

PROGRAM OUTCOMES

**PROGRAM SPECIFIC
OUTCOMES**

PRR & VS GOVERNMENT COLLEGE, VIDAVALUR					
Programmes Offered					
S.No.	Name of the Programme	Programme Code	Programme details		
01	H.E.P		HISTORY	ECONOMICS	POLITICAL SCIENCE
02	E.S.Cs		ECONOMICS	STATISTICS	COMPUTERS
03	B.Com., (Computers)		COMMERCE	COMMERCE	COMPUTERS
04	M.P.C		MATHEMATICS	PHYSICS	CHEMISTRY
05	M.P.Cs		MATHEMATICS	PHYSICS	COMPUTERS
06	M.S.Cs		MATHEMATICS	STATISTICS	COMPUTERS
07	B.Z.C		BOTANY	ZOOLOGY	CHEMISTRY

DEPARTMENT-WISE PROGRAMME OUTCOMES
Program Specific Outcomes

BA Programmes

After completing the B A Programme, the student

1. History - Economics - Political Science (HEP)

POs:

- Develops historical stance in all aspects
- Learn to analyze economic issues in day to day life
- Develops into a political assessment

PSO: Develops Rational Thinking and awareness about society and its connections

2. Economics, Statistics, Computer Applications (ESCs)

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

POs:

- Learn the economic scenario of Andhra Pradesh, intern the Indian economics.
- Learn basic mathematics and various applications in statistics like presentation of data, computation of probability, and design of experiments and analysis of time-series data.
- Master various skills in program developing and their execution.
- Finds interlink between the three subjects and their application in day to day life.

PSO: Learns reasoning, aptitude and analytical techniques to seek a job in bureau of economics and statistics.

B.Com. Programme

After completing the B.Com. (computers) Programme, the student

B.Com (Computer Applications)

POs:

- Illustrate basic knowledge of computer applications and apply standard practices in software development.
- Understand Analyze and Develop computer programs for efficient design of different computer-based systems.
- Produce reports and design documentation, and make effective presentations.
- Apply the knowledge of programming to solve problems that occur in day-to-day life.

PSO: Learns various accounting techniques and application of software in accounting to seek a job.

B .Sc Programmes

After completing the B Sc Programme, the student

1. Mathematics-Physics-Chemistry (MPC)

P Os:

- Understands basic concepts in Physics, Chemistry and Mathematics which helps in solving different types problems
- Develops scientific outlook
- Analyzes different chemical compositions in medicines and nature
- Develops experimental skills in Physics and Chemistry

P S O: Develops skills to become a scientist or a teacher

2. Mathematics-Physics-Computers (MPCs)

P Os:

- Develop and understand the programming concepts to understand software development cycle for developing the software.
- Analyse and assess the problem-solving techniques in the field of computer science
- Explore and employ life-long learning skills and adopt them to emerging technologies
- Design and develop computer programs/computer-based systems upgrading themselves on par with technology.

PSO: Identifies the association between the fundamental subjects learnt and apply them to solve problems that occur in real time.

3. Mathematics, Statistics, Computer Science (MSCs)

POs:

- Develop logical thinking and various techniques of problem salvation.
- Learn various procedures of presentation of data and its analysis.
- Master various skills in program developing and their execution.
- Finds interlink between the three subjects and their application in day to day life.

PSO: Learns reasoning, aptitude and analytical techniques to seek a job.

4. Botany – Zoology – Chemistry (BZC)

PO

- Apply the knowledge of biology to make scientific queries and enhance the comprehension potential.
- Convey and practice social, environmental and biological ethics
- Understanding of environmental conservation processes
- Understands about genetics and its importance in human health
- Scientific reasoning and analytical problem solving with a molecular perspective

PSO

- Design solutions from medicinal plants for health problems, disorders and disease of human beings
- Understand the applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine
- Inspires to become a good researcher/chemist/scientist

COURSES OUTCOMES

DEPARTMENT OF TELUGU

1011TEL15/16: General Telugu

A student who studies this course

- Enjoys the Epic “Mahabharatham”, observes the various values hidden in the stories and be exposed to the language aspect that differ from the ages, poets and writers.
- Be exposed to the grammatical aspects of language.
- Gets familiarity with different styles of writers and dialects of the language.

