CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Programme Outcomes, Programme Specific Outcomes and Course Outcomes

Programme Outcomes (PO)

Under Graduate

- Undergraduate students are engaged to develop of a passion for higher education at the initial level itself.
- Undergraduate students are engaged to develop soft skills, scientific approach, an instinctive aptitude for entrepreneurial skills.
- Undergraduate students are engaged to discriminate and to decide their choice of Post-graduate discipline.
- Undergraduate students are exposed to leadership, analytical, technical, creative skills and sports skills.
- Undergraduate students are to be refined by practising social ethics moral responsibilities and to be made laudable citizens of India.

Post Graduate

- Graduates are exposed to disseminate new and innovative knowledge that will make them fit for any competitions in job opportunities.
- Graduates are trained to apply new tangents or to exercise their knowledge and skill in their own disciplines.
- Graduates are encouraged to develop, demonstrate display, and disseminate newer versions and to interpret in novel ways.
- Graduates are kindled the flair for new and continuous learning process.
- Graduates are groomed to acquire the dexterity.

Master of Philosophy

- Scholars are to be further equipped themselves with the concepts of self-learning and enhancing the knowledge already acquired.
- Scholars are focussed on new attempts to find out new thrusts of knowledge which orient towards further research.
- Scholars are to frame, find, analyse and evaluate new yard sticks to sharpen to efficiency further.

Research (Ph.D.)

- Erudite are encouraged to find out feasible solutions to a particular problem through undertaking researchers with the scholarly guidance of research supervisors.
- Erudite are to entourinstitutions even to abroad to illumine his research findings on platforms like seminars/Symposium / National or international conference.
- Erudite are to be empowered with the ability as resource persons the domain of research aptitude in the minds of young scholars or wards.
- Erudite are to be empowered of building their nations developed ad powerful at global level.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of Tamil

Course Code : UTMJL11   **Course Name :** பழந்தமிழ் இலக்கியமும் உரைநடையும்

CO1. சங்கப் பாடல்களின் வாயிலாகபழந்தமிழர் பண்பாட்டினைமதிப்பிடல்

CO2. நீதிஇலக்கியங்களின் வழியாகநடுவுநிலைமையானகருத்துக்களைஎடுத்துரைத்தல்

CO3. கட்டுரைஎழுதுவதின் முக்கியத்துவத்தைவிளக்குதல்

CO4. பழந்தமிழர்கள்ஐந்திணைகளில் வாழ்ந்தமுறைகளைஅறிதல்

CO5. பழந்தமிழர்களின் வீரம் பற்றிபுறப்பாடல்களின் வழி விளக்குதல்

Course Code : UTMJL21   **Course Name :** காப்பிய இலக்கியமும் நாடகமும்

CO1. ஐம்பெருங்காப்பியங்களில் உள்ளஅறநெறிக் கருத்துக்களைஎடுத்துரைத்தல்

CO2. சமயக்காப்பியங்களில் உள்ள இறைநெறிக் கொள்கைகளைவிளக்குதல்

CO3. நாடகத்தின் முக்கியத்துவம் பற்றிவிளக்குதல்

CO4. இலக்கணத்தில் பாவகைகளைவிளக்குதல்

CO5. இன்றையவணிகத்திற்குத் தேவையானவிளம்பரம் பற்றிவிளக்குதல்

Course Code : UTMEL31   **Course Name :** காப்பிய இலக்கியமும் நாடகமும்

CO1. காப்பியங்களில் உள்ளஅறக் கருத்துக்களைவிளக்குதல்

CO2. காப்பியங்களின் தோற்றமும் வளர்ச்சியும் பற்றிவிளக்குதல்

CO3. நாடகத்துறையின் முன்னோடிகள் குறித்துவிளக்குதல்

CO4. இலக்கணத்தில் பாவகைகளைவிளக்குதல்

CO5. இலக்கணத்தில் அணிநயம் பற்றிஎடுத்துரைத்தல்

Course Code : UTMEL41   **Course Name :** பழந்தமிழ் இலக்கியமும் உரைநடையும்

CO1. அகப் பாடல்களின் வழியாகபழந்தமிழர் வாழ்க்கைமுறைகளைஎடுத்துரைத்தல்

CO2. நீதிஇலக்கியங்களின் வழியாகநடுவுநிலைமையானகருத்துக்களைஎடுத்துரைத்தல்

CO3 நற்சிந்தனைகள் மிக்ககட்டுரைகள் பற்றிவிவரித்தல்

CO4. ஐந்திணைகளுக்குரியமுதற்,கரு,உரிப் பொருட்களைத் தொகுத்துரைத்தல்

CO5. பண்டைத்தமிழ் உரையாசிரியர்கள் பற்றிவிளக்குதல்

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of English

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of Mathematics

Programme Specific Outcome:

1. Think in a critical manner.
2. Know when there is a need for information, to be able to identify, locate,evaluate, and effectively use that information for the issue or problem at hand. Formulate and develop mathematical arguments in a logical manner.
3. Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.
4. Understand, formulate and use quantitative models arising in social science,Business and other contexts.

Course Outcome

CO1: Calculus

1. define the basic concepts and principles of differential and integral calculus of real functions and sequences and series
2. interpret the geometric meaning of differential and integral calculus
3. apply the concept and principles of differential and integral calculus to solve geometric and physical problems
4. analyze the properties of functions based on graph obtained using Matlab.
5. organize solving of complex problems by combining the acquired mathematical concepts and principles

CO2: Theory of Equations and Trigonometry

1. Describe the relation between roots and coefficients
2. Find the sum of the power of the roots of an equation using Newton's Method.
3. Transform the equation through roots multiplied by a given number, increase the roots, decrease the roots, removal of terms
4. Solve the reciprocal equations.
5. Analyze the location and describe the nature of the roots of an equation.
6. Obtain integral roots of an equation by using Newton's Method and Horner's method.

CO3: Differential equations and its applications

1. Extract the solution of differential equations of the first order and of the first degree by variables separable, Homogeneous and Non-Homogeneous methods.
2. Find a solution of differential equations of the first order and of a degree higher than the first by using methods of solvable for p, x and y.
3. Compute all the solutions of second and higher order linear differential equations with constant coefficients, linear equations with variable coefficients.
4. Solve simultaneous linear equations with constant coefficients and total differential equations.

5. Form partial differential equations and find the solution of First order partial differential equations for some standard types.
6. Use inverse Laplace transform to return familiar functions and apply Laplace transform to solve second order linear differential equation and simultaneous linear differential equation.

CO4: Analytical Geometry 3D and Vector Calculus

1. Describe the various forms of equation of a plane, straight line, Sphere, Cone and Cylinder.
2. Find the angle between planes, Bisector planes, Perpendicular distance from a point to a plane, Image of a line on a plane, Intersection of two lines.
3. Compute the angle between a line and a plane, length of perpendicular from a point to a line.
4. Calculate the Shortest distance between two skew lines and find and interpret the gradient curl, divergence for a function at a given point.
5. Evaluate integrals by using Green's Theorem, Stokes theorem, Gauss's Theorem.

CO 5: Mechanics

1. Define Resultant, Component of a Force, Coplanar forces, like and unlike parallel forces, Moment of a force and Couple with examples.
2. Prove the Parallelogram of Forces, Triangle of Forces, Converse of the Triangle of Forces, Polygon of Forces, Lami's Theorem, Varignon's theorem of moments.
3. Find the resultant of coplanar couples, equilibrium of couples and the equation to the line of action of the resultant.
4. Discuss Friction, Forces of Friction, Cone of Friction, Angle of Friction and Laws of friction. .Define catenary and obtain the equation to the common catenary.
5. Find the tension at any point and discuss the geometrical properties of a catenary.
6. Define Projectile, impulse, impact and laws of impact and prove that the path of a projectile is a parabola.
7. Define Simple Hormonic Motion and find its Geometrical representation and find the Composition of Simple Hormonic Motion and the differential equation of a central orbit.

CO 6: Real Analysis:

1. Describe fundamental properties of the real numbers that lead to the formal development of real analysis comprehend rigorous arguments developing the theory underpinning real analysis
2. Demonstrate an understanding of limits and how they are used in sequences, series, differentiation and integration.
3. Construct rigorous mathematical proofs of basic results in real analysis
4. Appreciate how abstract ideas and rigorous methods in mathematical analysis can be applied to important practical problems.

CO7 : Complex analysis.

1. Demonstrate familiarity with a range of examples of these concepts.
2. Prove basic results in complex analysis.
3. Apply the methods of complex analysis to evaluate definite integrals and infinite series.
4. Demonstrate understanding and appreciation of deeper aspects of complex analysis such as the Riemann Mapping theorem.
5. Demonstrate skills in communicating mathematics orally and in writing.

CO8: Graph Theory

1. Describe the origin of Graph Theory.Illustrate different types of graphs.
2. Explain independent sets and covering sets and some basic theorems.
3. Discuss degree sequences and operations on graphs.
4. Explain connectedness and components and some theorems.
5. Characterize tree.
6. Derive some properties of planarity and Euler's formula.
7. Find chromatic number and chromatic polynomials for graphs.
8. Prove Five colour theorem. • Explain basic properties of directed graphs.

CO9 : Statistics :

1. Define Moments Skewness and Kurtosis. Fit a straight line.
2. Calculate the correlation coefficient for the given data. Compute Rank correlation.
3. Define attributes, consistency of data, independence of data and index numbers for the given data.
4. Define Probability, Conditional probability. Derive Baye's theorem

CO10: Modern Algebra

1. Define subgroup, center, Normalizer of a subgroup.
2. Find cycles and transpositions of a given permutations.
3. Prove Lagrange's theorem ,Euler's theorem and Fermats theorem
4. Define cyclic groups .
5. Prove a group has no proper subgroup if it is cyclic group of prime order.
6. Define normal subgroups , quotient groups and index of a subgroup.
7. Define homomorphism ,kernel of a homomorphism, isomorphism.
8. Prove Cayley's theorem , the fundamental theorem of homomorphism for groups
9. Define rings , zero divisors of a ring , integral domain , field and prove theorems

CO11: Numerical Analysis

1. Define Basic concepts of operators Δ, E, ∇
2. Find the difference of polynomial
3. Solve problems using Newton forward formula and Newton backward formula.

4. Derive Gauss's formula and Stirling formula using Newton forward formula and Newton backward formula. Find maxima and minima for differential difference equation.
5. Derive Simpson's 1/3 ,3/8 rules using trapezoidal rule
6. Find the solution of the first order and second order equation with constant coefficient
7. Find the summation of series finite difference technique
8. Find the solution of ordinary differential equation of first by Euler,Taylor and Runge-Kutta methods

CO12 : Linear Algebra

1. Introduction to vector space and subspace.
2. Use computational techniques and algebraic skills essential for the study of systems of
3. Linear equations, matrix algebra.
4. Vector spaces, eigenvalues and eigenvectors, Orthogonality and Diagonalization. (Computational and Algebraic Skills).

CO13: Programming in C & C++

1. Understand the features of C & C++ supporting object oriented programming
2. Understand the relative merits of C & C++ as an object oriented programming language
3. Understand how to produce object-oriented software using C & C++.
4. Understand how to apply the major object-oriented concepts to implement object oriented programs in C++, encapsulation, inheritance and polymorphism.
5. Understand advanced features of C& C++ specifically stream I/O, templates and operator overloading.

CO14: Ancillary Mathematics – I

1. Define characteristic equation of matrices and illustrate.
2. State Cayley Hamilton Theorem • Compute inverse of a matrix using Cayley – Hamilton Theorem. • Find Eigen values and Eigen vectors of a given matrix.
3. Solve equations of the first order but of higher degree solvable by dy/dx , y, x.
4. Compute complementary function and particular integral of the type eax, cos ax, sin ax.
5. Derive expression for sinnθ, cosnθ and tannθ, sinnθ, cosnθ Expand sinθ, cosθ, tanθ in powers of θ. Define hyperbolic and inverse hyperbolic functions

CO15 Ancillary Mathematics – II

1. Define Moments, Skewness and Kurtosis.
2. Fit a straight line, Parabola for the given data.
3. Calculate the correlation coefficient for the given data.
4. Compute Rank correlation for the given data.
5. Find intermediate values by using Newton's forward and backward formula and Lagrange's formula. Apply Laplace transform to solve differential equations.

6. Obtain Fourier series expansions for the given functions Compute Cosine and Sine series expansions for the given functions.

M.Sc.(Mathematics).

Programme Specific Outcome:

1. Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them. Inculcate mathematical reasoning.
2. Prepare and motivate students for research studies in mathematics and related fields. • Provide knowledge of a wide range of mathematical techniques and application of mathematical methods/tools in other scientific and engineering domains.
3. Provide advanced knowledge on topics in pure mathematics, empowering the students to pursue higher degrees at reputed academic institutions.
4. Strong foundation on algebraic topology and representation theory which have strong links and application in theoretical physics, in particular string theory.
5. Good understanding of number theory which can be used in modern online cryptographic technologies.
6. Nurture problem solving skills, thinking, creativity through assignments, project work.
7. Assist students in preparing (personal guidance, books) for competitive exams e.g. NET, GATE, etc.

Course Outcome

PGCO1: Linear Algebra

1. Introduction to vector space and subspace
2. Use computational techniques and algebraic skills essential for the study of systems of Linear equations, matrix algebra, vector space.
3. Eigenvalues and eigenvectors,
4. Orthogonality and Diagonalization. (Computational and Algebraic Skills).

PGCO2: Riemann Integration

1. Understand Integrability and theorems on integrability.
2. Recognize the difference between point wise and uniform convergence of a sequence of functions.
3. Illustrate the effect of uniform convergence on the limit function with respect to continuity, differentiability, and integrability.
4. Study improper integration using Riemann integration.
5. 315 Ordinary Differential equation.

6. Course Outcomes Student will be able to solve first order differential equations utilizing the standard

7. techniques for separable, exact, linear, homogeneous, or Bernoulli cases.

8. Student will be able to find the complete solution of a nonhomogeneous differential equation as a linear combination of the complementary function and a particular solution.

9. Student will have a working knowledge of basic application problems described by

10. second order linear differential equations with constant coefficients.

PGCO3 : Ordinary Differential equation.

1. Student will be able to solve first order differential equations utilizing the standard techniques for separable, exact, linear, homogeneous, or Bernoulli cases.

2. Find the complete solution of a nonhomogeneous differential equation as a linear combination of the complementary function and a particular solution.

3. working knowledge of basic application problems described bysecond order linear differential equations with constant coefficients.

PGCO4: Group Theory

1. Understand the importance of algebraic properties with regard to working within various number systems. Extend group structure to finite permutation groups (Caley Hamilton Theorem)

2. Generate groups given specific conditions.

3. Symmetry using group theory.

4. Understand the three major concrete models of Boolean algebra: the algebra of sets, the algebra of electrical circuits, and the algebra of logic.

PGCO5 : Differential Geometry Course Outcomes:

1. The course introduces the fundamentals of differential geometry primarily by focussing on the theory of curves and surfaces in three space. The theory of curves studies global properties of curves such as the four vertex theorem.

2. The theory of surfaces introduces the fundamental quadratic forms of a surface, intrinsic and extrinsic geometry of surfaces, and the Gauss-Bonnet theorem.

3. Calculational skills: The student will be able to compute quantities of geometric interest such as curvature, as well as develop a facility to compute in various specialized systems, such as semi geodesic coordinates or ones representing asymptotic lines or principal curvatures.

4. The student will also be introduced to the method of the moving frame and over determined systems of differential equations as they arise in surface theory.

5. Theoretical skills: . Students will start being able to develop arguments in the geometric description of curves and surfaces in order to establish basic properties of geodesics, parallel transport, evolutes, minimal surfaces.

PGCO6: **Number theory**

1. Find quotients and remainders from integer division
2. Apply Euclid's algorithm and backwards substitution
3. Understand the definitions of congruence, residue classes and least residues add and
4. subtract integers, modulo n, multiply integers and calculate powers, modulo n Determine multiplicative inverses, modulo n and use to solve linear congruence
5. Theory of quadratic residue.

PGCO7: **Operational Research**

1. Develop linear programming (LP) models shortest path, maximum flow, minimal spanning tree, critical path, minimum cost flow, and transshipment problems.
2. Understand the mathematical tools that are needed to solve optimization problems.
3. Formulate pure, mixed, and binary integer programming models.
4. Formulate the nonlinear programming models
5. Use some solution methods for solving the nonlinear optimization problems.

PGCO8: Complex Analysis :

1. Compute sums, products, quotients, conjugate, modulus, and argument of complex numbers.
2. Define and analyze limits and continuity for complex functions as well as consequences of continuity · Conceive the concepts of analytic functions and will be familiar with the elementary complex functions and their properties
3. Determine whether a given function is differentiable, and if so find its derivative. Applies the theory into application of the power series expansion of analytic functions.
4. Understand the basic methods of complex integration and its application in contour integration.
5. Analyze sequences and series of analytic functions and types of convergence, Evaluate complex contour integrals directly and by the fundamental theorem, apply the Cauchy integral theorem in its various versions, and the Cauchy integral formula.

PGCO9: Measure theory

1. Measure theory provides a foundation for many branches of mathematics such as harmonic analysis, ergodic theory, theory of partial differential equations and probability theory. It is a central, extremely useful part of modern analysis.
2. Interesting generalizations of measure theory have been developed. It is also subtle, with surprising, sometimes counter-intuitive, results. The aim of this course is to learn the basic elements of Measure Theory, with related discussions on applications in probability theory.

3. Students taking this course will develop an appreciation of the basic concepts of measure theory. These methods will be useful for further study in a range of other fields, e.g. Stochastic calculus, Quantum Theory and Harmonic analysis.
4. Relation to graduate attributes: The above outcomes are related to the development of the Science Faculty Graduate Attributes, in particular, Research, inquiry and analytical thinking abilities, Communication and Information literacy.

PGC10: Probability & Statistics

1. basic probability axioms and rules and the moments of discrete and continuous random variables as well as be familiar with common named discrete and continuous random variables.
2. How to derive the probability density function of transformations of random variables and use these techniques to generate data from various distributions.
3. How to calculate probabilities, and derive the marginal and conditional distributions of bivariate random variables.
4. Discrete time Markov chains and methods of finding the equilibrium probability distributions.
5. How to calculate probabilities of absorption and expected hitting times for discrete time Markov chains with absorbing states.
6. How to translate real-world problems into probability models.
7. How to read and annotate an outline of a proof and be able to write a logical proof of a statement.

PGCO11 : Galois theory

1. Explain the fundamental concepts of field extensions and Galois theory and their role in modern mathematics and applied contexts
2. Demonstrate accurate and efficient use of field extensions and Galois theory.
3. Demonstrate capacity for mathematical reasoning through analyzing, proving and explaining concepts from field extensions and Galois theory.
4. Apply problem-solving using field extensions and Galois theory applied to diverse situations in physics, engineering and other mathematical contexts.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of Physics

Course Code: SPHJA11   **Course Name: Mechanics ,Properties of Matter and Sound**

On completion of the course, the students will be able to

CO1. Describe conservation of energy, work, force, linear momentum and angular momentum

CO2. Learn the basics of potentials and fields, central forces and Kepler's laws

CO3. Learn the basics of properties of matter

CO4. Describe the production, detection of ultrasonic waves and applications

CO5. Familiarize with general terms in acoustics like intensity, loudness, reverberation etc,

Course Code: SPHJA31   **Course Name: Lab : Electricity and Electronics**

On Completion of the course, the students will be able to

CO1. Understand basic concept of current and current density vector.

CO2. Have a basic knowledge of semiconductor physics

CO3. Acquire knowledge about how a semiconductor diode rectifies an input ac signal

CO4. Learn how to construct a transistor amplifier and how its gain varies with frequency

CO5. Know about various number systems and their applications

CO6. Verification of De Morgan's Theorems (using ICs)

Course Code: SPHJA21   **Course Name: Thermal Physics**

On successful completion of the course, the student is expected to

CO1. Understand specific heat capacity of gas and the different theories on specific heat capacity

CO2 .Define postulates of kinetic theory of gases and arrive at theorem of equipartition of energy

CO3 .Have a clear understanding about Reversible and irreversible process and also working of a Carnot engine, and knowledge of calculating change in entropy for various process.

