knowledge will be increased with the study of calculus in the calculation of slope of a curve, utility, cost and revenue.
- Helps to find the solution for market stability.
- The application of Game Theory helps to understand the strategic behaviour and profit approaches for the firms in different market types.

  
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## INDIAN ECONOMICS

### **Course Objectives:-**

1. To understand the various growth phases of the Indian Economy.
2. To discuss the achievements and failures of various economic plans towards the development of India.
3. To provide information about trends, states, policies and various issues of different sectors of India economy.

### **Course Outcomes:-**

- Familiarized the changes in the Indian economy and its characteristic features as a growing economy.
- Analysed the Growth trends and reforms of India Agricultural sector after independence.
- Understand the major challenges facing by Indian economy such as poverty, unemployment inequality, education and health
- Examined various employment generation and poverty alleviation programs of the central government.
- Analysed various industrial policy reforms since the independence of India.
- Understand the role and significance of MSMEs, SSIs and cottage industries in the economic development.
- Understand the importance of MNCs and FDI in India economic development.
- Evaluate the promotional strategies towards investment in infrastructure development in India
- Understand India's achievements and failures in global economy.
- Explored India's position in attainment of sustainable development and millennium development goals.

## ECONOMIC THOUGHT

### **Course objectives:-**

1. To understand the historical background of economic analysis and its applications for current discussions in economics.
2. To describe the proper chronological and systematic progression of economic thought.
3. To understand economic ideas of different schools.

### **Course Outcomes:-**

- ✓ Understand the nature, scope and origin of Economic Thought.
- ✓ Provides an insight to students on the growth of early economic thought and modern Economic Thoughts.
- ✓ Evaluate the Growth of socialists and Marxist Economic Ideas.
- ✓ Understand the inter link between subjectivism and Marginalize.

  
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- ✓ Understand the Economic Ideas of Austrian School, Hedonist School, Lousane Mathematical School and Swedish school.
- ✓ Familiarize the Economic Ideas of J.B. say, J.S. Mill and Nassau William Senior.
- ✓ Examined Keynesian revolution and the Monetarist counter revolution aspects.
- ✓ Students understand about Heterodoxy Economics, feminist Economics and Ecological economics.

### ADVANCED MICROECONOMICS-II

#### Course Objectives

- To undersand advanced microeconomic theory comprising of topics in Welfare economics,
- To give an insight on topics like Walrasian and non-Walrasian general equilibrium, risk and uncernatity and economics on information.
- To develop the skill on measurement issues by solving numerical problems.

#### COURSE OUTCOME

- ✓ It helps the students to understand the general equilibrium theories to policy frame work for income distributions in the society.
- ✓ It helps to understand the exact contribution of the factors of production and policy implications to enhance the welfare of the people.
- ✓ It can make the students to understand the contributions of various economists and their approaches towards the theory of risk and uncertainty.
- ✓ It enables the students to examine the equilibrium in the market in terms of Walrasian and non-Walrasian aspect.
- ✓ It helps the students to understand the information structure in microeconomic models along with asymmetric information and moral hazards.

### ADVANCED MACROECONOMICS-II

#### Course Objectives

- To teach he advance macroeconomic theory comprising the models and theories in open macroeconomics, new classical revolution and models, new Keynesian models and theory of growth.

  
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- To highlight macroeconomic theory from Classical, Neoclassical, Keynesian and counter keynesian revolution perspectives.
- To develop skill on model building and solving measurement issues.
- To contextualize th relevance of the macroeconomic theory in economic policy.

### **COURSE OUTCOME**

- ✓ It enables the students to undersatnd the concepts open macroeconomic models in terms of capital mobiliy and exchange rates.
- ✓ Students can easily analyze the difference between the New Classical Revolution and the Keynesian approach to aggregate supply and demand analysis.
- ✓ It makes the students aware of contributions of various economists like john Muth, Thomas Sargent and Robert Barro towards the Rational Expection Models.
- ✓ It helps in determining the trends of macro economic variables.
- ✓ Provides information about the equilibrium and fluctions in real business cycle.
- ✓ Hepls in a better way to understand various growth models.

### **STATISTICAL METHODS IN ECONOMICS**

#### **Objectives:**

- To improve the application of statistics in economic theories.
- To restate the economic theories with numerical problems by using actual data.
- To study the empirical economics by applying statistical packages.