2011TEL15/16: General Telugu

A student who studies this course

- Understands the qualities of Prabandha Yugam , Significance of Sri Kalahasthi and the marriage system during 16th Century / Sri Krishnadevaraya Period.
- Appreciates Telugu literature and understands the reflection of social issues in writings of modern poetry and short stories

3011TEL15: General Telugu

A student who studies this course

- Gets familiarity with poets like Pothana and Koravi Goparaju and analyses the distinctiveness of their poetry.
- Understands all the aspects of our mother tongue and its importance for our existence as well as personality development.

DEPARTMENT OF ENGLISH

GENERAL ENGLISH

1001 ENG17: General English

A student who studies this course

- Gets interest in improving Listening, Speaking, Reading and Writing skills in English
- Gets acquaintance with various strategies of language learning skills
- Be able to identify the values inherent in the prescribed prose and poetry pieces in the text.

2001 ENG16: General English

A student who studies this course

- Improves Listening, Speaking, Reading and Writing skills in English
- Be able to have a better understanding of human experience
- Be exposed to moral education

3001 ENG16: General English

A student who studies this course

- Acquires competencies in Listening, Speaking, Reading and Writing skills in English
- Be able to utilize the English language skills for a better understanding of the remaining subjects
- Appreciates the role and importance of English Language as a means of passing on information, thoughts, emotions and feelings

Foundation Courses:

2061CSS16: Communication and Soft skills-I

A student who studies this course

- Gets improvement in vocabulary and grammar
- Knows about Listening and Reading as Language Skills in English

3061CSS16: Communication and Soft skills-II

A student who studies this course

- Improves good speaking skills in English with correct pronunciation, stress and Intonation
- Be able to Know about and participates in Group Discussion, Role-play using English
- Improves Public Speaking Skills in English

4011CSS16: Communication and Soft skills-III

A student who studies this course

- Improves soft skills such as Positive Thinking, Emotional Intelligence, and aspects of Body Language
- Gets mastery over writing skills such as Paragraph writing, Paraphrasing, Summarizing and Report Writing

DEPARTMENT OF MATHEMATICS

1308 MAT15: Differential Equations

A student who studies this course

- Solves differential equations by different methods
- Identifies orthogonal trajectories

2308 MAT15: Analytical Solid Geometry

A student who studies this course

- Identifies skew lines and shortest distance between the lines
- Illustrates enveloping cone of a sphere
- Demonstrates inscribed sphere of a cone

3308 MAT15: Abstract Algebra

A student who studies this course

- Analyses nature of functions and relations
- Practices permutation groups

4308 MAT15: Real Analysis

A student who studies this course

- Knows about increasing sequence, decreasing sequence
- Classifies infinite series by Cauchy's test De 'Alembert ratio test

5318 MAT15: Rings and Metrics

A student who studies this course

- Knows about rings , ideals, homeomorphisms
- Different method to solve linear equations and use of cayley-hamolton theorem

5328 MAT15: Linear Algebra

A student who studies this course

- Labels linear independent vectors and dependent vectors
- Recognizes orthogonal vectors and operates Matrices

63 MAT VII A: Vector Calculus

A student who studies this course

- Knows divergent, Convergent curl of Vectors
- Vector differentiation Vector integration
- Its application in Physics

63 MATVIII A1: Laplace Transforms

A student who studies this course

- Knows how solve differential equations using Laplace Transforms
- Knows its applications in Physics

63 MATVIII B1: Integral Transforms

A student who studies this course

- Knows how solve integral equations using Integral Transforms
- Knows its applications in Physics

Project Work

A student who studies this course

- Knows how to collect data from different sources
- Recognizes preparation and usage of Project outcome

DEPARTMENT OF PHYSICS

PHYSICS

PHY101: Mechanics & Properties of Matter

A student who studies this course

- Recalls the mechanics principles, Physical quantities, their representation and relations among them
- Identifies the basic principles of central forces and their application in planetary motion
- Solves the problems relating to mechanics and properties of matter
- Applies the principles in different fields like rockets ,gyroscope etc;

PHY 201: Waves and Oscillations

A student who studies this course

- Differentiates different types of pendulums, different wave motions and oscillations
- Acquainted with formulae, principle and phenomena related waves
- Solves the problems relating to waves and oscillations
- Uses these concept in the real life
- Understands the principles in the production and detection of Ultrasonic's and their applications.