CO4. Define different thermal processes and understand laws of thermodynamics and identify its outcomes

Course Code: SPHJA41   Course Name: Optics , Spectroscopy and Modern Physics

On successful completion of the course students will be able to:

- Learn Power of lens, Spherical aberration in lens, and to distinguish Chromatic aberration and achromatism aberration.
- Have developed the idea of interference, diffraction and polarization and to solve problems related to the phenomena
- Demonstrate experimental set up for Newton's rings, theory and its application.
- Understand theory of plane transmission grating and its resolving power.

Practicals

Course Code:SPHJA2P   Course Name: Ancillary Physics Practical - I

Upon Completion of the course, the students will be able to
- Conduct experiments on wooden bar and to identify its the strength.
- Test a wire or cylindrical rod for its strength.
- Calibrate a voltmeter or ammeter.
- Analyze the effects of refractive index of a medium using optical instruments.
- Estimate the specific resistance of any conductor.

Course Code: SPHJA4   Course Name: Lab : Ancillary Physics Practical - II

Upon Completion of the course, the students will be able to
- Measure the thickness of thin material using optical means.
- Determine the wavelength of Mercury spectrum.
- Analyze frequency response of RLC circuit.
- Comparison of capacities by De- Saughty's method.
- Construct and experimental verification of NAND and NOR gates as a universal building block.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of Chemistry

Programme Specific Outcomes

- Gain the knowledge of Chemistry through theory and practical"s.
- To explain nomenclature, stereochemistry, structures, reactivity, and mechanism of the chemical reactions.
- Identify chemical formulae and solve numerical problems.
- Use modern chemical tools, Models, Chem-draw, Charts and Equipments.
- Know structure-activity relationship.
- Understand good laboratory practices and safety.
- Develop research oriented skills.
- Make aware and handle the sophisticated instruments/equipments

Course Outcomes (B.Sc -Chemistry)

SEMESTER – I

Subject Code:SCHJC11   **Subject Name: General Chemistry**

1. To understand the atomic structure and various concepts regarding atomic structure
2. To learn the periodic properties of elements and their classification
3. To know the types of bonding in molecules
4. To understands the basic concepts in organic chemistry
5. To learn about kinetic theory, gas laws and molecular velocities

SEMESTER - II

Subject Code: SCHJC21   **Subject Name: Organic Chemistry-1**

1. To learn preparation and reactions of alkenes and alkynes
2. To study aromaticity and mechanism of certain reactions
3. To understand the chemistry of polynuclear hydrocarbons
4. To learn the preparation and reactions of halide based functional groups
5. To learn the concept of stereochemistry

SEMESTER - III

Subject Code:SCHJC31   **Subject Name: Physical Chemistry-1**

1. To understand the properties of matter
2. To know the structure and types of solids
3. To learn the characteristics and applications of colloids
4. To understand the principles of adsorption and catalysis
5. To learn about electrical conductance and ionic equilibria

SEMESTER - IV

Subject Code: SCHJC41   **Subject Name: Inorganic Chemistry**

1. To understand the concept of nuclear chemistry and its applications
2. To learn the characteristics d and f block elements
3. To understand the principles metallurgy
4. To know the properties and theories about coordination compounds
5. To learn about carbonyls, silicates and their applications

SEMESTER - V

Subject Code: SCH8C51   **Subject Name: Organic Chemistry-II**

1. To study the preparation and reactions of hydroxyl compounds
2. To learn the chemistry of ethers, aldehydes and ketones
3. To understand the chemistry of carboxylic acids
4. To know the properties and structure of carbohydrates
5. To learn about nitrogen containing compounds

Subject Code: SCH8C52   **Subject Name: Physical Chemistry-II**

1. To learn the first law of the thermodynamics and its applications
2. To understand second law of thermodynamics, entropy and free energy
3. To know the concept of thermodynamics equilibria
4. To understand phase rule and its applications to various systems
5. To learn the fundamentals of group theory and its applications.

Subject Code: SCH8C53   **Subject Name: Inorganic, Analytical &**
Applications of Computers in Chemistry

1. To know the various theories of acids and based
2. To learn the fundamentals of bioinorganic chemistry
3. To understand the importance of inorganic polymers
4. To study the analytical techniques
5. To learn the C language and its applications.

SEMESTER - VI

Subject Code: SCH8C61   **Subject Name: Organic Chemistry – III**

1. To learn the chemistry of heterocyclic compounds and alkaloids
2. To understand the concept of proteins nucleic acids and terpenes
3. To study the chemistry of dyes and know the applications of synthetic reagents
4. To learn the properties of Sulphur containing compounds and the mechanism of molecular rearrangements.

5. To study the application of spectral techniques to organic molecules.

Subject Code: SCH8C62   **Subject Name: Physical Chemistry-III**

1. To learn about rate, order and theories of reaction rate
2. To understand principles of various types of spectroscopy
3. To know the concept of thermodynamics of ideal solution
4. To understand about emf and electrochemical cells
5. To learn the fundamentals of photochemistry

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of Computer science

Program Specific Outcomes

On successful completion of B.Sc. Computer Science Program, the students would be able to

PSO 1: Understand the basic concepts involved in computing.
PSO 2: Share the ideas and the techniques they have learnt.
PSO 3: Apply the knowledge in Computer techniques to solve real world problems.
PSO 4: Think of new approaches for solving problems in different domains.
PSO 5: Follow ethics in designing software.
PSO 6: Collaborate with team members in developing projects.
PSO 7: Gain confidence to appear for competitive examinations like CSIR/UGC – NET, GATE, SET etc.

Course Outcomes

Semester: I (Odd)

CourseCode: SCSJC11   **Course Name: Programming in 'C'**

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

CO1: Outline the concepts of procedure- oriented programming languages.
CO2: Identify the various control structures and their application in program development.
CO3: Understand the concept of Modular programming.
CO4: Understanding the basics of functions and their uses in program development.
CO5: Learnt the usage of arrays, strings, pointers and Union.
CO6: Develop simple application programs using various features in C.

CourseCode: SCSJC1P   **Course Name: Lab : Programming in 'C'**

Upon Completion of the course, the students will be able to

CO1: Illustrate the control statements to write basic C programs.
CO2: Identify the usage of arrays, strings, functions and pointers.
CO3: Analyze the features of structures, union and their applications.
CO4: Evaluate the importance of pointers with arrays and functions.
CO5: Develop C programs using file management concepts.

CourseCode: SCSJA11   **Course Name: Mathematical Foundations I**

Upon Completion of the course, the students will be able to

CO1: Have knowledge in basic terminologies used in computer science subjects and
     ability to solve practical problems.
CO2: Understanding the knowledge of simple mathematical modeling.
CO3: Apply probability concepts to solve real-life problems.
CO4: Classify the sets, relations, functions and discrete structures.
CO5: Assess the use of propositions, and solving statistical problems using formulas.
CO6: Develop the ability to solve the recurrence relations by using various methods.

CourseCode:SCSJS1P   **Course Name: Lab : Office Automation**

Upon Completion of the course, the students will be able to

CO1: Understanding the concepts of computers and the use of MS office packages.
CO2: Identify the role of MS-word and itspotential application in real-life context.
CO3: Knowledge in the application of various menus and their uses in MS office packages.
CO4: Having hands-on training on the use of MS-Excel and MS-Power Point
CO5: Learnt to create simple database applications.

CourseCode:UVEJV11   **Course Name: VE: Value Education**

Upon Completion of the course, the students will be able to

CO1: Realizes the basic ethics in life as a human being.
CO2: Understand and accept the importance of harmonious living in a diverse society.
CO3: Understand and appreciate the need and importance for Value Based Living.
CO4: Set realistic goals in life and start achieving towards them.
CO5: Comprehend the value of human life in the society and adopt the local culture and
     Customs.
CO6: It directly addresses subtle questions of life and relates to day to day living.

Semester: II (Even)

CourseCode: SCSJC21   **Course Name: Object Oriented Programming with C++**

Upon Completion of the course, the students will be able to

CO1: Demonstrate a thorough understanding of the object-oriented programming concepts of encapsulation, polymorphism, inheritance and information hiding.

CO2: Improve the code using reusability with extensible Class types, User-defined operators and function Overloading.

CO3: Identify the use of virtual functions in the implementation of polymorphism.

CO4: Discover and implement the features including templates, exception and file handling for providing programmed solutions to complex problems.

CO5: Develop real - time applications in C++.

Course Code: SCSJC2P   Course Name: Lab : Object Oriented Programming with C++

Upon Completion of the course, the students will be able to

CO1: Find the solution to a problem using object oriented programming concepts.

CO2: Develop programs using object- oriented paradigm.

CO3: Inspect the features of C++ including templates, exception and file handling for providing programmed solutions to complex problems.

CO4: Appraise the strength of OOPs concepts in programs.

CO5: Build data structure application using C++.

Course Code:SCSJA21   Course Name: Mathematical Foundations II

Upon Completion of the course, the students will be able to

CO1: Demonstrate conceptual understanding of probability and statistical ideas, principles and procedures.

CO2: Identify probability models and function of random variables based on single& multiple random variables.

CO3: Examine the relationship between two quantitative variables with the use of correlation and linear regression.

CO4: Choose appropriate probability distributions to solve problems.

CO5: Reveal the knowledge of applicable t, F, chi square sample theory of estimators and Tests.

Course Code: SCSJS2P   Course Name: Lab : Linux programming

Upon Completion of the course, the students will be able to

CO1: Use Shell commands.

CO2: Use conditional statements to control the execution of shell scripts.

CO3: Design and implement shell functions.

CO4: Apply system calls for different purposes for solving problems.
CO5: Appreciate the features of open-source operating systems.
CO6: Familiarize the use of varieties of shell commands.

Course Code: UESJD21   **Course Name: Environmental Studies**

Upon Completion of the course, the students will be able to

CO1: Understand the complex relationships between natural and human systems.
CO2: Appreciate the core values and the richness of environment resources around the world.
CO3: Ability to describe the structure of an ecosystem and the changes it undergoes.
CO4: Demonstrate the ability to analyze and recognize the interrelationships in a food chain and
    a food web.
CO5: Articulate the interdisciplinary context of environmental issues.
CO6: Realize the importance of environment safety and security related matters.

Semester: III (Odd)

Course Code: SCSGC31   **Course Name: Data Structures & Computer Algorithms**

Upon Completion of the course, the students will be able to

CO1: Classify linear and non-linear data structures.
CO2: Select appropriate data structures for a given problem.
CO3: Examine operations like searching, insertion, deletion, traversal on various data structures.
CO4: Determine and analyze the complexity of given algorithms.
CO5: Develop appropriate problem solving technique for a given problem.

Course Code: SCSGC3P   **Course Name:Lab : Data Structures & Computer Algorithms**

Upon Completion of the course, the students will be able to

CO1: Demonstrate the application of various data structures.
CO2: Compare and contrast between linear and nonlinear data structures.
CO3: Apply suitable algorithms for solving real - time problems.
CO4: Determine the tree and graph traversals algorithms.

CO5: Discuss appropriate problems solving technique for a given problem.

Course Code:SCSGC32   **Course Name: Digital Principles & Computer Organization**

Upon Completion of the course, the students will be able to

CO1: Explain the concepts of binary numbers, computer instructions and peripheral devices.
CO2: Able tosolve number conversions and Boolean expressions.
CO3: Analyze the functions of combinational logic, instruction formats and basics of memory.
CO4: Evaluate the importance of logic gates, flip-flops and addressing modes.
CO5: Capable of design the digital circuits using logic gates.
CO6: Build combinational and sequential logic circuit.
CO7: Identify the components of register, input/output and memory organizations.

Course Code: SCSGA31   **Course Name: Resource Management Technique**

Upon Completion of the course, the students will be able to

CO1: Solve optimization problems using simple method.
CO2: Make use of different methods to get optimality of LP, TP and AP.
CO3: Interpret real-life problems into LP model and solve them.
CO4: Categorize classical optimization methods to solve real-life problems.
CO5: Familiarize concepts in linear programming and queuing models.

 Course Code: SCSGS3P   **Course Name: Lab: Multimedia**

Upon Completion of the course, the students will be able to

CO1: Illustrate the fundamental principles of computer graphics and mathematical concepts
     related to the computer graphical operations.
CO2: Apply two dimensional transformations and three dimensional transformations of an
     object.
CO3: Analyze the various tools used for computer graphics and multimedia.
CO4: Justify the authoring tools for packaging multimedia systems and use a variety of common
     software packages to complete the applications.
CO5: Having hands-on knowledge on multimedia packages.

Semester: IV (Even)

Course Code: SCSGC41   **Course Name: Java Programming**

Upon Completion of the course, the students will be able to

CO1: Understand the potential applications of java.
CO2: Make use of packages, interfaces, applets.
CO3: Build applications using interface and packages.
CO4: Execute different applications using threads and exception handling.
CO5: Able to develop simple real - time applications.

Course Code: SCSGC4P   **Course Name: Lab : Java Programming**

Upon Completion of the course, the students will be able to

CO1: Demonstrate the basic concepts in Java.
CO2: Make aware of multithreading, exception and file handling in Java.
CO3: Understand the use of strings.
CO4: Understand the applications of applets.
CO5: Create standalone Java based simple applications.

Course Code: SCSGC42   **Course Name: System Software**

Upon Completion of the course, the students will be able to

CO1: Explain the concepts of system software and machine architecture.
CO2: Identify the features of assemblers, loaders, linkers and compilers.
CO3: Analyze how assemblers, loaders, linkers and compilers are differed.
CO4: Evaluate the importance of macro processors.
CO5: Elaborate the working principles of system software.

Course Code: SCSGA41   **Course Name: Numerical Methods**

Upon Completion of the course, the students will be able to

CO1: The students will have a clear perception of the power of numerical techniques, ideas and
      would be able to demonstrate the applications of these techniques to problems drawn from
      industry, management, engineering & computer fields.
CO2: Solve differential equations using various methods.
CO3: Enable the students to write coding to solve specific problems.
CO4: Apply various interpolation methods and finite difference concepts.
CO5: Work numerically on the ordinary differential equations using different methods through
      the theory of finite differences**Course Code: SCSGS4P**

Course Name: Lab: PHP Programming

Upon Completion of the course, the students will be able to

CO1: Understand the basic concepts of PHP and its applications.

CO2: Apply the various existing libraries for developing application.

CO3: Appreciate the use of open-source server software.

CO4: Aware of OOPS concepts in PHP with MySQL.

CO5: Design and publish simple dynamic websites based on user requirements.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of Botany

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of History

Program Specific Outcomes

On successful completion of **B.A., History** Programme , the students would be able to

PSO 1: Understand the basic concepts involved in historical nature.
PSO 2: Share the ideas and the thoughts they have learnt.
PSO 3: Apply the knowledge in society to solve real world problems.
PSO 4: Think of new approaches for solving problems in different historical fields.
PSO 5: Follow ethics in the moral life.
PSO 6: Collaborate with the subject expert members in developing ideas concern.
PSO 7: Gain confidence to appear for competitive examinations conducted by State and
Union Public Service Commissions, Staff Selection Commission.
.**PSO 7:** Gain confidence to appear for competitive examinations like UGC – NET,
SET etc.

SEMESTER: I

Subject Name: History of India (Upto-900AD)   **Subject Code: AHSJC11**

In this course the students will

CO1:   Gain more knowledge about Indus valley and Dravidian civilizations of India

CO2:   Acquire sufficient knowledge about ancient Indian political, society and administrative
system of anciant dynasities

CO3:   Acquire knowledge about Indian religions and its doctrines

Subject Code :AHSJC12   **Subject Name: History of Tamilnadu
(Sangam Age to 1565 AD)**

In this course the students will
CO1:   Comprehend knowledge about the development of Tamil language during the sangam

Age

CO2:   Understand the antiquity of TamilNadu

CO3:   Attain knowledge about the administration of Nayak and various festivals

CO4:   Know how the & got power in Tamilnadu

Subject Code: AHSJA11   **Subject Name: Modern Governments – I**

In this course the students will

CO1:   Understand about various types of Constitutions

CO2: Acquire knowledge about Democracy , Presidential form of Government, Judicial review etc.,

CO3: Explore knowledge salient features of England and USA constitution

Subject Name: Value Education   **Subject Code: AHSJV11**

CO1: Comprehend knowledge about the development of Tamil language during the sangam Age

CO2: Understand the antiquity of TamilNadu

CO3: Attain knowledge about the administration of Nayak and various festivals

CO4: Know how the & got power in Tamilnadu

SEMESTER: II

Subject Name: History of India UP TO 900 – 1761 AD   Subject Code: AHSJC21

In this course the students will

CO1: Know the impacts of Arab conquest on Sind

CO2: Understand the various theories and the establishment of Raj puts rule in India

CO3: Study about socio-economic conditions during Delhi Sultanate period.

CO4: Know the doctrines of Bhakthi Movement

CO5: Understand the administration of Krishnadeva rayar

Subject Code: AHSJC22   Subject Name: History of Tamil Nadu 1565 - 1947 AD

In this course the students will

CO1: Seek sufficient knowledge about the Causes, Courses and Consequences of South Indian Rebellion

CO2: Study the services of Christian Missionaries and contributions of Social Reforms

CO3: Know the role of Tamilnadu in India's Freedom Movement

CO4: Analyze the origin and development of Dravidian movement

CO5: Acquire knowledge about State Boundary Agitations, Administration of Congress, DMK and ADMK ministries from 1952 – 2006 AD

Subject Name: Modern Governments – II   **Subject Code: AHSJA22**

In this course the students will

CO1: Gain knowledge about salient features of Swiss Constitution, Direct Democracy, Referendum

CO2: Acquire knowledge about the important provisions of Constitution of France and its administrative law

CO3: Analyze the salient features of Indian Constitution, Powers of The Prime Minister, The President, and The Cabinet.

CO4: Understand the practical functioning of Indian constitution

CO5: Seek knowledge about the functioning of Lok Sabha and Rajya Sabha, judicial system

Subject Name: Environmental studies   **Subject Code: VESJD21**

In this course the students will

CO1: To understanding the importance of Nature

CO2: Making students to preserve the environments

CO3: Make them to prepare for competitive examination

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of Economics

Program Specific Outcomes : After the completion of under graduate course in economics, the successful students are able to:

- ➢ Understand the characteristics of developed and developing economies especially¬ Indian economy
- ➢ Understand the features of economic development and growth¬ Understand the major economic variables such as GDP, GNP, Savings, Capital,¬ Investment, employment etc., and their inter-relationship.
- ➢ Understand the objectives, tools and the impact of macroeconomic policy on Indian¬ economy.
- ➢ Understand the objectives, tools and the impact of fiscal policy on Indian economic¬ stability.
- ➢ Understand the objectives, tools and the impact of monetary economic policy on¬ Indian economic stability.
- ➢ Understand the nature and scope of national and international trade and international¬ financial organizations such as World Bank, IMF etc., and their significances.
- ➢ Understand the important statistical and mathematical tools in order to interpret and¬ to build economic models for more authentications as well as to facilitate the policy makers.
- ➢ Understand the causes and the consequences of major economic problems such as¬ inflation, deflation, unemployment, poverty, income inequality etc., and also understand the solution to them.

Co1: Micro Economics-I

Objectives: To understand micro economic concepts like human wants, utility, market, price, value, goods and incomes.

Course outcomes:

- ✓ Aware of scope and nature of micro economics.
- ✓ Knowledge on different concepts of micro economics

- ✓ Aware of cardinal utility theory and ordinal utility theory.
- ✓ Familiar with the law of demand and elasticity of demand.