#### **Course outcomes:**

- Provide the statistical basement for the economic analysis.
- Helps to understand the current phenomenon by using statistical packages.
- Helps to know the characteristics of the changing variables with accurate percentage`
- The application of probability and random variables which helps to forecast the changes in policy making.
- There is a clear picture about the research, sampling and report writing.
- Enhance the skills of influences and relationship of multi variable analysis.
- Advanced methods applications in to research field and in economic theories.



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## **AGRICULTURAL ECONOMICS**

### **Course objectives:-**

1. To familiarized the role and significance of agriculture sectors growth in India.
2. To study various theories of agricultural growth and development.
3. To evaluate the changes in agriculture sector in global economy.

### **Course Outcomes:-**

- ❖ Understand the nature, scope and growth of agriculture sector in India.
- ❖ Provides an insight to students on the influential factors of agricultural production in India.
- ❖ Understand various theories of agricultural growth and development.
- ❖ Understand the methods for constructing of the Index of agricultural production.
- ❖ Evaluate the factors determines the prices for agricultural products in India.
- ❖ Realize the need of proper exploitation of resources and techniques to increase agricultural production.

## **DEVELOPMENT ECONOMICS**

### **Objectives:**

- To familiarize the students with the concept, structure and current issues in the economics of development.
- To acquaint them with the theories of development and growth, their applications, critics and the 'state of art' understanding.

### **Course outcomes:**

- Provides information about the Structural Diversity and common characteristics of Developing Nations.
- Helps to understand concept of Sustainable development and various determinants measuring development.
- It provides information about theories of economic development and Technical Dualism.
- There is a clear picture about growth models and endogenous growth theory.
- It helps to analyse the role of political institutions and State in economic development and its changing roles.

  
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## ECONOMETRICS-I

### Objectives:

- To know the basic models of Econometrics.
- To understand the Dynamic Econometric model.
- To study the Regression Analysis and its applications.

### Course outcomes:

- Able to understand the simple and General Regression models.
- Improve the research skills and its application.
- Helps to understand properties and estimation of variables by using OLS Method.
- The application of Heteroscedasticity increases the understand capacity of distribution of the sample.
- Application of dummy variable improves the skill of data analysis.
- Helps to find the error in the result.
- Helps to draw the inference based on the results.

## INTERNATIONAL ECONOMICS

### Objectives:-

- To understand the salient features of New Trade Theories.
- To learn the analytical framework of emergence of protectionism in Global trade.
- To acquaint with institutional integration of markets in terms of trade.

### Course Outcomes:-

- To understand the Neo-technological trade theories on market structure and international trade.
- Shows the scope and potential of Service trade in developing countries.
- Gain knowledge on economic integration through various trade unions.
- Explore the global and national scenario of structural changes in trade and economic development.
- Helps to understand the concept of protectionism and neo – protectionism.

  
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## ENVIRONMENTAL ECONOMICS

### **Objectives: -**

- To familiarize the students with the concepts of Environmental Economics.
- To learn about the principles and theories of optimal use of natural resources.
- To understand the concepts Global warming, Environmental Valuations methods, property rights, social costs.

### **Course Outcomes:-**

- Realize the nature and importance of Environmental Economics.
- Understand the causes and effects of Environmental pollutions like air, water, noise, soil etc.
- Suggest appropriate policy measures to control Environmental Degradation.
- Understand the concepts of Pigouvian taxes and Subsidies, Coase's bargaining solution and collective bargaining.
- Realize the importance of manpower involvement in Environmental up gradation.
- Analyse the Global Environmental externalities and Global warming.
- Find out the appropriate policy suggestions to improve the quality of Environment.
- Understand about tradable pollution permits and International Carbon Tax.

## PUBLIC ECONOMICS

### Course Objectives

- To enable the students to understand regulatory and development responsibility of government and changes in their policies.
- To enumerate the theoretical and empirical dimensions of public goods and public choice.
- To understand the fiscal federalism with special reference to Indian context.
- To understand the fiscal management issues in India.

### COURSE OUTCOME

- ✓ It helps the students to understand the role of modern state in economic development.
- ✓ It enables the students to know concept of market failure and rationale for government intervention.
- ✓ Students can understand the various instruments for the stabilization of Fiscal policy.
- ✓ Defects the imbalance in multi-unit finance.