PHY301: Wave Optics

A student who studies this course

- Explains the different types Aberrations in lenses and methods to minimize them
- Learns the principles of Interference ,Diffraction, and Polarization of light, and experiments related to wave nature of light
- Learns about different types of optical fibers and their applications

PHY401: Thermodynamics & Radiation Physics

A student who studies this course

- Explains the laws of thermodynamics and their application in working heat engines and refrigerators
- Understands the principles involved in production of low temperatures and cryogenic applications
- Understands the importance of quantum theory of radiation

PHY501: Electricity, Magnetism & Electronics

A student who studies this course

- Explains the principles and formulae in Electricity Magnetism and Electronics
- Solves the problems related to above topics
- Tests learned principles and formulae in their daily life

PHY601: Modern Physics

A student who studies this course

- Learns about different types of atomic models, origin of spectral lines
- Understands the Raman Effect and its applications
- Explains De Broglie Hypothesis and other Modern developments in Physics
- Learns about basic properties of Nuclei like binding energy
- Summarizes different theories and developments in modern physics like Raman effect, Uncertainty principle

PHY701(C): Renewable Energy

A student who studies this course

- Identifies different forms of Energy Resources and importance of Renewable Energy Resources
- Understands the role of energy in Economic Development and Social Transformation
- Learns about the global energy scenario and energy resources available in India
- Explains the basic principles involved in the generation of Solar Energy, Wind Energy, Ocean Energy, Hydrogen Energy and Bio energy

PHY801 (C1): Solar Thermal and Photo Voltaic Aspects

A student who studies this course

- Learns about the basic facts of Solar Radiation and Characteristics of materials used in production of solar energy
- Understands the working of different solar devices like flat plate collectors, solar photovoltaic cells etc;
- Learns about different Solar Thermal applications

PHY801 (C2): Wind Hydro and Ocean Energies

A student who studies this course

- Learns about the Wind generation and about different devices used to measure the wind speed
- Understands the aerodynamic design principles and Aerodynamic theories
- Learns about various wind energy applications
- Learns about small hydro power systems and their importance
- Understands about production of Ocean Energy ,Tidal Energy

PHY801 (C3): Energy Storage Devices

- Learns about different modes of energy storage
- Understands the basic principles of energy storage batteries and different types of batteries
- Learns about fuel cells and their applications

DEPARTMENT OF CHEMISTRY

1304CHE15: Inorganic and Organic Chemistry

- Gets knowledge about p-block elements
- Acquires knowledge about basic concepts of organic chemistry
- Understands the concept of Aromaticity, Huckel's rule

1304CHE15: Practical-I Simple Salt Analysis

- Develop skills required for the qualitative analysis of simple salt containing one anion and cation

2304CHE15: Physical and General Chemistry

- Understands the basic terminology of stereochemistry and molecular representations
- Gets knowledge about the states of matter in depth and properties of solutions
- Acquires knowledge about hybridization, valence bond theory and molecular orbital theory
- Learn about the properties of colloids, sols, emulsions and gels

2304CHE15: Practical-II Analysis of Mixture Salt

- Develop skills required for the qualitative analysis of mixture salt containing two anions and two cations

3304CHE15: Inorganic and Organic Chemistry

- Develops insight into Chemistry of d-block and f-block elements
- Develops in-depth knowledge about metal carbonyls and EAN (Effective atomic number)
- Learn about various name reactions and their mechanisms

3304CHE15: Practical-III Titrimetric analysis and Organic Functional Group Reactions

- Identifies the nature of functional group present in a given organic compound
- Determine the amount of Fe(II)/Cu(II) through titrimetric analysis

4304CHE15: Spectroscopy and Physical Chemistry

- Get awareness about spectroscopic techniques like Electronic, Infra red and Proton magnetic resonance spectroscopy and their uses in structural elucidation of an organic compound
- Develops in-depth knowledge about Phase equilibrium and its applications
- Gain the knowledge about conductometric and potentiometric titrations

4304CHE15: Practical-IV Physical Chemistry and IR Spectral Analysis

- Measure the concentration of acids through conductometric titrations
- Measure the CST (Critical Solution Temperature) of Phenol-Water system