Co2: Micro Economics-II

Objectives: To understand micro economic concepts like AC, MC TC, AR, MR, and TR

Course outcomes:

- ✓ Aware of cost analysis sand revenue analysis of micro economics.
- ✓ Knowledge on different concepts of AC, MC, TC, AR, MR and TR.
- ✓ Aware of equilibrium, price and output under different market conditions
- ✓ Familiar with the Market conditions and distribution
- ✓ To understand the Ricardo's theory of rent, modern theory of rent.

Co3: Macro Economics –I

Objective: To understand macroeconomic concepts like National income accounting, consumption functions and determinants of investments.

Course outcomes:

- ✓ Aware of scope and nature of macroeconomics.
- ✓ Knowledge on different concepts of national income.
- ✓ Aware of classical theory of income and employment.
- ✓ Familiar with the consumption functions and
- ✓ Aware of Keynesian Economics and classical theory of employment.

Co 4: Macro economics-II

Objective: To understand the investment functions and macro economics policies.

Course outcomes:

- ✓ Aware of investment function and rate of interest
- ✓ Aware of Multiplier and Accelerator theories
- ✓ Familiar with theories of distribution.

- ✓ Knowledge on causes, types of inflation and Phillip's curve.
- ✓ Familiar with objectives and tools of macroeconomic policies

Co5: Labour Economics

Objective: To study the labour issues with reference to Indian scenario and labour relations in India.

Course outcomes:

- ✓ Aware of nature and scope of labour economics.
- ✓ Aware of industrial disputes and its preventions.
- ✓ Aware of theories of wages.
- ✓ Knowledge on social security system
- ✓ Knowledge on growth, functions and role of trade unions.

C06: International Economics

Objective: To understand fundamental elements and need for International trade.

Course outcomes:

- ✓ Aware of the gains of International trade.
- ✓ Knowledge about theories of international trade.
- ✓ Knowledge on BOP and BOT.
- ✓ Aware of objectives and functions of IMF.
- ✓ Aware of WTO and GATT – and familiarity with TRIMS and TRIPS

Co7: Economic Statistics–I

Objective: To understand fundamental elements of statistics and important tools which they are relevant for economics.

Course outcomes:

- ✓ Learn about the importance & functions of statistics
- ✓ Familiar with sampling concepts and survey.
- ✓ Distinguish between primary and secondary data and also familiar with how to collect data
- ✓ To know about the concepts of classification, tabulation diagrams and graphs.

✓ Able to calculate mean median and mode and percentiles.

Co8: Economic Statistics–II

Objective: To analyze the economic issues through statistical support by using different statistical tools.

Course outcomes

- ✓ Students can apply the tools of Correlation & probable error.
- ✓ Will run the regression and standard error
- ✓ Familiar with index number & cost of living index
- ✓ Aware about the time series analysis & theoretical distribution.
- ✓ Aware of probability theory. .

Co9: Environmental studies

Objective: To know the importance of environmental factors which influencing the economy and to understand the concepts of global economy, environmental pollution and Green house effect.

Course outcomes

- ✓ Aware of nature and scope of environmental studies
- ✓ Knowledge about the market failures & externalities.
- ✓ Aware of different types of pollutions
- ✓ Familiar with Indian environmental policies and law.
- ✓ To know about global warming & deforestation.

Co10: Fiscal Economics

Objective: To understand fundamental elements of theories of taxation, public expenditure and revenues.

Course outcomes:

- ✓ Aware of public finance & private finance.
- ✓ Knowledge about causes and effects of public expenditure
- ✓ Knowledge on classification of public revenue
- ✓ Aware of Debt and its objectives.

✓ Able to understand about federal finance, finance commission and budget

Co11: Indian Economy

Objective: To understand the features of Indian economy and all major sectors and their development.

Course outcomes

- ✓ Basic knowledge about Indian economy \
- ✓ Aware of different five year plans
- ✓ Aware of public sector and private sector issues. .
- ✓ Knowledge on significance of foreign capital and government policies.

Co12: Monetary Economics

Objective: To know functions and role of money and various theories of demand for money.

Course outcomes

- ✓ Aware of functions and classifications of money
- ✓ Knowledge on classical theory of demand for money
- ✓ Knowledge on neo-classical theory of demand for money
- ✓ Aware of characteristics and effects of trade cycle
- ✓ Knowledge on causes and types of inflation

C13: Personality Development

Objective: To make aware about the importance of personality and development in the business world. To make the students follow the good personality and create a good relationship with others.

Course outcomes

- ✓ To understand the concept of personality development technique
- ✓ Familiar with positive attitudes and practice
- ✓ Knowledge about theories of motivation
- ✓ How to improve the self-esteem and personality
- ✓ Aware of body language and stress & time management

Co14: Environmental Economics

Objective: To be aware of natural resources and eco system. Also to understand the value of biodiversity and various kinds pollutions.

Course Outcomes

- ✓ Understand key concepts from environment studies , political, and social analysis

as they pertain to the design and evaluation of environmental policies and institutions..

- ✓ To understand and appreciate concepts and methods from renewable and non-renewable sources and their application in environmental problem solving.
- ✓ Students can acquire knowledge on ecosystem, Food Chains, and historical context of environmental issues and the links between human and natural systems.
- ✓ Students understand critically on Bio-diversity, threats for Bio-diversity and their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.

Co15: Mathematical Methods-I

Objective: To understand the Basic rules of Arithmetic operations, fraction (Common and Decimal) , functions and logarithm.

Course outcomes:

- ✓ To know about equations of linear and quadratic
- ✓ Familiar with the Trigonometric ratios and functions (simple cases).
- ✓ Aware of definition sets, union and interaction of sets.
- ✓ To study the partial and differentiation, linear equation and trigonometry

Co16: Mathematical Methods-II

Objective: To understand the implications of mathematical tools in economics and business.

Course outcomes:

- ✓ To know about matrices and determinants
- ✓ Familiar with the analytical geometry of two dimensions.
- ✓ Aware of differential calculus and integral calculus.

Co17: Economics of Insurance

Objective: To understand the Life Insurance Corporation of India and other insurance.

Course outcomes:

- ✓ To know about the characters of insurance.
- ✓ Familiar with the LIC of India.
- ✓ To study the difference between life and non life insurance policy and private company.
- ✓ Aware the health insurance, Fire, property, Marine, personal accident, fidelity, and workman compensation insurance.

Co18: Export-Import Procedure and documentation

Objective: To understand the Export-Import policy in India, import procedure, export procedure export financing and Counter trade.

Course outcomes:

- ✓ To know about the New EXIM policy.
- ✓ Familiar with the import procedure simplified in new import policy.
- ✓ To study the letter of credit, post shipment of finance and pre-shipment of finance..
- ✓ Aware the import incentives and export incentives- duty drawback.

Co19: Entrepreneurship development

Objective: To understand the Entrepreneur, entrepreneurial motivation, institutional finance and women entrepreneurship.

Course outcomes:

- ✓ To know about the role of entrepreneurship in economic development.
- ✓ Familiar with the women entrepreneur, concept and problems- rural entrepreurship, problems, factors affecting entrepreurial growth..
- ✓ To study the Commercial banks-IDBI, IFCI, ICICI, IRBI, UTI, SFC's, SIDBI, EXIM BANK, TIIC, NSIC, DIC and Industrial estates..
- ✓ Aware the problems of small scale industries.

Co20: Planning and Growth

Objective: To understand the planning, types of planning, planning process, Inda's five year plan and economic growth..

Course outcomes:

- ✓ To know about the planning in capitalism, socialism and mixed economy, role of planning in under developed countries.
- ✓ Familiar with the agriculture development planning and Industial progress during plan period and structural transformation.
- ✓ To study the Achievements and failures of five year plan in India, resources mobilisation..
- ✓ To study the difference between economic growth and development, obstacles of economic development.
- ✓ To study the balanced growth and unbalanced growth, big push theory and mahaanobis model of growth.

Co21: Economics of Marketing

Objective: To understand the Market, marketing functions, transportation, branding and packaging and channel of distribution.

Course outcomes:

- ✓ To know about the Classification of market, objectives of marketing and its importance..
- ✓ Familiar with the channels of distribution, middlemen, retailer and chain store.
- ✓ To study the sales promotion and advertisement and advertising media.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE

BODINAYAKANUR

Department of Commerce

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of Tamil

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முதலாம் ஆண்டு
முதற்பருவம் (ODD)

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Course Code: UTMJL11   **Course Name:** பழந்தமிழ் இலக்கியமும் உரைநடையும்

CO1: பத்துப்பாட்டுளட்டுத்தொகை நூல்கள் குறித்துஅறிந்து கொள்ளுதல்.

CO2: அற இலக்கியங்கள் கூறும் அறங்களை உணர்ந்துகொள்ளுதல்.

CO3: பல்வேறு இலக்கியஆசிரியர்களின் இலக்கிய அறிவினை மாணவர்கள்
உணர்ந்துகொள்ளுதல்.

CO4: அகப்பொருள் மற்றும் புறப்பொருள் இலக்கணத்தைமாணவர்கள்

புரிந்துகொள்வதற்குபயன்படுகிறது.

CO5: மாணவர்களின் படைப்பாற்றலை வெளிக்கொணர்தல்.

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முதலாம் ஆண்டு
இரண்டாம் பருவம்(EVEN)

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Course Code: UTMJL21   **Course Name:** காப்பிய இலக்கியமும் நாடகமும்

CO1: ஐம்பெருங்காப்பியங்களைப் பற்றிஅறிந்துகொள்ளுதல்.

CO2: சமயக் காப்பியங்களைப் பற்றிஅறிந்துகொள்ளுதல்.

CO3: நாடகங்கள் வாயிலாகமாணவர்களுக்குநடிப்புக் கலையை
ஊக்கப்படுத்துதல்.

CO4: பாமற்றும் அணியிலக்கணங்களைமாணவர்கள் அறிந்து கொள்ளுதல்.

CO5: விளம்பரம் மற்றும் திரைப்படவிமர்சனம் எழுதும் படைப்பாற்றலைமாணவர்களிடம்
வளர்த்தல்.

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இரண்டாம் ஆண்டு
மூன்றாம் பருவம் (ODD)

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Course Code: UTMJL31   **Course Name: இடைக்கால இலக்கியமும் புதினமும்**

CO1: சைவசமயத்தைவளர்த்ததமிழ் பெரியோர்களைப் பற்றி அறிந்துகொள்ளுதல்.

CO2: வைணவத்தையும் வைணவப் பெரியோர்களின் அருளுரைகளைப் பற்றிஅறிந்துகொள்ளுதல்.

CO3: சிற்றிலக்கியங்களின் சிறப்புக்களைமாணவர்கள் உணர்ந்து கொள்வதற்கு.

CO4: சொல் மற்றும் தொகை இலக்கணவகைகளைமாணவர்கள் உணர்ந்து கொள்வதற்கு.

CO5: மாணவர்களுக்குகட்டுரைமற்றும் பேட்டிகாணுதலுக்கான படைப்பாற்றலைஉருவாக்குதல்.

CO6: புதினம் வாசிப்பு மூலம் மாணவர்களின் கற்பனைத்திறனை

மேம்படுத்துதல்.

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இரண்டாம் ஆண்டு
நான்காம் பருவம்(EVEN)

</div>

Course Code: UTMJL41   **Course Name: இக்காலக் கவிதையும் சிறுகதையும்**

CO1: மரபுக் கவிதைகள் பற்றியும் மரபுக் கவிஞர்களைப் பற்றியும் அறிந்துகொள்ளுதல்.

CO2: புதுக்கவிதைகள் மற்றும் ஐக்கூ கவிதைகளைஅறிமுகம் செய்தல் மற்றும்

பயிற்சிஅளித்தல்.

CO3: சிறுகதைகள் மூலம் தனிமனிதஒழுக்கத்தைவளர்த்தல்.

CO4: எழுத்து இலக்கணத்தைபயிற்றுவித்தல்.

CO5: மரபுப் பிழைகள் குறித்துவிளக்குதல் மற்றும் கவிதைஎழுதும்

படைப்பாற்றலைவளர்த்தல்.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of English

Program Name: BA English

Program Specific Outcomes

On completion of BA English program, the students would be able to

PSO1: Encourage and engage in developing and sharpening their ability to understand expertise and improve their LSRW skill of the English language.

PSO2: Instilled a great passion to know about the foreign culture through a non- native language and to focus on imbibing good manners.

PSO3: Expose to a vast realm of pursuing higher education.

PSO4: Identify the individual talents and traits which suit to make them employable.

PSO5: Expose to sharpen their creativity and critical domains.

Course Outcomes

Semester: I (Odd)

CourseCode: UENJE11   **Course Name: English for Communication and Pleasure I**

Upon completion of the course, the students will able to

CO1: Gain the knowledge about the forms and the world of literature.

CO2: Approach the literary forms with aesthetic sense.

CO3: Analyze prose to identify main and subordinate ideas.

CO4: Develop individual perspectives through introducing prose and short stories.

CO5: Write in an effective manner that demonstrates basic concepts of grammar.

Course Code: AENJC11   **Course Name: Prose**

Upon completion of the course, the students will able to

CO1: Understand prose as a genre of literature.

CO2: Appreciate the expressions of various authors.

CO3: Understand the techniques of reading and writing.

CO4: Critically analyse the social issues through reading.

CO5: Expose to learning and application of Grammar.

Course Code: AENJC12   **Course Name: Short Stories**

Upon completion of the course, the students will able to

CO1: Introduce galaxy of writers representing various nationalities.

CO2: Understand the various techniques used by the writers.

CO3: Sensitize on the socio-cultural significance as manifested through the prescribed texts.

CO4: Produce new genre of short stories to the world of literature.

CO5: Criticize and relate the short stories with the contemporary society.

Course Code: AENJA11   **Course Name: Literary Forms**

Upon completion of the course, the students will able to

CO1: Understand different types of genre in English Literature.

CO2: Approach the literary genres with aesthetic sense.

CO3: Write verse on their own

CO4: Equip their literary sense with more knowledge of literature.

CO5: Analyse and appreciate the different writing forms of English Literature.

Course Code: UVEJV11   **Course Name: Value Education**

Upon completion of the course, the students will able to

CO1: Impart citizenship values among the society.

CO2: Be aware of civil rights.

CO3: Be familiar with basic features of Indian Constitution.

CO4: Know the values of different religion.

CO5: Inculcate moral and social values.

Course Code: UENJE21   **Course Name: English for Communication and Pleasure II**

At the conclusion of the course, the students will able to

CO1: Analyse and evaluate literary works.

CO2: Cite from the text to support their analyses in a discussion of literature.

CO3: Effectively express and exchange ideas through various modes of communication.
CO4: Work with a group to act out a One Act Play using vocabulary words.
CO5: Enhance the skills of reading and writing through composition.

Course Code: AENJC21   **Course Name: Poetry - I**

At the conclusion of the course, the students will able to

CO1: Understand and appreciate poetry as a literary art form.

CO2: Recognise poetry from a variety of cultures, languages and historic periods.

CO3: Apply the principles of literary criticism to the analysis of poetry.

CO4: Develop their own creativity by enhancing their poetry writing skills.

CO5: understand the thought and imagination contained in the poem.

Course Code: AENJC22   **Course Name: Fiction**

At the conclusion of the course, the students will able to

CO1: Learn the basics of conceptualization of a novel.

CO2: Sharpen critical thinking and critical reading skills.

CO3: Recognize the personal qualities needed to be an effective writer.

CO4: Acquire the intellectual and practical training needed to pursue a writing career.

CO5: Polish effective Communication skills through reading the prescribed texts.

Course Code: AENJA21   **Course Name: The Social History of England**

At the conclusion of the course, the students will able to

CO1: Understand social changes that occurred over the centuries

CO2: Equip to have direct impacts of social history of England.

CO3: Outline the historical backdrop of England.

CO4: Discuss the impacts of war and consequent changes.

CO5: Asses the sway of various resolutions and movements that reserved the history of
England.

Course Code: UESJD21   **Course Name: The Environmental Studies**

At the conclusion of the course, the students will able to

CO1: Acquire and awareness of the environment and its related problems.

CO2: Participate in improvement and protection of environment.

CO3: Acquire the skills for identifying and solving environmental issues.

CO4: Acquire knowledge about the environment and its allied problems.

CO5: Acquire an attitude of concern for the environment.

Course Code: AENEE31　　　　　**Course Name: English for communication Skills III**

At the conclusion of the course, the students will able to

CO1: Communicate effectively and appropriately in real life situations.

CO2: Put ideas in proper sequences according to situations.

CO3: Converse in familiar social situations.

CO4: Identify the common errors in English while speaking.

CO5: Express and respond to personal feelings, opinions and attitudes.

Course Code: AENEC31　　　　　　　　　　**Course Name:Poetry II**

At the conclusion of the course, the students will able to

CO1: Enjoy the recite the poem with proper rhythm and intonation.

CO2: Develop their power of imagination

CO3: Develop love for poetry reading and writing.

CO4: Train the emotions, feelings and imaginations of them.

CO5: Develop their aesthetic sense.

Course Code: AENEA31　　　　　**Course Name: Advanced English Grammar and Usage**

At the conclusion of the course, the students will able to

CO1: Relate the grammatical rules with appropriate situations.

CO2: Adapt the grammatical structures to crack competitive examinations.

CO3: Use grammatical structures appropriately.

CO4: Understand the factors that influence the use of grammar and vocabulary in speech and writing.

CO5: Acquire advanced language skills in order to communicate with speakers of English language.

Course Code: AENET31   **Course Name: History of English Literature I**

At the conclusion of the course, the students will able to

CO1: Delineate major writers and their works in chronological order.

CO2: Discuss how literature influences the social and political history of each period.

CO3: Compare English literature of one period with that of another.

CO4: Expose the history of England century wise.

CO5: View the England nation in historical perspective.

Course Code: AENES31   **Course Name: Word Power**

At the conclusion of the course, the students will able to

CO1: Use formal and informal varieties of English language.

CO2: Build their vocabulary through word formation.

CO3: Use the language according to their feelings and actions.

CO4: Express them with the use of English language.

CO5: Identify simple, multiple meaning words through varieties of English.

Course Code: AENES31   **Course Name: Presentation Skills**

At the conclusion of the course, the students will able to

CO1: Build presentations that create maximum impact.

CO2: Use their voice to greater effect.

CO3: Handle their audience with confidence.

CO4: Use their nerves to enhance their presentation.

CO5: Choose the right visual aids.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of BCA

Program Name: BCA

Program Specific outcomes

On successful completion of Bachelor of Computer application Program, the students would be able to

PSO1: To provide young men and women with the required knowledge and necessary skills to get rewarding careers into the changing world of information technology.

PSO2: To provide a foundation of computing principles and business practices for effectively using / managing information systems and enterprise software.

PSO3: To specialize in legacy application software ,system software or mobile applications.

PSO4: Think of new approaches for solving problems in different domains.

Course Outcomes
Semester: I (Odd)

Course Code: SCAJC11   **Course Name: Fundamentals of computer and C programming**

CO1: Familiarize with the fundamental concepts and computer and computer
programming.
CO2: Learn basic concepts of IT.
CO3: Learn fundamental concepts of programming by developing and
executing programs in c.
CO4: Focus will be on structured programming.
CO5: Features of c.
CO6: Various constructs and their syntax.

CO7: Data types and operator in c.

Course Code: SCAJC1P   **Course Name: Programming in C Lab**

After completing this lab course you will be able to:

CO1: Develop the logic for a given problem, write the algorithm, and draw a flow chart.
CO2: Recognize and understand the syntax and construction of C code.
CO3: Gain experience of procedural language programming know the steps involved in
compiling, linking and debugging C code.
CO4: Make use of different data-structures like arrays, pointers, structures and files.
CO5: Understand how to access and use library functions, understand function declaration
and definition.
CO6: To know the alternative ways of providing solution to a given problem.