- ✓ Discusses the issues in Fiscal Decentralization in India.
- ✓ It represents the current scenario of Indian Public Finance.

## **ECONOMETRICS-II**

### **Objectives:**

- To enable students to acquire knowledge of advanced econometrics.
- To acquaint students in methods relating to both single equation and simultaneous equation.
- To enable students to learn the applications of econometrics.

### **Course outcomes:**

- Able to understand the errors, methods and limitations in Single Equation Regression Model.
- Improve the skill of application of econometrics.
- Helps to understand properties and estimation of variables by using various Time Series Model.
- The application of Heteroscedasticity increases the understand capacity of distribution of the sample.
- Application of dummy variable improves the skill of data analysis.
- Helps to find the error in the result.
- Helps to draw the inference based on the results.

## **ECONOMICS OF INFRASTRUCTURE**

### **Objectives:-**

- To familiarize the students with the concept of Economics of Infrastructure.
- To understand the primacy of transport, communication, energy, education and health in development of the country.
- To acquaint wholly to issues involved in development of infrastructure.

### **Course Outcomes:-**

- Helps to understand the relationship between the infrastructure and economic development.
- Shows the scope transport and communication in developing countries.

  
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- Gain knowledge about the energy economics and energy modelling.
- Explore the organization and financing of supply of social services.
- Helps to understand the role of education and health dimension in development of the country.



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# Acharya Pathasala College of Arts & Science

Narasimharaja Colony, Bangalore -560 019.

Website: [apsartsandscience.org](http://apsartsandscience.org) Email: [apscollegeofartsandscience@gmail.com](mailto:apscollegeofartsandscience@gmail.com)

## Department of Mathematics

### Program Outcomes (POs)

**PO1. Disciplinary Knowledge:** Students acquire a comprehensive understanding of key mathematical fields such as algebra, calculus, differential equations, and geometry. This knowledge forms the foundation for solving mathematical problems in real-world scenarios and advanced research.

**PO2. Communication Skills:** Students develop the ability to express mathematical ideas clearly, both orally and in writing. Visualization tools and presentations are used to enhance their communication skills, making it easier to convey complex mathematical concepts.

**PO3. Critical Thinking:** Logical reasoning and critical analysis are fostered by solving mathematical problems and proving theorems. This skill is essential for real-life problems and contributes to overall intellectual growth.

**PO4. Problem Solving:** Students learn to analyze complex scenarios, devise mathematical models and apply appropriate techniques to find solutions. This is crucial in fields like physics, engineering, and computer science.

**PO5. Research Skills:** By engaging in project work and advanced courses, students cultivate research abilities, including formulating problems, exploring solutions, and presenting findings.

**PO6. Information Literacy:** Students become proficient in using digital tools, mathematical software (e.g., MATLAB, Python), and online resources to enhance their learning and problem-solving efficiency.

**PO7. Self-Directed Learning:** Independent learning is encouraged through assignments, self-study modules, and online resources, helping students become lifelong learners.

**PO8. Ethical Awareness:** Ethical practices are emphasized, particularly in research and application of mathematics. Students learn to respect intellectual property rights and maintain integrity in their work.

**PO9. Lifelong Learning:** The program instils a curiosity for continuous learning and improvement, preparing students to adapt to technological advancements and evolving knowledge in mathematics.

**PO10. Advanced Studies:** Students are equipped with the skills and knowledge required for pursuing higher education in mathematics and related disciplines.

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## **B.Sc., I Semester**

**Course Title: Algebra-I and Calculus-I**

### **Course Outcomes (COs)**

By the end of the course the student will be able to:

**CO1.** Understand the basics of matrices, including operations, determinants, and inverses.

**CO2.** Learn the concepts of eigenvalues and eigenvectors, which are essential in linear transformations and many real-world applications.

**CO3.** Apply differential calculus to solve problems involving limits, continuity, and differentiability.

**CO4.** Use derivatives to analyze the behavior of functions and solve optimization problems.

**CO5.** Gain hands-on experience by solving algebraic problems and calculus-related tasks using Free and Open-Source Software (FOSS) tools, enhancing their computational skills.

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## **B.Sc., II Semester**

**Course Title: Algebra-II and Calculus-II**

### **Course Outcomes:**

By the end of the course the student will be able to:

**CO1.** Explore the foundational concepts of group theory, including subgroups, homomorphism's, and isomorphism's.

**CO2.** Study advanced integral calculus, focusing on applications in finding areas and volumes using definite integrals.