5314CHE15: Inorganic, Organic and Physical Chemistry

- Learn about various concepts of Coordination chemistry and stereochemistry of coordination compounds
- Understands the stability of metal complexes
- The terminology in Thermodynamics and laws of Thermodynamics

5314CHE15: Practical-V Organic Chemistry

- Develop skills required for the systematic qualitative analysis of organic compounds and determination of physical constants

5324CHE15: Inorganic, Organic and Physical Chemistry

- Knows about kinetics of a chemical reaction and the concept of activation energy
- Understands the various photophysical and photochemical processes
- Learn the physical and chemical properties of Amino acids

5324CHE15: Practical-VI Physical Chemistry

- Capable to determine the surface tension and viscosity of a liquid
- Knows the determination of rate constant for acid catalysed ester hydrolysis

63CHE: Elective-VII-A: Analytical Methods in Chemistry

- Get awareness about separation techniques in chemical analysis and various types of chromatographic techniques, which are essential to become a good researcher
- Understand the principles of volumetric and gravimetric analysis

63CHE: Practical-VII-A

- Expertise in Paper chromatography technique, which is a notable purification technique
- EDTA titrations

63CHE: Cluster elective-VIII-A-1: Polymer Chemistry

- Expertise in the chemistry of polymers: various types of polymers, techniques of polymerization and kinetics of polymerization
- Gets knowledge about industrial applications of polymers

63CHE: Practical-VIII-A-1:

- Capable to prepare few drugs like aspirin, barbituric acid and paracetamol

63CHE: Cluster elective-VIII-A-2: Instrumental Methods of Analysis

- Get a deep insight into the various spectroscopic methods used for the Structural determination of organic compounds
- Thorough knowledge about the chromatographic techniques useful for the purification of organic compounds

63CHE: Practical-VIII-A-2:

- Practical demonstration of few organic reactions and rearrangements will certainly increase the interest in chemistry

63CHE: Cluster elective-VIII-A-3: Analysis of Drugs, Foods, Dairy Products & Bio-Chemical Analysis

- Understands the procedure for analysis of milk, milk products, food materials and preservatives
- Creates awareness about clinical analysis of blood
- Develops insight into the analysis of drugs and pharmaceuticals which creates an interest to join in chemical laboratories.

DEPARTMENT OF BOTANY

1303BOT15 : Microbial Diversity, Algae & Fungi (Theory)

- Study and impart knowledge about the general Characteristics, structure, reproduction, life history and economic importance of Bacteria and Viruses, Algae, Lichens and diseases.
- Understand the fundamentals of microscopy, staining technique, classification and control of microbes

1303BOT15: Microbial Diversity, Algae & Fungi (Lab)

- Learn the microscopic technique, familiarize with the external and internal structure of lower and higher group organisms.
- Study of algae, fungi, Lichens and its types. Study of plant diseases causal organisms, and control measures.

23003BOT15: Diversity of Archegoniates and Anatomy(Theory)

- Students able to explain about structure, classification, reproduction, life cycle and economic importance of Bryophytes, Pteridophytes and gymnosperms.
- Study and impart knowledge about the Structure, reproduction, life cycle, fossil, fossilization and geological time scale.

2303BOT15 :Diversity of Archegoniates and Anatomy(Lab)

- Students get knowledge in fossil and fossilization.
- Learn about the external and internal structure of Bryophytes, Pteridophytes, Gymnosperms
- To get knowledge about classification, mode of reproduction and detailed study of some important bryophytes, Pteridophytes and Gymnosperms. To impart knowledge to general characters, classification and stellar evolution of pteridophytes.

3303BOT15 : Plant Taxonomy & Embryology (Theory)

- Study and import knowledge about reproductive developmental aspects of male reproductive system Pollen grains, female reproductive system - embryo sac and structure and development plant embryo.
- Students will be able to utilize embryological studies in various aspects like analysis of evolutionary trends, circumscription and delimitation of taxa and making a decision on systematic positions.