Course Code: SCAJS1P   **Course Name: Office Automation Lab**

CO1: Paperless work environment.
CO2: Simplify operations and minimize computational errors.
CO3: Optimal utilization of resources.
CO4: Better information sharing and transparency.
CO5: Enhanced security and recovery of data.
CO6: Describe certification requirements for computer forensics labs.
CO7: List physical requirements for a computer forensics lab.
CO8: Explain the criteria for selecting a basic forensic workstation.
CO9: Describe components used to build a business case for developing a forensics lab**.**

Course Code: UVEJV11   **Course Name: Value Education**

CO1: Realizes the basic ethics in life as a human being.
CO2: Understand and accept the importance of harmonious living in a diverse society.
CO3: Understand and appreciate the need and importance for Value Based Living.
CO4: Set realistic goals in life and start achieving towards them.
CO5: Comprehend the value of human life in the society and adopt the local culture and
     customs.
CO6: It directly addresses subtle questions of life and relates to day to day living.

Semester: III

Course Code: SCAGC31   **Course Name: Java Programming**

CO1: To review computer basics, programs, and operating system.
CO2: To explore the relationship between java and the World Wide Web.
CO3: To distinguish the terms API, IDE, and JDK.
CO4: To write a simple java program.
CO5: To display output on the console.
CO6: To explain the basic syntax of a java program.
CO7: To create, compile, and run java programs.

Course Code: SCAGC3P   **Course Name: Java Programming Lab**

CO1: To teach the students basics of JAVA programs and its execution.
CO2: To teach the students the differences between C++ and Java programming.
CO3: To make the students learn concepts like packages and interfaces.
CO4: To make the students understand life cycle of the applets and its functionality.
CO5: To make the students understand the usage until package.
CO6: To teach the student, to develop java programs using interfaces.

Course Code: SCAGC32   **Course Name: Digital Principles and Computer Organization**

CO1: To teach the basics involved in data representation and digital logic circuits used in
    the computer system.
CO2: It includes the general concepts in digital logic design, including logic element.
CO3: To make better understand of logics used in Combinational and sequential circuit
    design.
CO4: To explore the basic architecture of processing, memory and i/o organization in a
    computer system.
CO5: To identify the elements of modern instructions sets and their impact on processor
    design.

Course Code: SCAGS3P   **Course Name: Business Accounting Lab**

CO1: To develop numerical abilities of students
CO2: To inculcate writing skills and business correspondence
CO3: To create awareness of law and legislations related to commerce and business
CO4: To introduce recent trends in business, organizations and industries
CO5: To acquire practical skills related with banking and other bus

Semester: V (Odd)

Course Code: SCAGC51   **Course Name: Relational Database Management System**

CO1: To define a database management system(DBMS) and describe the component of a DBMS.

CO2: To describe the architecture of a DBMS based on the ANSI/SPARC definition.

CO3: To define the three traditional database models: hierarchical, networking and relational.

CO4: To describe the relational model and relational.

CO5: To understand operations on a relational database based on commands available in sql.

CO6: To describe the steps in database design.

CO7: To define ERM and ER diagram and explain the entities and relationships in this model.

CO8: To define the hierarchical levels of normalization and understood the rational for normalizing the relations.

CO9: To List out database types other than the relational model.

Course Code: SCAGC52   **Course Name: Data Communication and Computer Networks**

CO1: Understand a broad range of computer networks and data communication technologies.

CO2: Be equipped with the basic knowledge of data communication fundamentals

CO3: Understand circuit switching , packet switching technologies and routing in Switched networks

CO4: Be able to calculate transmission, propagation and queuing delays

CO5: Be able to apply and implement different types of addressing and routing techniques.

CO6: Understand major internet applications and network management.

Course Code: SCAGC53   **Course Name : Operating System**

CO1: Be familiar with the fundamentals of Operating Systems.
CO2: To learn the concepts of asynchronous concurrent execution and concurrent
       programming
CO3: To learn the mechanisms involved in real memory management and virtual memory
        management

CO4: To gain knowledge on indefinite postponement, condition for deadlock and
       deadlock solutions
CO5: To know the concepts of disk performance optimization , file and database systems

Course Code : SCAGC5P   **Course Name : RDBMS Lab**

CO1 : To learn about the history and future direction of the SQL standard
CO2 : To get an overall appreciation of a modern RDBMS and the nature of SQL
CO3 : Familiarisation with the course environment and data to be used
CO4 : To understand the different issues involved in the design and implementation of a
        database system
CO5 : To understand and use data definition language to write query for a database

Course Code: SCAGA53   **Course Name: Information Security**

CO1: Concept of information security management
CO2: Information classification process
CO2: Security policy implementation
CO3: The roles and responsibilities of security administration
CO4: Risk Management Assessment
CO5: Security Awareness training.

Course Code: UES8D51   **Course Name: Environmental Studies**

CO1: Understand the complex relationships between natural and human systems.
CO2: Appreciate the core values and the richness of environment resources around the
    world.
CO3: Ability to describe the structure of an ecosystem and the changes it undergoes.
CO4: Demonstrate the ability to analyse and recognize the interrelationships in a food
    chain and a food web.
CO5: Articulate the interdisciplinary context of environmental issues.
CO6: Realize the importance of environment safety and security related matters

Course Code: SCAGS5P   **Course Name: Networking Lab**

CO1: To understand inter-process and inter-system communication
CO2: To understand socket programming in entirely
CO3: To understand usage of TCP/UDP/Raw sockets
CO4: To understand how to build network applications
CO5: To implement file transfer protocols
CO6: To learn and implement RPCs
CO7: To implement DES and RSA encryption/decryption schemes
CO8: To implement packet capturing and analysis
CO9: To implement clustering mechanism
CO10: To configure and implement firewalls
CO11: To design and implement simple IDS

Semester: II (Even)

Course Code: SCAJC21   **Course Name: Object Oriented programming with C++**

CO1: Learn about the fundamental concepts of object oriented programming.
CO2: Explore the fundamental hardware component of computer.
CO3: Learn about the fundamental types of software.
CO4: Instantiate an object from a class that you define.
CO5: Learn about the program compilation process and the project design methodology.

Course Code: SCAJC2P   **Course Name: Problem Solving using C++ Lab**

CO1: Code an algorithm into a program.
CO2: Desk-check a program.
CO3: Evaluate and modify a program.
CO4: Understand the components of a C++ program.
CO5: Create a C++ program.

Course Code: SCAJS2P   **Course Name: Business Accounting Lab**

CO1: To develop numerical abilities of students
CO2: To inculcate writing skills and business correspondence
CO3: To create awareness of law and legislations related to commerce and business
CO4: To introduce recent trends in business, organizations and industries
CO5: To acquire practical skills related with banking and other business

Course Code: UESJD21   **Course Name: Environmental Studies**

Upon Completion of the course, the students will be able to

CO1: Understand the complex relationships between natural and human systems.
CO2: Appreciate the core values and the richness of environment resources aroundthe world.
CO3: Ability to describe the structure of an ecosystem and the changes it undergoes.
CO4: Demonstrate the ability to analyse and recognize the interrelationships in a food chain and a food web.
CO5: Articulate the interdisciplinary context of environmental issues.
CO6: Realize the importance of environment safety and security related matters.

Semester: IV (Even)

Course Code: SCAGC41   **Course Name: Data Structures and Computer Algorithm**

CO1: To impart the basic concepts of data structures and algorithms
CO2: To be familiar with advanced data structures such as balanced search trees, hash tables, Priority queues, and disjoint set data structure.
CO3: To be familiar with some graph algorithms such as shortest path and minimum spanning trees
CO4: To understand basic concepts of traversal and search techniques.

Course Code: SCAGC4P   **Course Name: Data Structures and Computer Algorithm Lab**

CO1: To understand how various data structures can be classified.
CO2: To understand the most commonly used, basic data types and data arrays.
CO3: To understand the characteristics and mechanisms of problem-oriented data
     structures used to solve specific problems.
CO4: And also how to use a basic data structure for program implementation.

Course Code: SCAGC42   **Course Name: Computer Graphics**

CO1: To understand the basic objectives and scope of computer graphics
CO2: To identify computer graphics application
CO3: To understand the basic structures of 2d and 3d graphics system
CO4: To understand evolution of graphics programming environments
CO5: To understand the roles of java language, java 2d and java 3d packages
CO6: To identify computer graphics related fields

Course Code: SCAGS4P   **Course Name: Multimedia Lab**

CO1: In multimedia activities, students can learn real-world skills related to technology,
     the value of teamwork and effective collaboration techniques
CO2: The impact and importance of different media, the challenges of communicating to
     different audiences and how to present information in compelling ways.
CO3: Techniques for synthesizing and analysing complex content, the importance of
      research, planning, and organization skills.
 CO4: Technological resources, both hardware and software , technological skills, for both
      the students and teacher , time required to plan, design, develop, and evaluate
      multimedia activities.

Semester: VI (Even)

Course Code: SCAGC61   **Course Name: Dot Net Programming**

CO1: To provide a consistent object-oriented programming environment whether object code is stored and executed locally, executed locally but internet distributed or executed remotely.

CO2: To Provide a code-execution environment that minimizes software deployment and versioning conflicts.

CO3: To provide a code-execution environment that promotes safe execution of code, including code created by an unknown or semi-trusted third party.

CO4: To build all communication on industry standards to ensure that code based on the .NET Framework integrates with any other code.

Course Code: SCAGC6P   **Course Name: DotNet Programming Lab**

CO1: .NET supports two types of form-based apps, win Forms and Web Forms

CO2: Win forms are the traditional, desktop GUI apps.

CO3: The great news is that visual studio.NET enables quick.

CO4: Drag and drop construction of form- based applications.

CO5: Event-driven, code-behind programming

CO6: Visual studio.NET.

CO7: Win forms.

CO8: Controls.

Course Code: SCAGC62   **Course Name: Software Engineering**

CO1: Understanding user conceptual models and development of better specifications.

CO2: Improvement in design languages and reusable code.

CO3: Participatory design and interactive debugging.

CO4: Specification of interface and mock-up to confirm specifications.

CO5: To improve quality of software products.

CO6: To increase customer satisfaction and productivity.

CO7: To increase job satisfaction.

CO8: Software engineering is not programming.

CO9: Programming is an important part of software engineering.

Course Code: SCAGC63   Course Name: Cryptography and Network security

CO1: To familiarize with the security parameters in computer networks.
CO2: The way of develop the algorithm in various ways.
CO3: General type of network security and their implementation.
CO4: How to secure our network via different algorithms.
CO5: System attacks.
CO6: Physical protection measures.
CO7: Passwords
CO8: Data security
CO9: Substitution-based versus transposition-based cipher.
CO10: Public key cryptography, Advanced Encryption Standard, digital signatures, public key infrastructure.
CO11: Secure wired and wireless communications, Firewall protection.

Course Code: SCAGA61   Course Name: Value Education

CO1: Realizes the basic ethics in life as a human being.
CO2: Understand and accept the importance of harmonious living in a diverse society.
CO3: Understand and appreciate the need and importance for Value Based Living.
CO4: Set realistic goals in life and start achieving towards them.
CO5: Comprehend the value of human life in the society and adopt the local culture and customs.
CO6: It directly addresses subtle questions of life and relates to day to day living.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of B.Sc CS & IT

Program Name: B.Sc (IT)

Program Specific outcomes

PSO1: To provide basic inputs in various aspects and broad understanding of IT and its other
   Inter disciplinary interfaces.

PSO2: Focus of the program is management of Information Technology.

PSO3: To cater to the needs of effectively managing the business by bridging the gap
   between managerial practices in vogue and information technology**.**

PSO4: Be in a position to develop Industrial application.

Course Outcomes

Semester: I (Odd)

Course Code: SNTJC11   **Course Name: Introduction to Information Technology & programming in C**

CO1: To make familiarize with the fundamental concepts and computer and computer programming.
CO2: To learn basic concepts of IT.
CO3: To learn fundamental concepts of programming by developing and executing programs in c.
CO4: To teach features of c.
CO5: To teach various constructs and their syntax.
CO6: To teachData types and operator in c.

Course Code: SNTJC1P   **Course Name: Programming in C Lab**

CO1:To write a simple c program to solve a simple problem including
CO2: Beginning a project in Microsoft visual studio.
CO3: Declaration statements to define variables or a particular data type.
CO4: Formatted user input and output on the console window.
CO5: Arithmetic operation and type casting.
CO6: Basic programming style.
CO7: Learn problem solving strategies.
CO7: Achieve intermediate knowledge of c programming language.
CO8:Gain experience leveraging basic data structures
CO9:Get an understanding of simple algorithms

Course Code: SNTJS1P   **Course Name: Linux programming Lab**

CO1: Understand the shell login and logout files.
CO2: Learn about shell variables.
CO3 : Become familiar with the shell environment
CO4 : Learn about shell built-in commands

CO5 : Additional commands
CO6: Learn about shell grammar.
CO7: Understand command types.

Course Code: UVEJV11   **Course Name: Value Education**

CO1: Realizes the basic ethics in life as a human being.
CO2: Understand and accept the importance of harmonious living in a diverse society.
CO3: Understand and appreciate the need and importance for Value Based Living.
CO4: Set realistic goals in life and start achieving towards them.
CO5: Comprehend the value of human life in the society and adopt the local culture and
     Customs.
CO6: It directly addresses subtle questions of life and relates to day to day living.

Semester: III (Odd)

Course Code: SNTGC31   **Course Name: Object Oriented Programming sing C++**

CO1: Learn about the fundamental concepts of object oriented programming.
CO2: Explore the fundamental hardware component of computer.
CO3: Learn about the fundamental types of software.
CO4: Instantiate an object from a class that you define.
CO5: Learn about the program compilation process and the project design methodology.

Course Code: SNTGC3P   **Course Name: Object Oriented Programming using C++ Lab**

After completing this lab course you will be able to:
CO1: Develop the logic for a given problem, write the algorithm, and draw a flow chart.
CO2: Recognize and understand the syntax and construction of C code.
CO3: Gain experience of procedural language programming know the steps involved in
     compiling, linking and debugging C code. Make use of different data-structures like
     arrays, pointers, structures and files.
CO4: Understand how to access and use library functions, understand function declaration
     and definition. To know the alternative ways of providing solution to a given
     problem.

Course Code: SNTGC32   **Course Name: Data Structures and Computer Algorithms**

CO1: Use the relevant terminology to describe the difference between graphs and other
     types of collections.
CO2: Recognize applications for which graphs an appropriate.
CO3: Explain the structural differences between an adjacency matrix representations of a
     graph.
CO4: Graph terminologies: vertices, edges, simple graph.
CO5: To represent the traversal a graph using the abstract graph.
CO6: To design and implement breadth first search, depth first tree.
CO7: To solve the nine tail problem using breath first search tree.
CO8: To model graph using the graph interface the Abstract graph and the un weighted
     graph.

Course Code: SNTGA31   **Course Name: Digital Principles and Computer**
                                         Organization

CO1: To understand the generic principles that underlies the building of a digital computer.
CO2: To review the structure and functioning of a digital computer and understand
     Overall system architecture.
CO3: To analyse the working of memory unit and study the examples of mapping
     techniques of different memory system.
CO4: To understand the structure, function, and characteristics of computer systems.
CO5: To understand the design of the various functional units and components of
     computers.
CO6: To identify the elements of modern instructions sets and their impact on processor
     design.
CO7: To explain the function of each element of a memory hierarchy.
CO8: To identity and compare different methods for computer I/O.

Course Code: SNTGS3P   **Course Name: Multimedia Lab**

CO1: In multimedia activities, students can learn real-world skills related to technology,
     the value of teamwork and effective collaboration techniques
CO2: The impact and importance of different media, the challenges of communicating to

different audiences and how to present information in compelling ways.

CO3: Techniques for synthesizing and analysing complex content, the importance of research, planning, and organization skills.

CO4: Technological resources, both hardware and software , technological skills, for both the students and teacher , time required to plan, design, develop, and evaluate multimedia activities.

Semester: V (Odd)

Course Code: SNTGC51   **Course Name: Data Communication and Computer Networks**

CO1: Understand a broad range of computer networks and data communication technologies.

CO2: Be equipped with the basic knowledge of data communication fundamentals.

CO3: Understand circuit switching , packet switching technologies and routing in switched networks

CO4: Be able to calculate transmission ,propagation , and queuing delays

CO5: Be able to apply and implement different types of addressing and routing techniques.

CO6: Understand major internet applications and network management.

Course Code: SNTGC52   **Course Name: Software Engineering**

CO1: Understanding user conceptual models and development of better specifications.

CO2: Improvement in design languages and reusable code.

CO3: Participatory design and interactive debugging.

CO4: Specification of interface and mock-up to confirm specifications.

CO5: To improve quality of software products.

CO6: To increase customer satisfaction and productivity.

CO7: To increase job satisfaction.

CO8: Software engineering is not programming.

CO9: Programming is an important part of software engineering.

Course Code: SNTGC53   **Course Name: Java Programming**

CO1: To review computer basics, programs, and operating system.

CO2: To explore the relationship between java and the world wide web.

CO3: To distinguish the terms API, IDE, and JDK.

CO4: To write a simple java program.

CO5: To display output on the console.

CO6: To explain the basic syntax of a java program.
CO7: To create, compile, and run java programs.
CO8: (GUI) to display output using the JOptionpane output dialog boxes.

Course Code: SNTGC5P   **Course Name: Java Programming Lab**

CO1: To review computer basics, programs, and operating system.
CO2: To explore the relationship between java and the world wide web.
CO3: To distinguish the terms API, IDE, and JDK.
CO4: To write a simple java program.
CO5: To display output on the console.
CO6: To explain the basic syntax of a java program. To create, compile, and run java
       programs.
CO7: (GUI) to display output using the J Option pane output dialog boxes

Course Code: SNTGA53   **Course Name: Information Security**

CO1: Concept of information security management
CO2: Information classification process
CO2: Security policy implementation
CO3: The roles and responsibilities of security administration
CO4: Risk Management Assessment
CO5: Security Awareness training.

Course Code: UES8D51   **Course Name: Environmental Studies**

Upon Completion of the course, the students will be able to

CO1: Understand the complex relationships between natural and human systems.
CO2: Appreciate the core values and the richness of environment resources around the
       world.
CO3: Ability to describe the structure of an ecosystem and the changes it undergoes.

CO4: Demonstrate the ability to analyse and recognize the interrelationships in a food
chain and a food web.
CO5: Articulate the interdisciplinary context of environmental issues.
CO6: Realize the importance of environment safety and security related matters

Course Code: SNTGS5P   **Course Name: Networking Lab**

CO1: To understand inter-process and inter-system communication
CO2: To understand socket programming in entirely
CO3: To understand usage of TCP/UDP/Raw sockets
CO4: To understand how to build network applications
CO5: To implement file transfer protocols
CO6: To learn and implement RPCs
CO7: To implement DES and RSA encryption/decryption schemes
CO8: To implement packet capturing and analysis
CO9: To implement clustering mechanism
CO10: To configure and implement firewalls
CO11: To design and implement simple IDS

Semester: II (Even)

Course Code: SNTJC21   **Course Name: OOPS with C++**

Learn about the fundamental concepts of object oriented programming.
CO1: Explore the fundamental hardware component of computer.
CO2: Learn about the fundamental types of software.
CO3: Instantiate an object from a class that you define.

CO4: Learn about the program compilation process and the project design methodology.

Course Code: SNTJC2P   **Course Name: OOPS with C++ Lab**

CO1: Code an algorithm into a program.
CO2: Desk-check a program.
CO3: Evaluate and modify a program.

CO4: Understand the components of a C++ program.
CO5: Create a C++ program.

Course Code : SNTJS2P   **Course Name : Desk Top Publishing Lab**

CO1: Define desktop publishing
CO2: Identify the software and hardware needed for desktop publishing.
CO3: Identify the three main categories of typefaces.
CO4: Describe some of the important factors that must be considered when debugging a
     document.