**CO3.** Learn about polar coordinates, curvature, and their applications in analyzing curves.

**CO4.** Implement algebraic structures and solve integral problems using computational tools, improving students' technical proficiency.

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### **B.Sc., III Semester**

**Course Title:** Ordinary Differential Equations and Real Analysis-I

**Course Outcomes:**

By the end of the course the student will be able to:

**CO1.** Solve first-order and linear differential equations, which are crucial in modeling physical and engineering problems.

**CO2.** Analyze the convergence and divergence of sequences and series using various tests.

**CO3.** Apply power series solutions to solve ordinary differential equations.

**CO4.** Solve differential equations using numerical methods and analyze real functions with the help of software tools.

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### **B.Sc., IV Semester**

**Course Title:** Partial Differential Equations and Integral Transforms

**Course Outcomes:**

By the end of the course the student will be able to:

**CO1.** Formulate and solve first-order and second-order partial differential equations.

**CO2.** Understand and apply Laplace transforms and inverse Laplace transforms in solving differential equations.

**CO3.** Study Fourier series and Fourier transforms, which are widely used in signal processing and engineering applications.

**CO4.** Use computational techniques to solve PDEs and apply integral transforms for practical problem-solving.

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### **B.Sc., V Semester**

**Course Title 1:** Real Analysis-II and Complex Analysis

**Course Title 2:** Vector Calculus and Analytical Geometry

**Course Outcomes:**

By the end of the course the student will be able to:

**CO1.** Study improper integrals and their convergence using special functions like Beta and Gamma functions.

CO2. Understand the fundamentals of complex analysis, including analytic functions, Cauchy-Riemann equations, and complex integration.

CO3. Apply complex analysis techniques to solve real-world problems in physics and engineering.

CO4. Learn vector differential calculus, including gradient, divergence, and curl, and apply them to physical problems.

CO5. Understand vector integral theorems such as Green's theorem, Gauss's divergence theorem, and Stokes' theorem.

CO6. Explore three-dimensional geometry, focusing on planes, lines, spheres, and their intersections.

CO7. Perform vector calculus and analytical geometry computations using advanced mathematical software.

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**B.Sc., VI Semester**

**Course Title 1: Linear Algebra and Calculus of Variations**

**Course Title 2: Numerical Analysis**

**Course Outcomes:**

By the end of the course the student will be able to:

CO1. Study vector spaces, linear transformations, and their applications.

CO2. Understand eigenvalue problems and their role in solving systems of linear equations.

CO3. Learn the basics of calculus of variations, including functionals and Euler's equation.

CO4. Apply numerical methods to solve equations, including bisection, Newton-Raphson, and secant methods.

CO5. Perform numerical differentiation and integration using various techniques.

CO6. Solve ordinary differential equations numerically using methods like Euler's and Runge-Kutta methods.

CO7. Implement numerical methods and solve linear algebra problems using computational tools like MATLAB or Python.

  
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Meeting no. 2

35 18.10.23

IQAC meeting convened on 18.10.23 at 3 pm in Principal Room. Following are the agenda that were discussed and decided.

- Agenda :
1. National Conference
  2. Humanities Exhibition
  3. Alumni Involvement
  4. Review of Results
  5. CO's, PO's & PSO's

Chairperson and members were welcomed by the coordinator, Vasanti K. Principal was requested to lead the discussions and deliberations.

### Members Present

Dr B Jayashree

Smt Vasanti K

Smt Satyashree

Dr Narasimha Parvathikar

Sri Sunil Kumar

Sri Ragesh H K

Sri Chandramouleshwara - Alumni Representative

Abhishek Gowda - Student

  
Vasanti K  
Satyashree





Following resolutions were recorded.

Agenda 1: Depts under Humanities Stream expressed desire to organise One Day National Level Conference and hence the IQAC and Humanities departments were to work out all the modalities and logistics, such as the

theme, call for papers, seeking funds, Dept CE permission and so on.

Agenda 2: It was decided to hold an Exhibition by the Humanities Dept on the Conference Theme, to involve students both directly and indirectly.

Agenda 3: It was decided to seek funds from the Alumni for the National Conference.

Agenda 4: End Semester results being declared, the committee resolved to review the results and take required measures if required.