3303BOT15 : Plant Taxonomy & Embryology (Lab)

- Students get knowledge in internal structure of anther and isolation of endosperm, different types of ovules, pollination, pollen germination, different fruits and seeds
- Students learn the semi-technical descriptions of several families like annonaceae, Fabaceae, Asteraceae, Cucurbitaceae, Brassicaceae, Apiaceae, Asclipidiaceae, Poaceae, Orchidaceae and Aricaceae

4303BOT15: Plant Physiology and Metabolism(Theory)

- Students are capable to become practical knowledgeable in estimation of sugars, proteins, lipids and separation of plant pigments by paper chromatography methods. Students will experience in plasmolysis, light intensities were influenced on transpiration, stomata size and number are responsible for transpiration rate, different coloured light are important for oxygen evolution, respiration rates are measured by using germinating seeds with Respiroscope.
- Student will be able to understand plant water relations. Students understand the mechanism of photosynthesis and Respiration. Students get acquire knowledge in the mechanism of nitrogen fixation, plant growth regulators and photoperiodism.

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5313BOT15: Cell biology, Genetics and Plant breeding(Theory)

- Acquire knowledge on ultrastructure of cell.
- Understand the structure and chemical composition of chromatin and concept of cell division.
- Interpret the Mendel's principles, acquire knowledge on cytoplasmic inheritance and sex linked inheritance. Understand the concept of 'one gene one enzyme hypothesis'
- Understand the science of plant breeding. To introduce the student with branch of plant breeding for the survival of human being from starvation. To study the techniques of production of crop varieties.

5313BOT15 : Cell biology, Genetics and Plant breeding (Lab)

- The laboratory course gives practical knowledge to perusing students in the field of cytology,

genetics and evolution. A cell is the locus of behaviour and that this behaviour has structural basis. Students will be able to observe different cell organelles through electron micrographs from standard articles.

- Students are capable to acquire practical knowledge in histo-chemical tests in starch, sugars and proteins. Student will be able to observe mitosis cell division through the cytological preparation from onion root tips.

5323BOT15 : Course title: Plant Ecology & Phytogeography (Theory)

- Understand the various concepts of Biodiversity, values and factors influence its loss. They can be able to identify the threats to biodiversity and its habitat loss. Understand the basic concepts of plant ecology and our surrounding ecosystem.
- To identify the natural resources which can be conserved for future and sustainable development. Understand core concepts of biotic and abiotic. Classify the soils on the basis of physical, chemical and biological components. Analyse the phytogeography or phytogeographical division of India.

5323BOT15: Plant Ecology & Phytogeography (Lab)

- Practically students are able to find out the ecological parameters such as plant species distribution, abundance and density in a defined area by quadrat method.
- Students will be able to gain knowledge on estimation of dissolved oxygen content, chloride content, carbonate and bicarbonate in water and total dissolved solids

63BOT-VIIB : Elective: Nursery, Gardening and Floriculture(Theory)

- Students acquire knowledge regarding the Definition, objectives, scope and building up of infrastructure for nursery. Students learn about Planning and seasonal activities - Planting - direct seeding and transplants. Student gets knowledge regarding Nursery Management and Routine Garden Operations.
- Students will learn about the Definition, objectives and scope - different types of gardening, Landscape and home gardening - parks and its components, plant materials, design, Computer applications in landscaping., Gardening operations like soil laying, manuring, watering.

63BOT-VIIB : Elective: Nursery, Gardening and Floriculture(Lab)

- Categorization of horticultural crops in India based on: (a) use, (b) plant type, (c) usable plant part
- Prepare soil and apply an organic mulch
- Soilless plant culture. Use of plant growth regulators – IAA/NAA/IBA, Kinetin, ABA, GA 5. Prepare and plant a hanging basket and Use a leaf-litter blower. Students will learn the Preparation of Bonsai.

63BOT-VIIIA1:Cluster elective – VIII – A-1: Plant diversity and Human Welfare (Theory)

- Students will learn about Genetic diversity, Species diversity, Plant diversity at the ecosystem level, Agro -biodiversity and cultivated plant taxa, wild taxa.
- Students acquire knowledge about Values and uses of biodiversity: Ethical and aesthetic values, Methodologies for valuation and Uses of plants.

- Student import knowledge regarding Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agro-biodiversity, projected scenario for biodiversity loss
- Students get understanding regarding the Management of plant biodiversity and various Organizations associated with biodiversity management and Methodology for execution like IUCN, UNEP, UNESCO, WWF, NBPGR

63BOTV-IIIA1: Cluster elective – VIII – A-1 (Lab) : Plant diversity and Human Welfare)

- Study of plant diversity (flowering plants). Study of exotic species- Identification and morphological characteristics. Identification of forest trees through bark, wood, flowers, leaves and fruits.