Course Code : UESJD21   **Course Name : Environmental Studies**

CO1: Understand the complex relationships between natural and human systems.
CO2: Appreciate the core values and the richness of environment resources around the
     world.
CO3: Ability to describe the structure of an ecosystem and the changes it undergoes.
CO4: Demonstrate the ability to analyse and recognize the interrelationships in a food
     chain and a food web.
CO5: Articulate the interdisciplinary context of environmental issues.
CO6: Realize the importance of environment safety and security related matters**.**

Semester: IV (Even)

Course Code : SNTGC41   **Course Name : RDBMS**

CO1: Define a database management system(DBMS) and describe the component of a
     DBMS.
CO2: Describe the architecture of a DBMS based on the ANSI/SPARC definition.
CO3: Define the three traditional database models: hierarchical, networking and
     relational.
CO4: Describe the relational model and relational.
CO5: Understand operations on a relational database based on commands available in
     SQL.
CO6: Describe the step sin database design.

CO7: Define ERM and ER diagram and explain the entities and relationships in
this model.
CO8: Define the hierarchical levels of normalization and understood the rational
for normalizing the relations.
CO9: List database types other than the relational model.

Course Code : SNTGC4P   **Course Name : RDBMS Lab**

CO1 : To learn about the history and future direction of the SQL standard
CO2 : To get an overall appreciation of a modern RDBMS and the nature of SQL
CO3 : Familiarisation with the course environment and data to be used
CO4 : To understand the different issues involved in the design and
implementation of a database system
CO5 : To understand and use data definition language to write query for a
data base.

Course Code : SNTGC42   **Course Name : Operating System**

CO1: Be familiar with the fundamentals of Operating Systems.
CO2: To learn the concepts of asynchronous concurrent execution and concurrent
programming
CO3: To learn the mechanisms involved in real memory management and virtual memory
management
CO4: To gain knowledge on indefinite postponement, condition for deadlock and
deadlock solutions
CO5: To know the concepts of disk performance optimization, file and database systems.

Course Code : SNTGS4P   **Course Name : PHP & MYSQL**

CO1: Understand the usage of PHP and MySQL in dynamic web Development

CO2: Understand PHP language data types, logic controls, built-in and user-defined functions.
CO3: Be able to setup and configure MYSQL, PHP, Apache web server development environment
CO4: Select, insert, update and delete data using SQL language.

Semester: VI (Even)

Course Code : SNTGC61 **Course Name : Android Programming**

CO1: To study the importance of cloud computing in the E-commerce world.
CO2: To examine the advantage and dis advantage of the cloud computing in E-commerce business.
CO3: To study the legal issues involve in cloud computing.
CO4: To study the different features and characteristics in E-commerce.
CO5: To analysis the improved efficiency of cloud computing in this computer modern world.
CO6: Provide management information system.
CO7: Understood oracle web commerce personalization capabilities.
CO8: create a target to select content.

Course Code : SNTGC6P **Course Name : Web Programming Lab**

CO1: To introduce basic PHP programming
CO2: To design and implement simple databases using SQL
CO3: To construct Web application that
CO4: Access simple databases from PHP using dynamically generated SQL
CO5: Extract information from foreign web sites.
CO6: Send emails to potential users
CO7: Perform access control using cookies
CO8: To describe and evaluate the mechanisms behind dynamic web sites
CO9: To introduce the techniques used for constructing advanced community Web sites.

Course Code : SNTGC62 **Course Name : Software Testing**

CO1: To discuss the distinctions between validations is testing and defect testing.
CO2: To describe the principles of system and component testing

CO3: To describe strategies for generating system test cases
CO4: To understand the essential characteristics of tool used for test automation.
CO5: Uncover as many as errors as possible in a given timeline.
CO6: Demonstrate a given software product matching its requirement specifications.
CO7: Validate the quality of software testing using the minimum cost and efforts.

Course Code : SNTGA63   **Course Name : Cryptography and Network Security**

CO1: To familiarize with the security parameters in computer networks.
CO2: The way of develop the algorithm in various ways.
CO3: General type of network security and their implementation.
CO4: How to secure our network via different algorithms.
CO5: System attacks.
CO6: Physical protection measures.
CO7: Passwords
CO8: Data security
CO9: Substitution-based versus transposition-based cipher.
C010: Public key cryptography, Advanced Encryption Standard, digital signatures, public key infrastructure.
CO11: Secure wired and wireless communications, Firewall protection

Course Code : UVE8V61   **Course Name : Value Education**

CO1: Realizes the basic ethics in life as a human being.
CO2: Understand and accept the importance of harmonious living in a diverse society.
CO3: Understand and appreciate the need and importance for Value Based Living.
CO4: Set realistic goals in life and start achieving towards them.
CO5: Comprehend the value of human life in the society and adopt the local culture and customs.
CO6: It directly addresses subtle questions of life and relates to day to day living.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of Mathematics

Program Name: B.Sc (Mathematics)

Program Specific outcomes

PSO1: Think in a critical manner.

PSO2: Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand. Formulate and develop mathematical arguments in a logical manner.

PSO3: Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.

PSO4: Understand, formulate and use quantitative models arising in social science, Business and other contexts.

Course Outcomes

Semester: I (Odd)

CO1: Calculus

6. define the basic concepts and principles of differential and integral calculus of real functions and sequences and series
7. interpret the geometric meaning of differential and integral calculus
8. apply the concept and principles of differential and integral calculus to solve geometric and physical problems
9. analyze the properties of functions based on graph obtained using Matlab.
10. organize solving of complex problems by combining the acquired mathematical concepts and principles

CO2: Theory of Equations and Trigonometry

7. Describe the relation between roots and coefficients
8. Find the sum of the power of the roots of an equation using Newton's Method.
9. Transform the equation through roots multiplied by a given number, increase the roots, decrease the roots, removal of terms
10. Solve the reciprocal equations.
11. Analyze the location and describe the nature of the roots of an equation.
12. Obtain integral roots of an equation by using Newton's Method and Horner's method.

CO3: Differential equations and its applications

7. Extract the solution of differential equations of the first order and of the first degree by variables separable, Homogeneous and Non-Homogeneous methods.
8. Find a solution of differential equations of the first order and of a degree higher than the first by using methods of solvable for p, x and y.
9. Compute all the solutions of second and higher order linear differential equations with constant coefficients, linear equations with variable coefficients.
10. Solve simultaneous linear equations with constant coefficients and total differential equations.

11. Form partial differential equations and find the solution of First order partial differential equations for some standard types.
12. Use inverse Laplace transform to return familiar functions and apply Laplace transform to solve second order linear differential equation and simultaneous linear differential equation.

CO4: Analytical Geometry 3D and Vector Calculus

6. Describe the various forms of equation of a plane, straight line, Sphere, Cone and Cylinder.
7. Find the angle between planes, Bisector planes, Perpendicular distance from a point to a plane, Image of a line on a plane, Intersection of two lines.
8. Compute the angle between a line and a plane, length of perpendicular from a point to a line.
9. Calculate the Shortest distance between two skew lines and find and interpret the gradient curl, divergence for a function at a given point.
10. Evaluate integrals by using Green's Theorem, Stokes theorem, Gauss's Theorem.

CO 5: Mechanics

8. Define Resultant, Component of a Force, Coplanar forces, like and unlike parallel forces, Moment of a force and Couple with examples.
9. Prove the Parallelogram of Forces, Triangle of Forces, Converse of the Triangle of Forces, Polygon of Forces, Lami's Theorem, Varignon's theorem of moments.
10. Find the resultant of coplanar couples, equilibrium of couples and the equation to the line of action of the resultant.
11. Discuss Friction, Forces of Friction, Cone of Friction, Angle of Friction and Laws of friction. .Define catenary and obtain the equation to the common catenary.
12. Find the tension at any point and discuss the geometrical properties of a catenary.
13. Define Projectile, impulse, impact and laws of impact and prove that the path of a projectile is a parabola.
14. Define Simple Hormonic Motion and find its Geometrical representation and find the Composition of Simple Hormonic Motion and the differential equation of a central orbit.

CO 6: Real Analysis:

5. Describe fundamental properties of the real numbers that lead to the formal development of real analysis comprehend rigorous arguments developing the theory underpinning real analysis

6. Demonstrate an understanding of limits and how they are used in sequences, series, differentiation and integration.
7. Construct rigorous mathematical proofs of basic results in real analysis
8. Appreciate how abstract ideas and rigorous methods in mathematical analysis can be applied to important practical problems.

CO7 : Complex analysis.

6. Demonstrate familiarity with a range of examples of these concepts.
7. Prove basic results in complex analysis.
8. Apply the methods of complex analysis to evaluate definite integrals and infinite series.
9. Demonstrate understanding and appreciation of deeper aspects of complex analysis such as the Riemann Mapping theorem.
10. Demonstrate skills in communicating mathematics orally and in writing.

CO8: Graph Theory

9. Describe the origin of Graph Theory.Illustrate different types of graphs.
10. Explain independent sets and covering sets and some basic theorems.
11. Discuss degree sequences and operations on graphs.
12. Explain connectedness and components and some theorems.
13. Characterize tree.
14. Derive some properties of planarity and Euler's formula.
15. Find chromatic number and chromatic polynomials for graphs.
16. Prove Fivecolour theorem. • Explain basic properties of directed graphs.

CO9 : Statistics :

5. Define Moments Skewness and Kurtosis. Fit a straight line.
6. Calculate the correlation coefficient for the given data. Compute Rank correlation.
7. Define attributes, consistency of data, independence of data and index numbers for the given data.
8. Define Probability, Conditional probability. Derive Baye's theorem.

CO10: Modern Algebra

10. Define subgroup, center, Normalizer of a subgroup.
11. Find cycles and transpositions of a given permutations.
12. Prove Lagrange's theorem ,Euler's theorem and Fermats theorem
13. Define cyclic groups .

14. Prove a group has no proper subgroup if it is cyclic group of prime order.
15. Define normal subgroups , quotient groups and index of a subgroup.
16. Define homomorphism ,kernel ofa homomorphism,isomorphism.
17. Prove Cayley's theorem , the fundamental theorem of homomorphism for groups
18. Define rings , zero divisors of a ring , integral domain , field and prove theorems.

CO11: Numerical Analysis

9. Define Basic concepts of operators Δ, E, ∇
10. Find the difference of polynomial
11. Solve problems using Newton forward formula and Newton backward formula.
12. Derive Gauss's formula and Stirling formula using Newton forward formula and Newton backward formula. Find maxima and minima for differential difference equation.
13. Derive Simpson's 1/3 ,3/8 rules using trapezoidal rule
14. Find the solution of the first order and second order equation with constant coefficient
15. Find the summation of series finite difference technique
16. Find the solution of ordinary differential equation of first by Euler,Taylor and Runge-Kutta methods

CO12 : Linear Algebra

5. Introduction to vector space and subspace.
6. Use computational techniques and algebraic skills essential for the study of systems of
7. Linear equations, matrix algebra.
8. Vector spaces, eigenvalues and eigenvectors, Orthogonality and Diagonalization. (Computational and Algebraic Skills).

CO13: Programming in C & C++

6. Understand the features of C & C++ supporting object oriented programming
7. Understand the relative merits of C &C++ as an object oriented programming language
8. Understand how to produce object-oriented software using C &C++.
9. Understand how to apply the major object-oriented concepts to implement object oriented programs in C++, encapsulation, inheritance and polymorphism.
10. Understand advanced features of C&C++ specifically stream I/O, templates and operator overloading.

CO14: Ancillary Mathematics – I

6. Define characteristic equation of matrices and illustrate.

7. State Cayley Hamilton Theorem • Compute inverse of a matrix using Cayley – Hamilton Theorem. • Find Eigen values and Eigen vectors of a given matrix.
8. Solve equations of the first order but of higher degree solvable by dy/dx , y, x.
9. Compute complementary function and particular integral of the type eax, cos ax, sin ax.
10. Derive expression for sinnθ, cosnθ and tannθ, sinnθ, cosnθExpand sinθ, cosθ, tanθ in powers of θ. Define hyperbolic and inverse hyperbolic functions.

CO15 Ancillary Mathematics – II

7. Define Moments, Skewness and Kurtosis.
8. Fit a straight line, Parabola for the given data.
9. Calculate the correlation coefficient for the given data.
10. Compute Rank correlation for the given data.
11. Find intermediate values by using Newton's forward and backward formula and Lagrange's formula.Apply Laplace transform to solve differential equations.
12. Obtain Fourier series expansions for the given functionsCompute Cosine and Sine series expansions for the given functions.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of Physics

Program Specific Outcomes   **B.Sc., Physics**

- To enhance the student's academic abilities, personal qualities and transferable skills which will give them an opportunity to develop as responsible citizens.
- To define the basic laws involved in Physics
- To understand the concepts and significance of the various physical phenomena.
- To carry out experiments to understand the laws and concepts of Physics.
- To apply the theories learnt and the skills acquired to solve real time problems.
- To acquire a wide range of problem solving skills, both analytical and computational and to apply them.

<u>Semester –I</u>

Course Code: UVEJV11   **Course Name: Value Education**

After completion of course, the students will be able to

- The importance of values
- What are the values behind the religion and society?
- The role of family in the society
- Significance of Education, Profession
- Basic duties on society and nation

Course Code: SPH8C11   **Course Name: MECHANICS AND PROPERTIES OF MATTER**

OBJECTIVES:

- To study the motion of Objects, understand the laws of motion .
- To study the laws of gravitation.
- To know the principle of conversion of momentum.
- To knows energy and their consequences.
- To identify the characteristics of solids and fluids in terms of their properties.

Course Code: SPH8S11   **Course Name: PROGRAMMING IN C**

OBJECTIVES:

- To introduce to students about the key features in C .
- To introduce to students the implementation of C.
- To know the purpose of Programing Language.
- T know   the Programs and their consequences.
- To identify the   properties in C Language and develop the skill in it.

Course Code: SPHJA11   **Course Name: MECHNICS, PROPERTIES OF MATTER AND SOUND**

OBJECTIVES:

- To understand about force, energy, work done and power.
- To understand about angular momentum and velocity.
- To understand about Ultrasonic and applications.

Semester –II

Course Code: UESJD21   **Course Name: Environmental Studies**

After completion of course, the students will be able to

- Study the important role of our environment.
- Know the structure of earth and its components.
- Avoid to pollute the resources.
- Understand why disaster happened? And its management.
- Understand them duties on environment.

Course Code: SPHJS12   **Course Name: Solar Energy**

After completion of course, the students will be able to

- Understand the various forms of energy

- Study the renewable and non renewable resources

- Explain the nature of solar radiation

- Know about solar appliances

- Explain Photosynthesis and Gobar gas plant

Course Code: SPHJA21   **Course Name: THERMAL PHYSICS**

OBJECTIVES:

- To understand about Cv and Cp relation of gases.
- To know about green house effect.
- To understand about thermodynamics

Course Code: SPH8C2P   **Course Name: PHYSICS PRACTICAL – I**

OBJECTIVES:

- To know about practical experiments.
- To analysis theory and practical difference.
- To understand about working function of circuits.

Course Code: SPHJC21   **Course Name: THERMAL PHYSICS AND ACOUSTICS**

OBJECTIVES:

- To study the motion of Objects, understand the laws of motion.
- To study the laws of Thermodynamics.
- To know the principle of Sound in Acoustics.
- To know energy and their consequences.
- To identify the characteristics of solids and Dynamic theory in terms of their properties.

Course Code: SPHJS21   **Course Name: ASTROPHYSICS**

Objective

- To study the Birth of Modern Astronomy .
- To study the Orientation of Earth in Space.
- To know the principle of corona, Sunspot, Auroras.
- To know the Stars and their consequences.
- To identify the Galaxy and its types.

Course Code: SPHJS22　　　　　**Course Name: MEDICAL PHYSICS**

OBJECTIVES:

- To study the Anatomical Terminology.
- To study the Physics of Cardiovascular System.
- To know the principle of Sound in Medicine.
- To know energy and their consequences.
- To identify the characteristics of EMG, ECG, CT SCAN in terms of their properties.

Course Code: SPHJA2P　　　　　　**Course Name: ANCILLARY PHYSICS**

PRACTICAL

OBJECTIVES:

- To know about practical experiments.
- To analysis theory and practical difference.
- To understand about working function of circuits.

Semester –III

Course Code: SPH8C31　　　　　　**Course Name: ELECTROMAGNETISM**

OBJECTIVES:

- To understand electromagnetic induction, and its characteristics.

- To understand L, C, R circuits and series and parallel resonance circuits.

- To understand A.C bridges – Maxwell's bridge – Anderson's bridge and Owen's bridge.

Course Code: SEL8A33   **Course Name: Basic Discrete Electronics**

After completion of course, the students will be able to

- Study Current, Resistance, Capacitance
- Understand the semiconductor devices and its properties
- PN junction characteristics and load line analysis
- Feedback circuits and operation of amplifier
- Oscillators' uses in laboratory

Semester –IV

Course Code: SEL8A4R   **Course Name: Electronic Devices and Circuits Lab**

After completion of course, the students will be able to

- Know the importance of electronic components in daily life
- Understand the colour code of resistors, CRO and AFO
- Operation of rectifier in bridge circuits
- Characteristics of various diodes
- Role of transistor in electronics

Course Code: SPH8C41   **Course Name: OPTICS AND SPECTROSCOPY**

OBJECTIVES:

- To familiarize the fundamental laws concerning reflection and refraction.
- To understand the phenomena like, interference, diffraction, and polarization.
- To perceive the basic concept of spectroscopy.

Course Code: SEL8A43   **Course Name: SIMPLE CONTROL SYSTEMS AND APPLICATION**

OF IC'S

OBJECTIVES:
- To understand about Photovoltaic cells, Photoconductive cells, Photo emissive cells.
- To understand about construction working function of servomotor, stepper motor.
- To understand about IC fabrication technology.

Semester –V

Course Code: SPH8C52   **Course Name:Nuclear Physics**

After completion of course, the students will be able to

- Understand the basic properties of nuclei and the atomic nucleus

- Describe radioactivity and related phenomena

- Explain the various interactions of nuclear radiation with matter

- Understand the fission and fusion reactions and their applications

- Understand nuclear interactions and elementary particles involved in the interactions

Course Code: SPH8C51   Course Name: ATOMIC PHYSICS AND QUANTUM MECHANICS

Objective

- To study the structure of Objects, understand the laws of motion .
- To study the theory of Bohr Atom Model.
- To know the development of atom structure in Sommerfield .
- To know Wave Prapobility of Schrodinger.
- To identify the Applications of Quantum theory.

Semester –VI

Course Code: SPH9S61   **Course Name: Opto Electronics**

After completion of course, the students will be able to

- Understand the properties of light

- Know the optoelectronics devices and its principles

- Role of optoelectronics devices in technology

- Difference between LED and LCD

- Light propagation in fiber

Course Code: SEL8A63   Course Name:Communication System, Microprocessor and

Computer

After completion of course, the students will be able to

- Understand the principle of communication system

- Know the and operation of TV, RADAR, Fibre optic cable

- Know, What is the purpose of computer and microprocessor

- Study the process of microprocessor

- Know the Magnetic and optical storage devices

Course Code: SPH8C6Q   **Course Name: PHYSICS PRACTICAL – IV**

Objective

- Know the importance of electronic components in daily life

- Understand the colour code of resistors, CRO and AFO

- Operation of rectifier in bridge circuits

- Characteristics of various diodes

- Role of transistor in electronics

Course Code: SPH8C6R   **Course Name: PHYSICS PRACTICAL – V**

Objective

- Know the importance of electronic components in daily life

- Understand the colour code of resistors, CRO and AFO

- Operation of rectifier in bridge circuits

- Characteristics of various diodes

- Role of transistor in electronics

Course Code: SPH8C61   **Course Name: CLASSICAL AND STATISTICAL MECHANICS**

OBJECTIVES:

- To understand about conservation of momentum and energy and forces.
- To understand about D'Alembert's principle and Lagrangian equation.

- To understand about statical mechanics.

Course Code: SPH8C62   **Course Name: MATERIAL SCIENCE**

OBJECTIVES:

- To understand the different types of bonding in solids and types of crystal structure.

- To understand the magnetic materials and its types and applications.

- To understand the dielectric materials and its applications.

- To understand Laser principle and applications.

Course Code: SPH8C63   **Course Name: DIGITAL ELECTRONICS**

Objective

- To study the Number System .
- To study the laws of Karnaugh Map.
- To know the principle of MUX,DMUX,BCD Counter.
- T know Flip Flops and their consequences.
- To identify the Conversion in A/D,D/A.