Agenda 5: Popularise the value and objectives of PDs, COs & PSOs, as the new batch of students taken admission and classes are being held.

It was also decided to form various committees for the Organising of National Level Conference.

The meeting concluded with proposing of vote of thanks by Suail Kumar K.

Varanlt  
Coordinator

Principal



# **Acharya Pathasala College of Arts & Science**

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## **Department of Physics**

### **B.Sc., (NEP Scheme) Course Outcomes (Cos) / Program Outcomes (Pos)**

#### **for the academic year 2023-24**

#### **Semester – I**

##### **Phy-DSCT1: Mechanics and Properties of Matter**

Course Outcomes (Cos) / Program Outcomes (Pos):

1. Fixing units, tabulation of observations, analysis of data (graphical/analytical).
2. Accuracy of measurement and sources of errors, importance of significant figures.
3. Knowledge of how  $g$  can be determined experimentally and derive satisfaction.
4. Understanding the difference between simple and torsional pendulum and their use in the determination of various physical parameters.
5. Knowledge of how various elastic moduli can be determined.
6. Measuring surface tension and viscosity and appreciate the methods adopted.
7. Hands on experience of different equipments.

#### **Semester – II**

##### **Phy-DSCT2: Electricity and Magnetism**

Course Outcomes (Cos) / Program Outcomes (Pos):

1. Demonstrate Gauss law, Coulomb's law for the electric field, and apply it to systems of point charges as well as line, surface, and volume distributions of charges.
2. Explain and differentiate the vector (electric fields, Coulomb's law) and scalar (electric potential, electric potential energy) formalisms of electrostatics.
3. Apply Gauss's law of electrostatics to solve a variety of problems.
4. Describe the magnetic field produced by magnetic dipoles and electric currents.
5. Explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.
6. Describe how magnetism is produced and list examples where its effects are observed.

7. Apply Kirchhoff's rules to analyse AC circuits consisting of parallel and/or series combinations of voltage sources and resistors and to describe the graphical relationship of resistance, capacitor and inductor.
8. Apply various network theorems such as Superposition, Thevenin, Norton, Reciprocity, Maximum Power Transfer, etc. and their applications in electronics, electrical circuit analysis, and electrical machines.

## **Semester – V**

### **PHY-DSCT5: Classical Mechanics and Quantum Mechanics-I (Paper – 5)**

Course Outcomes (Cos):

1. Inertial and non-inertial frames of reference.
2. Apply the Lorentz transformations to transform velocities in special relativity.
3. Calculate the relativistic Doppler effect.
4. Limitations of classical physics.
5. Physical significance of wave function: expectation values and probability.
6. Understanding uncertainty relation.
7. Examples of exactly solvable potentials.
8. Importance of commutation relations.

### **PHY-DSCT6: Elements of Atomic, Molecular & Laser Physics (Paper – 6)**

Course Outcomes (Cos):

1. Description of atomic properties using basic atomic models.
2. Interpretation of atomic spectra of elements using vector atom model.
3. Interpretation of molecular spectra of compounds using basics of molecular physics.
4. Explanation of laser systems and their applications in various fields.

## **Semester – VI**

### **PHY-DSCT 7: Elements of Condensed Matter & Nuclear Physics (Paper – 7)**

Course Outcomes (Cos):

1. Elemental Crystallography.
2. Knowledge about X-rays and Diffraction of X-rays.
3. Discussion of Classical and Quantum free electron theory including their limitations.

4. Explanation the basic properties of nucleus.
5. Understanding the concepts of binding energy and binding energy per nucleon v/s mass number graph.
6. Explanation of alpha, beta and gamma decays.
7. Study of interaction of gamma radiation with matter by photoelectric effect, Compton scattering and pair production.
8. Study of different nuclear detectors such as ionization chamber, Geiger-Mueller counter, Scintillation detectors, photo-multiplier tube and semiconductor detectors.