63BOT-VIIB: Elective - VII (Theory): Nursery, Gardening and Floriculture)

- Students acquire knowledge regarding the Definition, objectives, scope and building up of infrastructure for nursery. Students learn about Planning and seasonal activities - Planting - direct seeding and transplants. Student get knowledge regarding Nursery Management and Routine Garden Operations.
- Students will learn about the Definition, objectives and scope - different types of gardening, Landscape and home gardening - parks and its components, plant materials, design, Computer applications in landscaping., Gardening operations like soil laying, manuring, watering.

63BOT-VIIB Elective: - VII (Lab): Elective: Nursery, Gardening and Floriculture

- Categorization of horticultural crops in India based on: (a) use, (b) plant type, (c) usable plant part
- Prepare soil and apply an organic mulch
- Soilless plant culture. Use of plant growth regulators – IAA/NAA/IBA, Kinetin, ABA, GA 5. Prepare and plant a hanging basket and Use a leaf-litter blower. Students will learn the Preparation of Bonsai.

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- Student import knowledge regarding Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agro-biodiversity, projected scenario for biodiversity loss
- Students get understanding regarding the Management of plant biodiversity and various Organizations associated with biodiversity management and Methodology for execution like IUCN, UNEP, UNESCO, WWF, NBPGR

63BOTV-IIIA1 Course: Cluster elective – VIII – A-1 (Lab): Plant diversity and Human Welfare

- Study of plant diversity (flowering plants). Study of exotic species- Identification and morphological characteristics. Identification of forest trees through bark, wood, flowers, leaves and fruits.

DEPARTMENT OF ZOOLOGY

1314Z0016: Biology of Non-Chordates (Theory)

- Student gains knowledge about , Systematics and Phylogeny of various Invertebrate phyla
- Student know importance of Invertebrates and their larvae in the process of evolution

1314Z0016P: Biology of Non-Chordates (Practical)

- Student acquires practical knowledge on Invertebrate phyla and identification of Non-Chordates

2314Z0016: Biology of Chordates (Theory)

- Student gains knowledge about, Systematic and Phylogeny of various Vertebrate phyla
- Student acquires knowledge on vertebrate Systematics and Phylogeny of various vertebrate phyla

2314Z0016P Biology of Chordates (Practical)

- Student acquires practical knowledge on Invertebrate phyla and identification Chordate animals

3314Z0015: Cell Biology, Genetics and Evolution (Theory)

- Student acquires knowledge about cell structure, functions of various cell organelles
- Understands the inheritance of characters from parents to offspring
- Theories of Evolution
- Mendelian and non mendelian inheritance

3314Z0015P: Cell Biology, Genetics and Evolution (Practical)

- Student observe cell structure and various cell organells under microscope and also identify giant chromosomes
- Students solved genetic problems

4314Z0015: Embryology, Physiology and Ecology (Theory)

- Student Knows the gametes and embryonic development in vertebrates
- Students acquires knowledge on functioning of various systems of mammals
- Student role in protecting the environment
- Understand the mechanisms that work to keep the human body alive and functioning

4314Z0015P: Embryology, Physiology and Ecology (Practical)

- Student acquires practical knowledge in doing physiology and ecology experiments
- Students observe various embryos structure under microscope

5314Z0015: Animal Biotechnology (Theory)

- Students acquires Knowledge of animal cells in culture, growth of cell lines
- Use in recombinant DNA technology, genetic manipulations and in a variety of industrial processes.

5314ZOO15P: Animal Biotechnology (Practical)

- Students acquires knowledge on Practical skills of conducting basic lab experiments

5324ZOO15: Animal Husbandry (Theory)

- Gives knowledge of poultry farming, feed management
- Students acquires knowledge on breeds of Dairy Cattle and Buffaloes and care and management

5324ZOO15P: Animal Husbandry (Practical)

- Student gains practical knowledge regarding identification of disease causing organisms in poultry
- Students gains practical knowledge about various activities carried out in a dairy farm

63ZOO-VIIA: Immunology (Theory)

- Provides basics knowledge about immune system
- Students acquire knowledge on types of immunity, antigens-antibodies and their properties
- Students Understanding the types of hypersensitivity reactions and auto immune diseases

63ZOO-VIIAP: Immunology (Practical)