Course Code: SEL8A6R   **Course Name: PHYSICS PRACTICAL ALLIED**

                          ELECTRONICS LAB EXPERIMENTS

OBJECTIVES:

- To know about practical experiments.
- To analysis theory and practical difference.
- To understand about working function of circuits.

Course Code: SPH8C6P   **Course Name: PHYSICS PRACTICAL GENERAL LAB**

                             EXPERIMENTS

OBJECTIVES:

- To know about practical experiments.
- To analysis theory and practical difference.

- To understand about working function of circuits.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of Botany

Program Outcomes – B.Sc Botany

1. After the completion of B.Sc., Botany degree coerce, a student may go far higher studies like M.Sc., Botany/ Biology/ Forest Science/ Bio – Technology etc.,

2. Student may appear for civil service examinations.

3. With the knowledge acquired the botany graduates may go for self employment in the field of Mushroom cultivation, landscape gardening, Horticulture business like farm management & Post harvest production technology

4. The students are fortunate enough to love and live with the communion of nature.

5. Apart from this for appealed and skill based paper to learn the skills the student are brought to the nearby industries and research lab related to the topic.

CORE SUBJECT PAPERS

1. Algae, Fungi, Lichens and Bryophytes
   - Describe the structure and reproduction of different groups of lower plants
   - Understand the diversity, complexity and economic value of Algae, Fungi, Bryophytes and Lichens

2. Pteridophytes, Gymnosperms & Paleo Botany
   - Differentiate the diversity of lower vascular plants
   - Interpret the complexity of Cryptogames & Paleobotany
   - Illustrate the economic importance of Pteridophytes and Gymnosperms

3. Cell Biology and Angiosperm Embryology
   - Differentiate eukaryotic and prokaryotic organization of all
   - Describe the cellular organelles and inclusions
   - Identity the stage of mitosis and meiosis
   - Illustrate the structure and function of reproductive organs and changes associated with seed development

4. Plant Anatomy and Micro techniques
   - Understand the organization of meristem, tissue and relate them to their function
   - Describe the primary, secondary and anomalous growth in root and stem
   - Take C.S, L.S and understanding procedure of tissues

5. Taxonomy of Angiosperms

   - Explain the principals of systematic
   - Describe the distinctive features of selected families
   - Recall the economic value of the plants in the cited families

6. Plant Ecology & Phytogeography

   - Understand the concept of ecology and components of ecosystem
   - Identify different ecological groups
   - Know ecological succession different aspects of phytogeography. Biogeochemical cycle and remote sensing of vegetation

7. Bio chemistry & Bio Techniques

   - Acquire deep knowledge on structure and function of biomolucules
   - Develop skills in the use of techniques and methodology relavent to research project
   - Relate the concept and designs of metabolic reactions in biological systems.

8. Bio Physics & Plant Physiology

   - Understand the mechanism of respiration
   - Relate the role of movement of water and minarals in plants
   - Explain the mechanism and role of the photosynthesis
   - Relate the role of phytoharmones on growth and development of plants

9. Genetics & Evolution

   - Understand various aspects of inheritance, DNA, RNA and mutation
   - Appreciate the wonders of genes and its expression
   - Relate various theores of evolution such as Darwinism, Lamarkism etc.,

10. Microbiology

   - Describe and differentiate various types of microbes
   - Explain the structure, reproduction, growth, multiplication of bacteria and virus
   - Categorize the techniques used in identification, isolation and control of microbes

Skill papers

1. Biofertilizers, Biopesticides and Organic farming
   - Relate the various microbes used as biofertilizers and biopesticides
   - Identify their role in the maintenance of soil fertility
   - Illustrate various methods of mass cultivation of biofertilizers and composting methods.

2. Horticulture and Plant breeding
   - Know various aspects of horticulture
   - Develops skills in horticulture practices & techniques
   - Learn to construct kitchen garden, orchard, ornamental garden.

3. Post Harvest Technology of Crops
   - Produce fruit products like jam, jelly, squash, syrub etc.,
   - Extract essential oils from spice crops
   - Produce herbal cosmetics from medicinal and aromatic plants

4. Mushroom cultivation technology
   - Cultivate three types of edible mushrooms
   - Understand the utility of plant waste and animal waste
   - Develop the skills of swan production and mushroom recipe

5. Plant biotechnology and bio informatics
   - Define the principles of and applications of plant biotechnology
   - Describe the process involved in genetic engineering and plant tissue culture
   - Understand the basic concepts of Bio informatics

6. Herbal technology
   - Understand different system of medicines like Allopathy Sidha Ayurvedda and Unani etc
   - Identify different sources of drugs from plants
   - Relate drugs acting on different system of human body

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of Commerce

Program Specific Outcomes

Subject Name: Business Correspondence   Subject Code: UVTJL11

Co 1. To provide an overview of Prerequisites to Business Communication.

Co 2. To put in use the basic mechanics of Grammar. c)

Co 3. To provide an outline to effective Organizational Communication.

Co 4. To underline the nuances of Business communication.

Co 5. To impart the correct practices of the strategies of Effective Business writing.

Co 6. Differentiate between different methods of communication.

Co 7. Effective Communication in Business.

Subject Name: Introduction to Pc Software and Ms Office   Subject Code: CCAJC11

Co 1. To demonstrate understanding of the basic operations of a computer system;

Co 2. To explain the principles of operations for computer systems used in a particular application,
specifically in terms of the systems' hardware and software components;

Co 3. To use computer terminology correctly in the context of a particular application;

Co 4. To use computer applications software to solve problems;

Co 5. To discuss and comment on the social impact of the widespread use of computer technology;

Co 6. To automate simple tasks in specific applications.

Subject Name:Financial Accounting-I   Subject Code:CCAJC21

Co 1. This course will enable the students to combine practice and theoretical knowledge of financial
accounting.

Co 2. The students of this course will be active learners and develop awareness of emerging trends in
financial accounting,

Co 3. The course will provide decision making skills to the students in the financial analysis context,

Co 4. The students of this course will have the ability to identify and analyse financial accounting
problems and opportunities in real life situations.

Co 5. Demonstrate knowledge of each step in the accounting cycle.

Co 6. Use Generally Accepted Accounting Principles (GAAP) to record common business
transactions involving merchandise inventory, cash, and accounts receivable transactions.

Co 7. Use debit and credit accounting to record and adjust basic business transactions.

Co 8. Prepare multi-step income statements, classified balance sheets, and statements of retained earnings.

Co 9. Use basic financial statement ratio analysis to evaluate financial performance.

Co 10. Know and apply organizational internal control components.

Subject Name: Value Education   **Subject Code:**

Co 1. Full development of child's personality in its physical, mental, emotional and spiritual aspects.

Co 2. Inculcation of good manners and of responsible and cooperative citizenship.

Co 3. Developing respect for the dignity of individual and society.

Co 4. Inculcation of a spirit of patriotism and national integration.

Co 5. Developing a democratic way of thinking and living.

Co 6. Developing tolerance towards and understanding of different religious faiths.

Co 7. Developing sense of brotherhood at social, national and international levels.

Co 8. Evolving the evaluation criteria on value-education.

Subject Name: Insurance   **Subject Code: UVTJL21**

Co 1. Define the origin of insurance and its development up to the present time.

Co 2. Explain the basic elements of the insurance industry.

Co 3. Describe the nature of insurance and its mode of operation.

Co 4. Demonstrate an understanding of insurance terms and concepts.

Co 5. Explain the nature and main features of insurance.

Co 6. Analyze the main classes of insurance.

Subject Name: Business Application Programming   **Subject Code: CCAJC21**

Co 1. To Utilize the Program Development Cycle.

Co 2. To understand basic programming concepts.

Co3. To understand basic Object-Oriented Programming.

Co 4. To focus of this course is object-oriented computer programming using the C++ programming language.

Co 5. Utilizing character strings

Co 6. Utilizations of sequential data files

Co 7. Understanding of classes and objects

Co 8. Understanding of how to access databases within C++.

Subject name: Financial Accounting-II　　　　　**Subject Code: CCAJC22**

Co 1. This course will enable the students to combine practice and theoretical knowledge of financial accounting.

Co 2. The students of this course will be active learners and develop awareness of emerging trends in financial accounting,

Co 3. The course will provide decision making skills to the students in the financial analysis context,

Co 4. The students of this course will have the ability to identify and analyse financial accounting problems and opportunities in real life situations.

Co 5. Appreciate the need for negotiable instruments and procedure of accounting for bills honoured and dishonoured.

Co 6. Differentiate Trade bills from Accommodation Bills

Co 7. Understand the concept of Consignment and learn the accounting treatment of the various aspects of consignment.

Subject Name: Environmental Studies　　　　　**Subject Code: UESJD21**

Co 1. Acquire awareness about immediate/wider surroundings through lived experiences on various themes related to daily life for example Family, Plants, Animals, Food, Water, Travel, and Shelter etc.

Co 2. Nurture natural curiosity and creativity for the immediate surroundings.

Co 3. Develop various processes/skills e.g. observation, discussion, explanation, experimentation, logical reasoning, through interaction with immediate surroundings.

Co 4. Develop sensitivity for the natural, physical and human resources in the immediate environment.

Subject Name: Database Management System   Subject Code: CCADC31

Co 1. Describe the fundamental elements of relational database management systems

Co 2. Explain the basic concepts of relational data model, entity-relationship model, relational

database design, relational algebra and SQL.

Co 3. Improve the database design by normalization.

Co 4. Familiar with basic database storage structures and access techniques: file and page

organizations, indexing methods including B tree, and hashing.

Co 5. Understand the role of the database administrator

Subject Name: Financial Accounting - III   Subject Code: CCADC32

Co 1. The information is useful to those making investment and credit decisions.

Co 2. The financial reports are helpful in assessing future cash flows.

Co 3. The economic resources, the claims to those resources (liabilities), and the changes in those

resources and claims are clearly identified.

Co 4. To facilitate social functions and control.

Co 5. To provide information regarding accounting policies.

Subject Name: Business Statistics   Subject Code :CCADC33

Co 1. To develop the students ability to deal with numerical and quantitative issues in business

Co 2. To enable the use of statistical, graphical and algebraic techniques wherever relevant.

Co 3. To have a proper understanding of Statistical applications in Economics and Management.

Co 4. To describe data with descriptive statistics

Co 5. To perform statistical analysis

Co 6. To interpret the result of statistical analysis.

Co 7. Use simple/multiple regression models to analyse the underlying relationships between the

variables through hypothesis testing

Subject Name: COST ACCOUNTING   **Subject Code:CCADC34**

Co 1. To understand the basic concepts and processes used to determine product costs,

Co 2. To be able to interpret cost accounting statements,

Co 3. To be able to analyze and evaluate information for cost ascertainment, planning, control and decision making, and

Co 4. To be able to solve simple cases.

Co 5. Explain the concept and role of cost accounting in the business management of manufacturing and non-manufacturing companies.

Co 6. Identify and calculate different types of costs (direct, indirect, variable, and fixed costs).

Subject Name: Retail marketing   **Subject Code: CCADS31**

Co 1. Customer Satisfaction: Retailers know that satisfied customers are loyal customers.

Co 2. Acquiring the Right Products: A customer will only be satisfied if they can purchase the right products to satisfy their needs

Co 3. To understand the importance of merchandising planning, its forms and process.

Co 4. To identify changing trends in retail positioning.

Co 5. Thus an important of identify the products customers will demand, and negotiate with suppliers to obtain these products

Subject Name: Visual Programming   **Subject Name: CCADC41**

Co 1. A course provides the skills and knowledge required to use essential features and capabilities of Visual BASIC.

Co 2. It includes basic programming concepts, problem solving, programming logic, and the design of event-driven programming.

Co 3. Using Visual Basic's form designer to create user interfaces

Co 4. Writing Visual Basic code in modules and classes

Co 5. Creating dialogs, menus, windows and use Windows common dialogs

Co 6. Creating SDI and MDI applications

Co 7. Developing modular, reusable Visual Basic code and forms.

Subject Name: Banking Theory Law & Practice   **Subject Code: CCADC42**

Co 1. To give thorough knowledge of banking operations and make the Students aware of the Banking Law and Practice in India

Co 2. To gain knowledge about the origin of the bank and relationship between banker and customer

Co 3. To understand the function of resource bank of India, commercial bank. CRR-SLR-REBO Rate-revise repo rate

Co 4. To know the types, rules of crossing and endorsement

Co 5. To understand the duties, statutory production, paying bankers and collecting bankers

Co 6. To gain knowledge about the payment in due course, and concept of negligence

Co 7. To understand the various types of loans and advances

Co 8. To gain the types particular knowledge of E-Banking, E-Payment, ATM Card, biometric card EFT, ECS, E-Money-Digital cash.

Subject Name: Business Mathematics   **Subject Code:CCADC43**

Co 1. To provide college students with reinforcement of mathematical computations.

Co 2. Challenge the student to understand how to process and interpret information to arrive at logical conclusions to common business math applications.

Co 3. Develop proficiency in the application to solve business math problems.

Co 4. Understand the important role math plays in all facets of the business world.

Co 5. Understanding basic terms in the areas of business calculus and financial mathematics.

Subject Name: Financial Accounting – IV   **Subject Code:CCADC44**

Co 1. Profit for all the partners

Co 2. Partnership include bring together the skill and resources of multiple business owners to create a whole that is bigger and better than the parts.

Co 3. Survival in competition market

Co 4. Good services

Co 5. Gain more shares in market

Subject Name: International Trade   **Subject Code:CCADS41**

Co 1. General trade policy objectives have focused on reduced protection, achieving a more outward-oriented trade regime, increased market access for exports, and greater global integration, aimed at increasing economic efficiency, competitiveness, and export-led growth

Co 2. Standard international trade models universally consider maximizing the availability of inexpensive goods as the objective of international trade.

Co 3. They then go on to show that tariffs and other impediments to trade cause a loss of economic efficiency.

III B.Com (CA) (V, VI Semester)

Subject Name: Business Laws   **Subject Code: CCADC51**

Co 1. Explain the concept in business law with respect to foreign trade.

Co 2. Apply the global business law to current business environment

Co 3. Analysis the principle of International business and adopted by firm

Co 4. Integrate the concept of business law with foreign trade.

Subject Name: Financial Accounting – V   **Subject Code: CCADC52**

Co 1. To understand the accounting treatment for issued forfeiture, redemption, and reissue of shares and debentures.

Co 2. To prepare the underwriting pre and post incorporation account, acquisition merger. Internal and external reconstruction and liquidation of company

Co 3. To understand the accounting treatment of internal, external reconstruction and liquidation of company.

Co 4. To understand the need for valuation, different type of valuation of goodwill and shares

Subject Name: Income Tax Law and Practice   **Subject code: CCADC53**

Co 1. To give an understanding of the relevant provision of direct Tax code.

Co.2   To introduce practical aspect planning.

Co.3   To expose the students to the latest provision of Income Tax Act.

Co 4. Control of cyclical

Co 5. Non-Revenue objective

Co 6. To increase the revenue of Indian government. So that they can spend back on welfare of public country and pays salary to government employees.

Co 7. Taxation is used as an instrument of economic policy .It affect the total volume of Production, consumption, investment, choice of industrial location and techniques balance of payments distribution of incomes etc.,

Subject Name: Multimedia   **Subject Code:CCADC54**

Co 1. A Students will understand multimedia in respect to many application including business, schools, home, education, and virtual reality.

Co 2. A Students will understand the hardware and software needed to create projects using creativity and organization to create them.

Co 3. A Student will develop multimedia skills understanding the principal players of individual players in multimedia teams in developing projects.

Co 4. A Students will work with all aspects of images.

Co 5. A Students will work with all aspects of sound.

Subject Name: Export and Import Procedures and Documentation   **Subject Code: CCADS51**

Co. 1. To Femilarious students with the process of international

Customs clearance operations

Co.2. To form a base of policy frame work in international business

Co.3. To understand the procedure for export and import clearance

Co.4. To develop a Systematic methodology to handle export.

Subject Name: Environmental Studies   **Subject Code:VES8DS1**

Co 1. Acquire awareness about immediate/wider surroundings through lived experiences on various themes related to daily life for example Family, Plants, Animals, Food, Water, Travel, and Shelter etc.

Co 2. Nurture natural curiosity and creativity for the immediate surroundings.

Co 3. Develop various processes/skills e.g. observation, discussion, explanation, experimentation, logical reasoning, through interaction with immediate surroundings.

Co 4. Develop sensitivity for the natural, physical and human resources in the immediate environment.

Subject Name: Labour law   **Subject Code: CCADC61**

Co 1. The nature and scope of labour law.

Co 2. The rational of labour law in organization.

Co 3. The international labour in organization.

Co 4. Managing employee relationship at work.

Subject Name: Income Tax Law and Practice- II   **Subject Code: CCADC62**

Co 1. To give an understanding of the relevant provision of direct   Tax code.

Co 2. To introduce practical aspect planning.

Co 3. To expose the students to the latest provision of Income Tax Act.

Co 4. Control of cyclical

Co 5. Non-Revenue objective

Co 6. To increase the revenue of Indian government. So that they can spend back on welfare of public country and pays salary to government employees.

Co 7. Taxation is used as an instrument of economic policy .It affect the total volume of Production, consumption, investment, choice of industrial location and techniques balance of payments distribution of incomes etc.,

Subject Name: Internet and Web Technology   **Subject Code: CCADC63**

Co 1. To teach the basics involved in publishing content on the World Wide Web.

Co 2. This includes the 'language of the web'- HTML, the fundamentals of how the internet and the web function, a basic understanding of graphic production with a specific stress on creating graphic for the web.

Co 3. The general grounding introduction to more advanced topic such as programming and scripting.

Co 4. This will also express to the basic tools and application used in web publishing.

Subject Name: Value Education   **Subject Code: UVE8V61**

Co 1. Full development of child's personality in its physical, mental, emotional and spiritual aspects.

Co 2. Inculcation of good manners and of responsible and cooperative citizenship.

Co 3. Developing respect for the dignity of individual and society.

Co 4. Inculcation of a spirit of patriotism and national integration.

Co 5. Developing a democratic way of thinking and living.

Co 6. Developing tolerance towards and understanding of different religious faiths.

Co 7. Developing sense of brotherhood at social, national and international levels.

Subject Name: Ms Office and Tally   **Subject Code: CCADS62**

Co 1. To make the students familiar with Computer environment, Operating System and among students about applications of Internet in Commerce

Co 2. To create documents, Improve workflow, change page layout, and add advance formatting tables, images, hyperlinks, and watermarks in Microsoft Word

Co 3. To create worksheets, organize data, and create charts in Microsoft Excel

Co 4. To add basic objects and design elements to presentations create presentations with images and videos

Co 5. To instil the knowledge about accounting procedures, methods and techniques with practical approach to accounts writing by using software package

Subject Name: Information Technology   **Subject Code: CCADS61**

CO 1. How to use the computer as a business and personal tool through the use of applications software.

Co 2. Students will learn to use the Internet.

Co 3. Solve business problems through the use of information systems and technology.

Co 4. Design and implement information systems.

Co 5. To introduce cutting-edge technologies and trends such as those in the areas of wireless multimedia, computer security, digital audio, and high-performance computing.

Co 6. Demonstrate a comprehensive understanding of the broad themes in Information Technology.

Co 7. Apply ethical decision making in the development, implementation, and management of IT systems.

Subject Name:Commerce Practical   **Subject Code: CCADC62**

Co 1. To Preparation of Charts, Models, News Letters by students for display

Co 2. To inculcate writing skills and business correspondence

Co 3. To create awareness of law and legalizations related to commerce and business

Co 4. To acquire practical skills related with banking and other business.PP

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

Department of Business Administration

Program Name: Business Administration

Program Specific Outcomes

On successful completion of Business Administration Program, the students would be able to

PSO 1: Understand the basic concepts involved in management studies.