**PHY-DSCT8: Electronic Instrumentation & Sensors (Paper – 8)**

**Course Outcomes (Cos):**

1. Identify different types of tests and measuring instruments used in practice and understand their basic working principles.
2. Get hands on training in wiring a circuit, soldering, making a measurement using an electronic circuit used in instrumentation.
3. Have an understanding of the basic electronic components viz., resistors, capacitors, inductors, discrete and integrated circuits, colour codes, values and pin diagram, their practical use.
4. Understanding of the measurement of voltage, current, resistance value, identification of the terminals of a transistor and ICs.
5. Identify and understand the different types of transducers and sensors used in robust and hand-held instruments.
6. Understand and give a mathematical treatment of the working of rectifiers, filter, data converters and different types of transducers.
7. Connect the concepts learnt in the course to their practical use in daily life.
8. Develop basic hands-on skills in the usage of oscilloscopes, multimeters, rectifiers, amplifiers, oscillators and high voltage probes, generators and digital meters.
9. Servicing of simple faults of domestic appliances: Iron box, immersion heater, fan, hot plate, battery charger, emergency lamp and the like.





# A P S COLLEGE OF ARTS AND SCIENCE

N .R COLONY, BANGALORE -19

## DEPARTMENT OF POLITICAL SCIENCE

### PROGRAMME LEARNING OUTCOMES IN POLITICAL SCIENCE - 2023- 24

- At the end of the successful completion of the course, the students will be able to acquired main knowledge.
- Study and analyses political contexts from critical and constructive prospective.
- Have a better understanding of the working of various political institutions including decentralized institution state legislature and parliament and relate this functioning to the greater because of nation building as a responsible citizen.
- Assess how global national and regional development affects polity and society.
- To gain critical thinking and develop the ability to make logical inferences about socio-economic and political issues, on the basis of comparative and contemporary political discourses in India.
- Contemplate about national and international issues involving states having different political ideologies and historical context.
- Pursue higher education such as post graduate studies and researching political science and in other interdisciplinary areas to provide qualitative insights to create a better world.

Principal

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# **A P S COLLEGE OF ARTS AND SCIENCE**

N .R COLONY, BANGALORE -19

DEPARTMENT OF POLITICAL SCIENCE - 2023- 24

## **I sem B.A Paper: DSC-1 Basic concepts of Political Science**

### **LEARNING OUTCOME:**

At the end of the course of the students shall understand-

- Political Science, Theoretically and will gain knowledge to explain and analyze Politics at large.
- The dynamics of Politics.
- To inculcate the Democratic spirit.

## **I sem B.A Paper: DSC-2 Political Theory**

### **LEARNING OUTCOMES:**

At the end of the course the students shall understand –

- The nature and relevance of political theory.
- The different concepts like Liberty, Equality, Justice and Rights.
- To reflect upon some of the important debates in Political Theory.

## **II sem B.A Paper: DSC-3**

### **Western Political Thought**

Learning Outcomes:

At the end of the course the students shall understand-

And get an introduction to the Schools of Political Thought and Theory making in the West.

And introduce the richness and variations in the political perceptions of Western Thinkers.

And familiarize themselves to the Thought and Theory of Western Philosophy.

## **II sem B.A Paper: DSC-4**

### **Indian National Movement And Constitutional Development**

Learning Outcome:

At the end of the course the students shall-

- Understand how the colonial rule was over thrown by the Indian nationalists.

Appreciate the ideals and values of Gandhi that resulted in freedom.

Examine the problem of Independent India and the role played by great leaders in solving them.

### III sem B.A Paper: DSC-5

#### INDIAN GOVERNMENT AND POLITICS

Learning Outcome: At the end of the course the students shall-

- Learn how the governments both at the union as well state level operates and what are its challenges.
- Understand the characteristics of power structures in India and the response of the political parties to the socio-political dynamics.
- Measure and understand the effects of judicial decisions on policy making and social development in India.

### III sem B.A Paper: DSC-6

#### PARLIAMENTARY PROCEDURES IN INDIA

Learning Outcome:

At the end of the course the students shall-

- Aim at understanding the procedural aspects of parliamentary system of governments.
- Learn about the privileges of people's representatives and match it with their performance.
- Understand the working of committees, budgetary aspects and deliberative mechanism within the parliament.

## **IV sem B.A Paper: DSC-7**

### **ANCIENT INDIAN POLITICAL IDEAS AND INSTITUTIONS**

**Learning Outcome:** At the end of the course the students shall-

- Reflection the native concepts like Dharma, Rajadharma, Nyaya, Viveka etc., in the light of their modern connotations.
- Understand the role of texts and stories in the Indian context by reflecting upon our own experiences.
- Revisit our own socio-political structures through the textual and non-textual sources from the early Indian period in order to quell the European representation of Indian Society and heritage.

## **IV sem B.A Paper: DSC-8**

### **MODERN POLITICAL ANALYSIS**

**Learning Outcome:**

At the end of the course the students shall-

- Understand the key concepts of Political Institutional working and science within them.
- Be familiar with the Phenomenon of politics and various explanations relating to the influences that mould the decision making process.
- Help the students to visualize the working of political institutions and the process of decision making through diagrammatic presentations.

## **IV sem**

**Course Title: CONSTITUTION OF INDIA**

**Ability Enhancement Compulsory Courses(AECC) III Sem B.Com/BBA and IV Sem BA/B.SC/BCA/BHM/BSW and other Courses**

**Learning Outcomes:**

After completing this course students will be able to-

- Understand the philosophy of the Constitution and its structure.
- Measure the powers and functions of various offices under the Constitution.
- Appreciate the role of Constitution in a Democracy

## **SEMESTER-V**

### **DSC 9: International Relations-Basic Concepts**

#### **Course Objectives:**

This course aims at acquainting to the students the usefulness of studying International Relations as a discipline. It will help them to explain and express the consequences of good relations with the neighbouring nations and far of nations, the economic, cultural, industrial and technological benefits one can reap through meaningful relationships between nations. Functionally, it helps them to experience them earning of national power and sovereignty.

#### **Learning Outcome:**

At the end of the course the students shall-

- Be in apposition describe National interest, National power and the significance of sovereignty.
- The students will get the basic knowledge of the practical political world, including the operating institutions, processes, and policies.
- The students will be in opposition to describe the nuances of balance of power, collective security and diplomacy

### **DSC 10: Comparative Government and Politics**

#### **Course Objectives:**

In this paper the functioning of the governments (UK, USA and China) is to be compared and analysed. It deals with the mixture of presidential, parliamentary and federal system of governments. The study aims to help students to understand and debate various matters pertaining to the working of these systems. This paper aims at equipping students with knowledge and critical understanding of different political systems and institutions in the world.

#### **Learning Outcome:**

At the end of the course the students shall-

- Grasp and understand the working of constitutional systems of these countries.
- Compare and evaluate the working of the governments concerned.
- Understand and explain different forms of executive and their functioning

## **DSC 11: Karnataka Government and Politics**

### **Course Objectives:**

The course will help to understand the political transformation Karnataka State from princely State of Mysore. It aims at understanding of the social bases and the major issues that confronted the evolution of Karnataka politics within the domain of national politics.

### **Learning Outcome:**

At the end of the course the students shall-

- Understand the social and political conditions of Mysore under colonial rule.
- Develop perspective s on the important persons and organizations that were involved in the process of unification.
- Analyse the issues related to regionalism, polarisation, identity politics, water, language, and border issues.

## **SEMESTER – VI**

### **DSC 13: International Relations-Theoretical Aspects**

#### **Course Objectives:**

The objective is to give an outline of the conceptual approaches to the discipline of International Relations and illustrate the major theoretical orientations. It explains the prominent debates in International Relations and vividly shows how they can be operationalised.

#### **Learning Outcome:**

At the end of the course the students shall–

- Make presentations on theories identifying them with examples, which are both critical and reflective in a live engaging class.
- Explain theories by relating them to contemporary events across the globe.
- Interpret world affairs in the light of theories which will serve as a key intellectual tool for them explains the events with rational basis.

### **DSC 15: Public Policy Analysis**

#### **Course Objectives:**

The course is designed to help students to understand the need for policies and the methods of their formulation. It gives them an opportunity to analyse policies and their impact. It helps them to know the processes and research that goes in to policy making by which the students can prepare themselves to be tomorrow's policy makers.

#### **Learning Outcome:**

At the end of the course the students shall–

- Know the constitutional and legal positions of policy making.
- Understand the role of legislature and executive in policy making and implementation.
- Learn about the role of research institutions in policy making and the politics involved in it.

## **DSC 16: Modern Indian Political Thinkers**

### **Course Objectives:**

The aim is to make students understand the major ideas of Modern Indian Political Thinkers and their impact on making of modern India and her political system. It helps to know the phases and different schools of the Political ideas in Modern India. It is also motivating the students reflect about the contemporary political scenario and think about political solutions to the existing socio-political problems in India.