PSO 2: Share the ideas and concept to match it towards organizational need.

PSO 3: Apply the knowledge in orgnisation to solve day to day problems.

PSO 4: Think innovative approaches tosolving problems in different domains.

PSO 5: Follow ethics in implementing the decision in an organisation.

PSO 6: Collaborate with team members in developing synergy effect.

PSO 7: Gain confidence to appear for competitive examinations like,,CAT,MAT,,GMAT,UGC –
NET, GATE,SET etc.

Course Outcomes

Semester: I (Odd)

CourseCode:UVK911   **Course Name: Vanihakadidhangal**

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

CO1 : outline the general principles of business communication

CO2 : choose persuasive business terms for effective communication

CO3 : analyse the various types of conventional and digital communication

CO4 : draft effective business correspondence with brevity and clarity for various business context

Course Code:ABAJC11   **Course Name: Principles of Management**

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of management.

CO2: explain and summarize the role of principles and elements of management in business.

CO3: comprehend, analyze, and infer the various principles, structures in businessorganisations.

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of elements and functions of management in business situations.

CO5: acquire and keep abreast of the key elements of management through self-paced and self-directed learning.

CourseCode:ABAJC12   **Course Name: Financial Accounting**

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of Accounting.

CO2: explain and summarize the role of principles and elements of Accounting in business.

CO3: comprehend, analyze, and infer the various principles of structures of Accounting in business organisations and prepare basic accounting statements.

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of Accounting Information in business situations.

CO5: acquire and keep abreast of the concepts in Accounting self-paced and self-directed learning.

CourseCode:ABAJA11   **Course Name: Business Economics**

Upon Completion of the course, the students will be able to

CO1: outline the concepts of general and global business environment

CO2: analyses the economic environment of business

CO3: examine the role of MNCs for the economy and impact of LPG on the economy

CO4: appraise the technological environment of business

CO5: build an environment analysis of business and elaborate TRIPS, TRIMS and GATS

CourseCode:UVEJV11Course Name: Value Education

Upon Completion of the course, the students will be able to

CO1: Realizes the basic ethics in life as a human being.
CO2: Understand and accept the importance of harmonious living in a diverse society.
CO3: Understand and appreciate the need and importance for Value Based Living.
CO4: Set realistic goals in life and start achieving towards them.
CO5: Comprehend the value of human life in the society and adopt the local culture and Customs.
CO6:addresses subtle questions of life and relates to day to day living.

Semester: II (Even)

CourseCode:UVKJL21 **Course Name: Aluvalaga Melanmai**

Upon Completion of the course, the students will be able to
CO1: recollect and understand the fundamental terms, principles and elements of Office Management

CO2: explain and summarize the role of principles and elements of Office Management in business

CO3: comprehend, analyze, and infer the various principles and structures of Office in business organisations

CO4: formulate, judge and make decisions individually and in groups the factual, conceptual or creative value of elements and functions of Office Management in business situations

CO5: acquire and keep abreast of the key elements of Office Management through selfpaced and self-directed learning

CourseCode:ABA8C21 **Course Name: Business Environment**

Upon Completion of the course, the students will be able to

CO1 : understand the concepts related to environmental economics

CO2 : identify the global environmental problems

CO3 : apply the environmental theories in solving environmental issues

CO4 : sensitize the importance of environmental quality and the role of stakeholders to improve the environmental quality

CO5 : discuss the environmental policies and suggest measures

CourseCode: ABA8C22   **Course Name: Cost Accounting**

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of Cost Accounting

CO2: explain and infer the principles and elements of Costing in business situations

CO3: comprehend, analyze, and infer the various principles of Costing in business organisations and prepare Cost Statements

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of Cost elements and functions in business situations

CO5: acquire and keep abreast of the concepts of Cost Accounting in management through self-paced and self-directed learning

CourseCode:ABA8A21Course Name: Money and Banking

Upon Completion of the course, the students will be able to

CO1: explain the concepts related to money

CO2: identify the various monetary standards particularly in India

CO3: compare various theories of money and price

CO4: evaluate the factors determining the demand for money and supply of money

CO5: compute the value of money by applying the quantity theory of money

Course Code:ABA8N21   **Course Name: Fundamentals of Entrepreneurship**

Upon Completion of the course, the students will be able to

CO1: recall the concepts of entrepreneurship and its importance to Indian economy.

CO2: demonstrate the role of EDPs and MSMEs

CO3: analyze the necessary qualities to become an entrepreneur and device strategies to overcome the problems of women and rural entrepreneurs.

CO4 : appraise the need of assistance rendered by the various institutions to entrepreneurs

CO5 : formulate a business plan and feasibility study for starting MSME

Semester: III (Odd)

CourseCode: ABAGC31Course Name: Business Law-I

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental legal terms in Contract, Agency, Partnership, Sale of Goods and Negotiable Instruments

CO2: explain and summarize the role of legal provisions in business

CO3: comprehend, analyze, and infer the various laws governing business organisations

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of legal protection in business situations

CO5: acquire and keep abreast of the legal provisions in business situations through selfpaced and self-directed learning

CourseCode: ABAGC32Course Name: Banking Law & Practice

Upon Completion of the course, the students will be able to

CO1 : understand the basic concepts of banking and E-banking

CO2: make use of the banking products

CO3 : analyse the role of banker regarding collection and payment

CO4 : evaluate the E- banking services

CO5 : construct the remedies for minimizing NPAs

CourseCode:ABAGC33   **Course Name: Computer Application in Business-I**

Upon Completion of the course, the students will be able to

CO1: Explain the concepts of computer and office packages.

CO2: Identify the operations of Ms-word,Ms- Excell and Ms-PowerPoint.

CO3: Ability to handle various operations in those software's.

CourseCode: ABAGC34Course Name: Entrepreneurship

Upon Completion of the course, the students will be able to

CO1: recall the concepts of entrepreneurship and its importance to Indian economy.

CO2: demonstrate the role of EDPs and MSMEs

CO3: analyze the necessary qualities to become an entrepreneur and device strategies to
     overcome the problems of women and rural entrepreneurs.

CO4 : appraise the need of assistance rendered by the various institutions to entrepreneurs

CO5 : formulate a business plan and feasibility study for starting MSME

 CourseCode:ABAGA31Course Name: Business Statistics

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles of data presentation and formulae
in Statistics

CO2: explain and solve simple statistical problems in central tendencies, correlation, and regression
and infer the results

CO3: comprehend, analyze, and infer the various implications Statistics in business situations

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or
creative value of data in business situations

 CO5: acquire and keep abreast of the concepts in Statistics through self-paced and selfdirected
learning

Course Code:ABAGS32 Course Name:Personality Development

Upon Completion of the course, the students will be able to

CO1: enhance the interpersonal skill by making themselves easy to move with their peer and other fellow worker in organization.

CO2: ability to make effective presentation.

Semester: IV (Even)

CourseCode: ABAGC41Course Name: Business Law-II

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental legal terms in Companies Act, Factories Act, Workmen Compensation Act, Employee Gratuity and Provident Fund Act, Industrial Disputes Act, Employee State Insurance Act, and Trade Union Act

CO2: explain and summarize the role of legal provisions in Industrial context

CO3: comprehend, analyze, and infer the various laws governing Industrial organisations

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of legal protection in Industrial situations

CO5: acquire and keep abreast of the legal provisions in Industrial situations through selfpaced and self-directed learning

CourseCode: ABAGC43Course Name: Computer Application in Business-II

Upon Completion of the course, the students will be able to

CO1: Identify the operations of Ms-access

CO2: Create database and ability to retrieve those data.

CO3: Evaluate the internet applications in business.

CO4: Discuss the various models of e-commerce.

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CourseCode: ABAGC42Course Name: Marketing Management

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of Marketing Management

CO2: explain and summarize the role of principles and elements of Marketing in business

CO3: comprehend, analyze, and infer the various principles of structures in Marketing systems

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of elements and functions of Marketing Management in business situations

CO5: acquire and keep abreast of the key concepts of Marketing through self-paced and self-directed learning

CourseCode: ABAGC44Course Name: OrganizationalBehavior

 Upon Completion of the course, the students will be able to
CO1: recollect and understand the fundamental terms, principles and concepts of behavioural issues in an organisational context

 CO2: explain and summarize key individual, group, and organisational processes and dynamics in business

CO3: comprehend, analyze, and infer the various principles of leading and motivating individuals and groups in organisations

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of elements and functions of organizational behaviour in business situations

CO5: acquire and keep abreast of the concepts of organisationalbehaviour through selfpaced and self-directed learning

CourseCode: ABAGS41Course Name: Business Mathematics

Upon Completion of the course, the students will be able to

CO1 : recall the price and income theories and mathematically explain the behaviour   of consumers, firms and market

CO2 : make use of mathematical techniques like differentiation, integration, LPP in solving market issues

CO3 : assume the scope of mathematical economics in the research field

CO4 : interpret the output related to the demand, production, market and input-output analyses

CO5 : optimize the level of utility, cost, revenue and profit

Course Code: ABA8S41   Course Name: Body language and interview skills

Upon Completion of the course, the students will be able to

CO1: understand the concept of personality and its determinants.
CO2: ability to improve the perception and self-confidence.
CO3: make use of stress management techniques.

Course Code: ABA8S42   Course Name: Salesmanship

 Upon Completion of the course, the students will be able to

CO1: ability to understand the steps in developing salesmanship skills.
CO2: recollect the quality of good salesman and cultivate those skills.
CO3: judge and understand the use of time management techniques.

Semester: V (Odd)

Course Code: ABAGC51   Course Name: Operations Management

 Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of Operations Management

CO2: explain and summarize the role of principles and processes of Operations Management in business

CO3: comprehend, analyze, and infer the various principles of structures of Operations Management in business organisations

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of elements and functions of Operations Management in business situations

CO5: acquire and keep abreast of the key developments of Operations Management through self-paced and self-directed learning

Course Code: ABAGC52   Course Name: Human Resource Management

Upon Completion of the course, the students will be able to

CO1: recollect and understandthe importance of human resource in an organization.

CO2: ability to understand and effective use of workforce in an organization.

CO3: acquire knowledge on directing the human resource towards organizational goal.

CO4: analyze, judge and make decisions on human resource issues among the workforce.

Course Code: ABAGC53   Course Name: Advertising Management

Upon Completion of the course, the students will be able to
CO1: recollect and understand the fundamental terms, principles and elements of Advertisement Management

CO2: explain and summarize infer the role of principles and forms of Advertisement Management in business

CO3: comprehend, analyze, and infer the various principles of structures of Advertising and prepare advertisement copies

CO4: formulate, judge and make decisions individually and in groups the factual, conceptual or creative value of elements and functions of Advertisement Management in business situations

CO5: acquire and keep abreast of the key issues of Advertisement Management through self-paced and self-directed learning

Course Code: ABAGC54   **Course Name: Financial Management**

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of Financial Management, Capitalisation, Current Asset Management, and Investment Decisions

CO2: explain and summarize the role of principles and elements of the above mentioned Financial Management tools in business situations

CO3: comprehend, analyze, and infer and work out problems in the above mentioned Financial Management tools

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of Financial Management elements and functions in business situations

CO5: acquire and keep abreast of the concepts of Financial Management in business organisations through self-paced and self-directed learning

Course Code: ABAGA51   **Course Name: Research Methodology**

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of Research

CO2: explain and summarize the role of principles and elements of Research in business

CO3: comprehend, analyze, and infer the various principles of structures of Research in business organisations

CO4: formulate, judge and make decisions individually and in groups on the factual, conceptual or creative value of elements and functions of Research in business situations

CO5: acquire and keep abreast of the key elements of Research through self paced and self-directed learning

Course Code:ABAGS51Course Name: Leadership & Communication Skills

Upon Completion of the course, the students will be able to

CO1: understanding the concept of leadership.
CO2: evaluate the importance of communication and us of communication skills wisely.
CO3:ability to speak in group and plan for the public speech.

Course Code:UES8D51   **Course Name: Environmental Science**

 Upon Completion of the course, the students will be able to

CO1: ability to understand ecosystem, energy flow, food chain, food web and Biogeochemical
cycles.
CO2: Knowledge related to drinking and driving, road safety rules and traffic signals
CO3: awareness on disaster management
CO4: understandability on green infrastructure, education, health,etc,.

Semester: VI (Even)

Course Code: ABAGC61   **Course Name: Retail Management**

Upon Completion of the course, the students will be able to

CO1 : outline the retail formats

CO2 : apply the promotional mix methods in retail industry

CO3 : examine retail brands and private label strategies

CO4 : evaluate the retail customer strategies

CO5 : develop skills for organising retail mall.

Course Code: ABAGC62   **Course Name: Strategic Management**

Upon Completion of the course, the students will be able to

CO1: recollect and understand the fundamental terms, principles and elements of Strategies and Strategic Management

CO2: explain and summarize the role of principles and elements of Strategic Management in business.

CO3: comprehend, analyze, and infer the various principles of structures of Strategic Management in business organisations

CO4: formulate, judge and make decisions individually and in groups the factual, conceptual or creative value of elements and functions of Strategic Management in business situations

CO5: acquire and keep abreast of the key concepts of Strategic Management through selfpaced and self-directed learning

Course Code: ABAGC63   **Course Name: Services Marketing**

Upon Completion of the course, the students will be able to

CO1: Outline the concept of Services marketing.

CO2: Identify the factors influencing consumer behavior and growth of service sectors.

CO3: Assess service policy and services marketing strategies

CO4: Determine the marketing mix in services.

CO5: Discuss the sector services

Course Code: ABAGC64 Course Name: Total Quality Management

 Upon Completion of the course, the students will be able to

CO1: explain the concepts of Quality, bench marking and quality certifications

CO2: experiment with the potential areas of bench marking and the requirements for its successful implementation

CO3: analyse the need of cultural changes and considerations for implementation of   Total Quality Management

CO4: evaluate the significance and applications of tools and techniques of TQM

 CO5: formulate a modern business philosophy and adapt to quality certifications

Course Code: ABAGS61 Course Name: Employability Skills

 Upon Completion of the course, the students will be able to

CO1: ability to understand the use and importance of soft and hard skill.
CO2: recollect and understand the level of the students' soft and hard skill.
CO3: ability to develop both skills.
CO4: acquire basic knowledge on dressing skill

Course Code: UVE8V61 Course Name: Value Education

 Upon Completion of the course, the students will be able to

 CO1: Realizes the basic ethics in life as a human being.
 CO2: Understand and accept the importance of harmonious living in a diverse society.
 CO3: Understand and appreciate the need and importance for Value Based Living.
 CO4: Set realistic goals in life and start achieving towards them.
 CO5: Comprehend the value of human life in the society and adopt the local culture and
       Customs.
 CO6: It directly addresses subtle questions of life and relates to day to day living

CARDAMOM PLANTERS' ASSOCIATION COLLEGE BODINAYAKANUR

Department of MA History

Program Name: M.A (History)

Program Specific Outcomes

On successful completion of **M.A., History** Programme , the students would be able to

PSO 1: Understand the concepts involved in historical nature.

PSO 2: Share the new ideas and the thoughts they have learnt.

PSO 3: Apply the knowledge in society to solve real world problems.

PSO 4: Think of new approaches for solving problems in different historical fields.

PSO 5: Collaborate with the subject expert members in developing ideas concern.

PSO 6: Gain confidence to appear for competitive examinations conducted by State and Union

Public Service Commissions, Staff Selection Commission.

PSO 7: Gain confidence to appear for competitive examinations like UGC – NET, SET etc.

COURSE OUTCOMES

SEMESTER: I

Subject Name: State and Society in Tamilnadu upto A.D. 1565
Subject Code: THSJC11

In this course the students will

CO1:   Gain Knowledge about the historical significance in ancient Tamilnadu.

CO2:   Understand the various theories of Kalabhras' homeland and the impacts of their rule

CO3:   Acquire knowledge about the Age of Pallavas, Pandyas and their contribution to Art and Architecture

CO4:   Examine the historical and social background of the Cholas and their achievements to Art and Architecture

CO5:   Getting the knowledge of state and society in the age of Muslim invasions in Tamil Country.

Subject Name: Socio-Economic History of India upto A.D.1206   Subject Code: THSJC12
In this course the students will

CO1:   Acquire knowledge about the uniqueness of the sources of ancient India and Indus valley civilization

CO2:   Study about Socio-economic and religious condition of the Vedic society

CO3:   Getting the knowledge about the Mahajanapadas in ancient India.

CO4:   Gain knowledge about the causes for the spread of Buddhism

CO5:   Understand the development of Rise of Magada and Mauryan Empires

CO6:   Understand the purpose of Growth of Art, architecture and sculpture

CO6:   Gain knowledge about the social and economic system under Gupta and Vardhana Dynasties and accounts of foreigners

Subject Name: History of the USA (1776 to 1865 AD)   Subject Code: THSJC13

In this course the students will

CO1:   Learn the colonial administration in America.

CO2:   Understand the causes and consequences of the American war of Independence and civil way

CO3:   Acquire knowledge about the Republican administration

CO4:   Know the causes for the Territorial expansion.

Subject Name: International Relations from A.D.1914 -1945   **Subject Code: THSJC14**
In this course the students will

CO1:   Acquire knowledge about the uniqueness of the historical significance of international politics

CO2:   Study about the basic knowledge about development of America and participation of First World war.

CO3:   Gain the knowledge about the League of Nations.

CO4:   Understand the new ideology of Nazism and Fascism and formation of alliances

CO5:   Study about the United Nations Organisaions

CO6:   Understand the purpose of Growth of Art, architecture and sculpture

CO6:   Gain knowledge about the social and economic system under Gupta and Vardhana Dynasties and accounts of foriegners

Subject Name: Indian Art and Architecture   **Subject Name:THSJT12**
In this course the students will

CO1:   Examine the uniqueness of the early Indian architecture - Harappan, Mauryas, Buddhist and Jains.

CO2:   Study about the basic knowledge about the art and architecture of Sungas, Kanvas, Sadavaganas and Kushanas

CO3:   Understand the architecture of Pallava, Cholas and Vijayanagar rulers and Nayaks art and architecture

CO4:   Gain the knowledge about Indo-Turkish Architecture

CO5:   Study about the Mughal Art and architecture

SEMESTER: II
Subject Name: State and Society of Tamil Nadu from A.D. 1565 -20000
Subject Code: THSJC21

In this course the students will

CO1:   Acquire knowledge on the history of Tamil Nadu.

CO2:   Gain knowledge about the socio-economic conditions under Nayak rulers of Madurai, Tanjore and Gingee.

CO3:   Learn the revenue and cultural contributions of the Marathas, Maravas of Ramnad and Sivaganga

CO4:   Understand the historical significance of British land revenue under the company rule

CO5:   Examine the knowledge about Social reform movement in Tamil Nadu.

CO6:   Obtain the knowledge about administration of DMK and AIADMK

Subject Name: Socio-Economic History of India A.D.1206 - 1857   Subject Code: THSJC2

In this course the students will

CO1:   Obtain knowledge about the Society and Economic policies under Sultanate

CO2:   Study about Socio-economic and religious condition of the Vijayanagar Empire

CO3:   Receiving the knowledge about the Socio-Economic condition under Mughals.

CO4:   Gain knowledge about Society under Company's administration and socio-reform movement in India.

CO5:   Understand the education system of Muslim and Company Rule

Subject Name: History of United States of America. from 1865-1945
Subject Code: THSJC23

In this course the students will

CO1:   Understand the importance of America's emergence as world power

CO2:   Know the various programmers of different Presidents.

CO3:   Gain the knowledge about Rise of Imperialism

CO4:   Examine the knowledge about USA and the World War I

CO5:   Understand the importance of Franklin D. Roosevelt administration and World War II

CO6:   Know the Movement for Rights

Subject Name: International Relations from A.D.1945 -2000   Subject Code: THSJC24

In this course the students will

CO1:   Acquire knowledge about the uniqueness of the historical significance of international politics

CO2:   Study about the basic knowledge about Cold war

CO3:   Gain the knowledge about the United Nations Organisations.

CO4:   Understand the Global Terrorism

CO5:   Study about the growth of Asian, Afrrican Nations and organisation of African Unity

CO6:   Understand the purpose of International Associations of Commonwealth, NAM, SAARC, OPEC, IMF and Foreign Policies of India, USA, Russia and China

Subject Name: Museology   **Subject Code: THSJT22**
In this course the students will

CO1:   Acquire knowledge about the uniqueness of the Museum movement and Classification of Museums

CO2:   Study about the basic knowledge about Museum Architecture, Collection and Exhibition of Museum

CO3:   Gain the knowledge about the Conservation and preservation

CO4:   Understand the Museum administration

CO5:   Study about the Educational programmes and museum research

CARDAMOM PLANTERS' ASSOCIATION COLLEGE
BODINAYAKANUR

PG & Research Department of Chemistry

<div align="center">

M.Sc -Chemistry

Programme specific Outcome

</div>

1. The syllabus of M.Sc Chemistry has been designed in such a way that the students gain the required knowledge of confidence and skill which would enable to enhance upgrade attitude and competing skills.

2. Moreover peer-team teaching learning methodology would eradicate his/her shyness and fear psychosis, further, the programme is inculcate the skill-basedknowledge which would help in their placement in good academics and research career.

<div align="center">

Course outcome

Semester – I

</div>

ECHJC11: Introduction to organic reactions

- Learn SN1, SN2 and SNi Mechanism and stereochemistry.

- Solve the elimination problems.

- Distinguish between type of addition, elimination and substitution reaction.

- Learn E and Z nomenclature in C, N, S, P containing compound ,Stereo chemical principal, enantiomeric relationship R and S.

ECHJC12: Chemical bonding, Solid sate Metallurgy and inorganic polymer

- Understands the background of bonding forces

- Appreciates the importance of various theories in bonding

- Learns the chemistry basis of solid state

- Gains the information about the structures of silicates and caged compounds

- Estimates the importance of extractive metallurgy

ECHJC13: Thermodynamics, Chemical Equilibrium and Elecrochemistry

- Understands the various theories of electrolytic conductance

- Recognizes the dynamics of electrode reaction

- Learns the classical status of thermodynamics

- Appreciates the fundamentals of molecular thermodynamics

- Estimates the basis of chemical equilibrium

ECHJT11: Medicinal Chemistry

- Gains the importance of medicinal chemistry

- Appreciates the role of antibiotics in everyday life

- Acquires the usage of therapeutic agents

- Validates the crucial role of therapeutic agents

ECHJT12: Biochemistry

- Gains knowledge about the enzymes

- Study about the generation and storage of metabolic energy

- Role of various elements in metalloprotiens

- Monitoring the sutures of DNA and RNA using various techniques

ECHJC2P: Inorganic Qualitative and quantitative analyses- Practical

- Determines the procedure for semi micro analysis of inorganic salt mixture

- Understanding the procedure for semi micro qualitative analysis

- Estimates the accurate analytical procedure of analysis

- Appreciates the procedure for inorganic analysis

- Learns the steps involved in the complex formation process

ECHJC2Q: Organic preparation and Qualitative and Quantitative analyses – Practical

- Learns principle of organic estimation

- Gains the procedure for organic separation and derivation

- Understands the method of organic preparation

- Develops the various routes for recrystallization

SEMESTER – II

ECHJC21: Stereochemistry and organic reactions

- Perceives the concept of conformational analysis

- Visualizes the aromatic electrophilic substitution mechanism

- Analyses the cruciality of the stereochemical process

- Study about the structure stereochemistry and synthesis of terpenes

ECHJC22:Co-ordination, Organometallic and Bioinorganic chemistry

- Learns the structure and properties of coordination compounds

- Analyses the reaction pathways of complex formation

- Explain VBT, CFT and MOT of co-ordination complexes.

- Validates the role of bioinorganic chemistry in every day action

- Appreciates the vibrant role of catalysts in chemical reaction

ECHJC23: Group theory and spectroscopy

- Validates the theoretical background of rotational spectra

- Analyses the physical approach of IR and Raman spectra

- Gains knowledge about NQR and ESR spectra

- Encompasses the symmetrical utility of molecules

ECHJT21: Computer applications in Chemistry

- Understanding the basic concepts of communication systems

- Gains knowledge about internet and web pages

- Application of internet into chemistry

- Study of VB and other Language forms

ECHJT22: Industrial Chemistry

- To study the principle of chmical technology

- To know about the raw materials and energy used for chemical industry

- To understand the process involved in small scale industry

- To study the safety measures of industries

ECHJC2P: Inorganic Qualitative and quantitative analyses- Practical

- Determines the procedure for semi micro analysis of inorganic salt mixture

- Understanding the procedure for semi micro qualitative analysis

- Estimates the accurate analytical procedure of analysis

- Appreciates the procedure for inorganic analysis

- Learns the steps involved in the complex formation process

ECHJC2Q: Organic preparation and Qualitative and Quantitative analyses – Practical

- Learns principle of organic estimation

- Gains the procedure for organic separation and derivation

- Understands the method of organic preparation

- Develops the various routes for recrystallization

- Identifies the way for identification of components

SEMESTER – III

ECHJC31: Organic spectroscopy and natural products

- To study UV, IR and NMR spectroscopy.

- Discuss different types of rearrangement reactions.

- Determine structure of compound by spectroscopic methods

- To study alkaloids and terpinoids with their properties and application.

ECHJC32: Inorganic spectroscopy, nanochemistry and f-block element

- Determines the structure of complex using electronic spectra

- Employs the IR, Raman and Mass bauer analytical tools for structural elucidation

- Understands the magnetic properties by NMR and ESR spectra

- Validates the inorganic molecular rearrangements

- Study the electronic configuration of lanthanides and actinides.

ECHJC32: Quantum, Nano and Macromolecular Chemistry

- Understands the importance of quantitative mechanics in electron filling

- Perceives the postulates of quantum chemistry

- Applies the wave mechanics for for determining atom structure

- Study about the instrumentations involved in nanochemistry

- Visualizes the macro molecular structure

ECHJN31: Chemistry for competitive examinations

- To enhance the knowledge to get pass in various competitive examinations

- To understand the basics of chemistry

- To study the impact of chemistry in environment

- Application of chemistry in daily life

ECHJN31: Environmental Science

- Learns basics of Environment

- Gains in-depth knowledge about air pollution, water pollution and soil pollution

- To understand the various instrumentation techniques involved in the analysis of pollution

ECHJC4P Coductometric and potentiometric titrations and kinetic, adsorption and spectral measurements - practical

- Gains the procedure for conductometric determination

- Learns holistic method of surface adsorption

- Experiments the kinetics of chemical reaction

- Appreciates the importance of potentiometric methods

- Understands the sensitivity of pH metric titration

ECHJC4Q Project/Review of recent Aspects of chemistry-Project Viva-Voce

- Gains hands on various analytical instruments (research)

- Learns the steps involved in solving a problem

- Understands the formatting of table work

- Enters in the first step of research aptitude

- Visualizes the steps of project work presentation

SEMESTER – IV

ECHJC41: Biomolecules, Rearrangements and synthetic mehods

- Study of carbohydrates: structure of pyronose, furanose, hexoes and peptides

- Gains knowledge about cycloaddition and photosensitization reactions

- Learns mechanism of rearrangement reactions

- Understands principles of green chemistry

- Appreciates the importance of solvent free synthesis

ECHJC42: Nuclear chemistry, Elecroanalytical and Thermal methods

- To introduce the muclear and analytical chemistry aspects, data analysis and computers in chemistry

- Ensures the students to understand the structure of nucleus, nuclear fission and fusion, radioactivity of isotopes, electroanalytical, thermoanalytical and spectroanalytical methods.

- Gains knowledge of computers in chemistry, internet, browsing and searching a website.

ECHJC43:Chemical kinetics, Surface, Biophysical and Photochemistry

- Learns about the theories of reaction rates

- Study about the chain reactions

- Explains about the fast reaction and enzyme catalysis

- Gains the potential about photo and radiation chemistry

ECHJT41: Polymer Chemistry

- Understands the classification of polymers

- Learns the chemical background of individual polymers

- Determines the various uses of polymers

- Analyses the different types of polymerization process

ECHJT42:Introduction to nanosciences

- Provides in-depth knowledge about the structure of nanmaterials

- Explains about the synthesis methods of nanomaterials

- Visualises the principles of instrumentations

- Gains knowledge about the optical properties of nanomaterials

ECHJC4P: Coductometric and potentiometric titrations and kinetic, adsorption and spectral measurements - practical

- Gains the procedure for conductometric determination

- Learns holistic method of surface adsorption

- Experiments the kinetics of chemical reaction

- Appreciates the importance of potentiometric methods

- Understands the sensitivity of pH metric titration

ECHJC4Q: Project/Review of recent Aspects of chemistry-Project Viva-Voce

- Gains hands on various analytical instruments (research)

- Learns the steps involved in solving a problem

- Understands the formatting of table work

- Enters in the first step of research aptitude

- Visualizes the steps of project work presentation

M.Phil & Ph.D Chemistry

The perceive knowledge on basic research, scientific literature searching and scientific documentation

1. To acquire from nature to research laboratory and perceive fundamentals of isolation and purification techniques
2. To illustrate the role of different principles of chemistry in the development of computational chemistry
3. To make use of instrumental knowledge to problem solving and real-time academic and industrial applications.
4. To organize the laboratory infrastructure, facilities and practice scientific documentation and scientific ethics.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE BODINAYAKANUR

Department of M.Sc Computer Science

Programme Name: M.Sc(Computer Science)

Program Specific Outcomes

On successful completion of M.Sc (Computer Science) programme
PSO1: Post Graduate Students will demonstrate in-depth knowledge in one of the offered concentration areas.

PSO2: Students will demonstrate a breadth of knowledge in computer science, as exemplified in the areas of system, theory and software development.

PSO3: Students will demonstrate ability to conduct a research or applied Computer Science project, requiring writing and presentation skills which exemplify scholarly style in computer science.

Course Outcomes

Semester: I (Odd)

Subject Code : ECSGC12   **Subject Name: Advanced Java Programming**

Upon Completion of the course the students will be able to

CO1: Deepen your Knowledge of Advanced features of the java language.   Be familiar
     with AWT component classes ,swing component classes and other swing controls
CO2: To understand the network concepts (client/server, socket)in java
CO3: Introducing basic steps in java database connectivity applications and working with
     metadata
CO4: Understanding the concepts of servlets and JSP
CO5: Developing web based programming using servlets and JSP.

Subject Code : ECSGC13   **Subject Name: Data structures and Algorithms**

CO1:To impart the basic concepts of data structures and algorithms
CO2: Be familiar with advanced data structures such as balanced search trees, hash tables,
     priority queues, and disjoint set data structure.
CO3:Be familiar with some graph algorithms such as shortest path and minimum spanning
     Trees.
CO4:To understand basic concepts of traversal and search techniques
CO5: Understand the backtracking, branch and bound algorithms for knapsack problem,
     queens problem and traveling salesperson efficiency considerations.

**Subject Code : ECSJC14Subject Name: Data Communication
and computer Networks**

Upon Completion of the course the students will be able to

CO1: Understand a broad range of computer networks and data communication
     technologies.
CO2: Be equipped with the basic knowledge of data communication fundamentals.
CO3:Understand circuit switching , packet switching technologies and routing in switched
     networks
CO4:Be able to calculate transmission ,propagation , and queuing delays
CO5: Be able to apply and implement different types of addressing   and routing
     techniques.
CO6: Understand major internet applications and network management.

Subject Code : ECSJC1P   Subject Name: Advanced Java Programming lab

Upon Completion of the course the students will be able to
CO1: To teach the students basics of JAVA programs and its execution.
CO2: To teach the students the differences between C++ and Java programming.
CO3: To make the students learn concepts like packages and interfaces.
CO4: To make the students understand life cycle of the applets and its functionality.
CO5: To make the students understand the usage until package.
CO6: To teach the student, to develop java programs using interfaces.

Subject Code : ECSJC1Q   Subject Name: Data Structures and Algorithms lab

Upon Completion of the course the students will be able to
CO1:To understand how various data structures can be classified
CO2:To understand the most commonly used, basic data types and data arrays
CO3:To understand the characteristics and mechanisms of problem-oriented data structures used to solve specific problems
CO4:And also how to use a basic data structure for program implementation

Semester: III (Odd)

Subject Code : ECSGC31Subject Name: Digital Image Processing
Upon Completion of the course the students will be able to
CO1:To study the fundamental concepts in digital image processing and components of digital image processing
CO2: Be exposed to image compression and segmentation techniques
CO3: Be familiar with image transformation and spatial filters.
CO4:Understanding the concepts of colour image processing ,wavelets and multiresolution processing
CO5:Be familiar with morphological image processing and object recognition

Subject Code : ECSGC32Subject Name: Soft Computing
Upon Completion of the course the students will be able to

CO1: Introduce students to soft computing concepts and techniques and foster their abilities in designing and implementing soft computing based solutions for real-world and engineering problems.
CO2: Explain the students about Artificial Neural Networks and various categories of

ANN.
CO3: Introduce students to fuzzy systems, fuzzy logic and its applications.
CO4:Introducing the basic concepts of genetic algorithm ,and its applications
CO5:To understand the swarm intelligence systems, and ant colony optimization algorithm for TSP

Subject Code : ECSGT33Subject Name: Internet of Things
Upon Completion of the course the students will be able to

CO1: To assimilate the concept of internet of things.
CO2: To gauge the potential of IOT focusing on the IOT applications.
CO3: To familiarize with devices and technologies that can be employed to realize IOT.
CO4: To dejargonise the terms of IOT.
CO5: To understand the concepts of IOT physical servers and clouds offerings.

Subject Code: ECSGN31   **Subject Name: Information technology
                                              and Data compression**

Upon Completion of the course the students will be able to
CO1: To understand the basic components of computer and memory organization.
CO2: To understand database management concept.
CO3: Introduce students to basic applications, concepts, and techniques of DataCompression.
CO4: To develop skills for using recent data compressionssoftware to solve practical problemsin varietyof disciplines.
CO5: To gain experience doing independent study and research.

Subject Code : ECSGC3PSubject Name: Soft Computing Lab
Upon Completion of the Subject the students will be able to
CO1: To understand the basic concept of Soft computing models and Pattern recognition tasks.
CO2: Develop the skills to gain a basic understanding of neural network and fuzzy logic.
CO3: Understand appropriate learning rules for each of architecture and learn several neural network concepts and its application.

Subject Code : ECSGC3QSubject Name: Digital Image Processing Lab
CO1: Understand differences between computer vision and image processing.
CO2: To know the basic components of an image processing system
CO3: To know the key concepts in image file formats
CO4: Develop the student's ability to apply these tools in the laboratory in image restoration, enhancement and compression.

Semester: II (Even) – (2018-2019)

Subject Code : ECSJC21Subject Name: Python Programming
Upon Completion of the Subject the students will be able to
CO1:Familiarize the student with introduction to python language ,python functions and python control structures
CO2: Introduction of strings, mutable and immutable objects (lists, sets, tuples, dictionary).
CO3:Be familiar with recursive solution for problems on numeric data, problems on tower of Hanoi, and solutions for problems on strings
CO4:Be familiar with applications of python

Subject Code : ECSJC22Subject Name: Compiler Design
CO1: Be able to build a compiler for a (simplified) (programming) language.
CO2: To know how to use compiler construction tools, such as generators of scanners and parser.
CO3: Be familiar with assembly code and virtual machines, such as the JVM, and byte code.
CO4: Be able to define LL (1), LR (1), and LAIR (1) grammars.
CO5: Be familiars with compilers analysis and optimization techniques.

Subject Code : ECSJC23Subject Name: Operating System and Design and Principles
CO1: To learn the fundamentals of Operating Systems.
CO2: To learn the mechanisms of OS to handle processes and threads and their communication
CO3: To learn the mechanisms involved in memory management in contemporary OS
CO4: To gain knowledge on distributed operating system concepts that includes architecture, Mutual exclusion algorithms, deadlock detection algorithms and agreement protocols
CO5: To know the components and management aspects of concurrency management
CO6: To learn programmatically to implement simple OS mechanism

Subject Code : ECSJC2PSubject Name: Distributed System
CO1: Be familiar with the knowledge of distributed systems techniques and methodologies.
CO2: Explain the design and development of distributed systems and distributed systems applications.
CO3: To understand the concepts of synchronization, fault tolerance, and consistency in distributed systems applications.
CO4: Discuss the design and testing of a large software system, and to be able to communicate that design to others.

Subject Code : ECSJC2QSubject Name: Python Programming Lab
CO1: Master the fundamentals of writing Python scripts
CO2: Learn core Python scripting elements such as variables and flow control structures
CO3: Discover how to work with lists and sequence data

CO4: Write Python functions to facilitate code reuse
CO5: Use Python to read and write files

Subject Code : ECSJC2QSubject Name: Operating System Lab
CO1: Understanding windows desktop user interface
CO2:Configuring the Windows operating system using control panel
CO3:Managing hardware, software and users
CO4:Managing folders and files
CO5:Creating Internet connections
CO6:Standalone and networked operating systems

Semester: IV (Even) – (2018-2019)

Subject Code : ECSGC41Subject Name: Pattern Recognition
Upon Completion of the course the students will be able to
CO1: Process the sensed data to eliminate noise
CO2: Hypothesize models that describe each class population.
CO3: Then we may recover the process that generated the patterns.
CO4: Choose the best-fitting model for given sensed data to assign the class label associated with the model. .
CO5: Prior methods have used 1D transforms to identify key features, but these methods were not robust to 2D profile.
CO6: Additionally, these methods adapt poorly to geometric variation of the shapes

Subject Code :ECSGC42Subject Name: Advanced System Architecture
Upon Completion of the course the students will be able to
CO1:Provide a checklist of issues to consider when selecting a system architecture.
CO2: Explain network protocols and licensing issues.
CO3: Describe wireless networking, including wireless standards, topologies, and rends.
CO4:Discuss the potential impact of cloud computing and web 2.0
CO5: Describe servers, server-based processing, clients, and client-based processing.
CO6: Explain client/server architecture, including tiers, cost-benefit issues, and performance.

Subject Code : ECSGT41   **Subject Name: Big Data Analytics**

Upon Completion of the course the students will be able to

CO1: To enable learners to develop expert knowledge and analytical skills in current and developing areas of analysis , statistics and machine learning

CO2:To provide learners with the deep and systematic knowledge of business and technical strategies for data analytics and the subsequent skills to implement solutions in these areas

CO3:To develop in the learner a deep and systematic understanding and current issues of research and analysis

CO4: To enable learners conduct independent research and analysis in the field of data analytics.

CO5: To enable the learner to identify, develop and apply detailed analytical, creative, problem solving skills.

CARDAMOM PLANTERS' ASSOCIATION COLLEGE BODINAYAKANUR

Research Department of Mathematics

M.Phil., Mathematics

Course Outcome

1. Read mathematics independently and solve advanced mathematical problems.
2. Demonstrate mastery of subject material, as evidenced by quality of performance in coursework, and on written and oral examinations in mathematics.
3. Communicate mathematical ideas, results, context, and background effectively and professionally in written and oral form.
4. Produce and defend an original contribution to knowledge, as evidenced by the writing and defence of a thesis involving significant original research

PhD. Mathematics.

Course Outcome

1. Programme Outcomes Students have/capable of Undergone relevant (taught) courses required for undertaking specialized research.
2. Identifying unsolved yet relevant problem in a specific field.
3. Articulating ideas and strategies for addressing a research problem.
4. Undertaken original research on a particular topic.
5. Effectively communicating research, through journal publications and conference presentations, to the mathematics community.
6. Disseminating research to a broader audience. Program Specific Outcomes
7. Generate publications in reputed mathematical journals.
8. Provide scope for interaction with international researchers and developing collaborations.
9. Provide opportunities to research students for communication (and discussion) of advanced mathematical topics to undergraduate and graduate students.
10. Produce next generation researchers in mathematics.