### **Learning Outcome:**

At the end of the course the students shall-

- Know the background political ideas of making modern Indian political system.
- Understand the different shades of political ideas in modern India.
- Learn about the role political thinking in resolving socio-political problem of the country.



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## **Department of Sociology**

### **B.A., (NEP Scheme) Course Outcomes (Cos) / Program Outcomes (Pos)**

#### **for the academic year 2023-24**

#### **Semester – I**

#### **DSC-I Understanding Sociology**

##### **Course Outcomes (Cos):**

By the end of the Course the student will be able to:

1. Think critically by exercising sociological imagination.
2. Question common wisdom, raise important questions and examine arguments.
3. Collect and analyse data, make conclusions and present arguments.
4. Think theoretically and examine the empirical data.
5. Skilfully Participate in Research Groups and market Research Firms.
6. Serve in Development Agencies, Government Departments and Projects.
7. Transfer Skills as a Teacher, Facilitator of Community Development.
8. Competent to make a difference in the community.

#### **DSC -2 Changing Social Institutions in India**

##### **Course Outcomes (COs):**

By the end of the Course the student will be able to:

1. Identify the new forms taken by institutions of family and marriage.
2. Understand the role played by religion in modern world.
3. Sensitise the students to the conflicting norms of secularism and living by one's religious beliefs.
4. Appreciate the role of education and challenges in making education accessible to all.
5. Recognise the social nature of economy and work.
6. Grasp the opportunities offered by democracy and the threats it faces.
7. Undertake micro research work and communicate effectively.

## **Semester – II**

### **DSC -3 Foundations of Sociological Theory**

Course Outcomes (Cos):

By the end of the Course the student will be able to:

1. Contextualise the social and intellectual background of classical sociologists.
2. Appreciate the contemporaneity of classical sociological thought.
3. Appreciate the need for thinking in theoretical terms and concepts.
4. Demonstrate Basic Understanding of Theory and Research.

### **DSC -4 Sociology of Rural Life in India**

Course Outcomes (COs):

By the end of the Course the student will be able to:

1. Understand the myths and realities of village India constructed by Western scholars.
2. Understand the changes in land tenure systems and consequences.
3. Appreciate the role of traditional social institutions and how they have responded to forces of change.
4. Make an informed analysis of various development programmes and challenges encountered.

## **Semester – V**

### **DSC - 9: Social Entrepreneurship**

Course Outcomes (Cos):

By the end of the Course the student will be able to:

1. Provide knowledge about social entrepreneurship.
2. To help them to start their own social enterprise or NPO.
3. Understand the scope and need for social entrepreneurship.
4. Plan and implement socially innovative ideas in the areas of Entrepreneurship.

### **DSC -10: Society and Tribes**

Course Outcomes (COs):

By the end of the Course the student will be able to:

1. Gain basic knowledge about social organisation of tribals.
2. Critically understand the implications of changes occurring in tribal life.
3. Undertake micro research work.
4. Assess the impact of social changes on tribal social life.

### **DSC -11 Statistics in Sociological Research**

Course Outcomes (COs):

At the end of the course the student should be able to:

1. Use appropriate research method.
2. Use appropriate statistical techniques.
3. Summarise data, examine relationships among variables.

## **Semester – VI**

### **DSC -12: Sociological Perspectives**

Course Outcomes (COs):

At the end of the course the student should be able to:

1. Understand major Sociological theoretical approaches.
2. Compare and contrast the different theoretical perspectives.
3. Appreciate the significance of major Sociological theories.
4. Able to use fundamental theoretical categories.

### **DSC – 13: Sociology of Health**

Course Outcomes (COs):

At the end of the course the student should be able to:

1. Understand the concept of health, illness and social conditions.
2. Analyse the inter-relationship between social factors and health status.
3. Understand the role of doctors, nurse, pharmaceutical industry and social institutions in maintaining and promoting human health.

4. Distinguish between health, well-being, illness and disease.
5. Analyse the role of pharmaceutical industry and hospitals critically.

#### DSC - 14: Society in Karnataka

Course Outcomes (COs):

At the end of the course the student should be able to:

1. Enable students to have real life exposures, which they theoretically learnt in the classroom.
2. To comprehend critically the issues pertaining to chosen area.
3. To experience the problems and challenges in the chosen area.
4. To explore possible employability skills in the chosen area.



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