- Students observed Lymphoid organs and prepared Histological slides under micrope
- Students acquires practical knowledge on Blood group determination

63ZOOVIII-B1: Principles of Aquaculture (Theory)

- Students Understands basics of Aquaculture, types of aquaculture
- Students acquire knowledge on construction of aqua farms and seed resources
- Provides knowledge on culture Ponds

63ZOOVIII-B1-P: Principles of Aquaculture (Practical)

- Gives practical knowledge on identification of fishes and crustaceans
- Students acquires knowledge on identification of fish diseases

63ZOO-VII-B2: Aquaculture Management (Theory)

- Gives knowledge on Breeding and Hatchery Management
- Students gain knowledge about Water quality Management, Feed management and Disease management

63ZOO-VIII-B2-P: Aquaculture Management (Practical)

- Gives practical knowledge live food, ,balanced fish feed
- Students gains practical knowledge on estimation of proteins, carbohydrates and lipids

63ZOO-VIII-B3: Post Harvest Technology (Theory)

- Student gains knowledge regarding Fish Preservation, fishby-products and seaweed products
- Gives knowledge on Sanitation and Quality control

63-VIII-B3-P: Post Harvest Technology (Practical)

- Students gains knowledge on project work and project report

DEPARTMENT OF COMMERCE

1201FOA17: Fundamentals of Accounting-I

A student who studies this course

- Acquires the Fundamental knowledge of Financial Accounting
- Learns about the procedures to be followed in preparation of Bank Reconciliation Statement

1202BUO17: Business Organization

A student who studies this course

- Learns about Concepts of business, Trade, Industry & Commerce,
- Gains knowledge about different Forms of business organizations, Entrepreneurship, Company incorporation procedures

2201FOA15: Fundamentals of Accounting-II

A student who studies this course

- Gains knowledge in accounting procedures to be followed for special concepts like Depreciation Bills of Exchange, Consignment Accounts and Joint Venture accounts etc.

2202BUE16: Business Environment

A student who studies this course

- Understands the components of the business environment within which the business organizations are operating.

3201COA16: Corporate Accounting

A student who studies this course

- Learns about accounting procedures to be followed for Company's Share Capital (Equity & Bonus shares), Debt Capital (Debentures)
- Learns about Valuation of goodwill & Shares and Company Final Accounts.

3202BUS16: Business Statistics

A student who studies this course

- Gains knowledge in application of Statistical tools and techniques in business decision making
- Learns the use of computers in interpretation of statistical data

4202BUS15: Business Law

A student who studies this course

- Understands Essentials of agreements and contracts under Indian Contract Act.,
- Gains knowledge in Fundamental of Sale of Goods Act., Cyber laws and contract procedures etc.,

4201ASO15: Accounting for Service Organizations

A student who studies this course

➤ Learns the specific accounting principles and procedures followed in various Service Rendering Organizations viz., Electricity Supply Companies, Banking and Insurance Companies

CMA5202: Business leadership

A student who studies this course

- Understands the concept of Leadership,
- learns about traits, styles and Qualities of good leaders and stages in Decision making processes and
- Acquainted with few profiles of Inspirational Business Leaders

5221COA15: Cost Accounting

A student who studies this course

- Learns about Elements of cost, cost centre & Cost units, prepares cost sheets,
- Understands the issues in control of material cost in factories, wage policies, overheads,
- Learns about Job Costing & Contract Costing methods and Marginal Costing.

5231GST15: Goods & Services Tax Fundamentals

A student who studies this course

- Gains knowledge in Basic Concepts and principles of Goods & Services Taxes (GST),
- Knows different Models of GST, Inter-State transactions under GST (IGST) and Input Tax Credit

5241ADA15: Advanced accounting

A student who studies this course

- Learns about principles and procedures of accounting under Royalty Accounts, Partnership Business accounts and Company Liquidation etc.

6211EVM15: Event management

A student who studies this course

- Understands different types of Corporate Events and
- Understands procedures for management of such events

6212ADA15: Advanced cost accounting

A student who studies this course

- Understands the procedure of Reconciliation of cost profit and financial profit and
- Trained in finding the cost of products and services using different costing methods like process costing, Operating costing, Standard Costing & Budget Costing.

6213AUD15: Auditing

A student who studies this course

- Gains knowledge relating to basic concepts of Auditing,

- Learns about auditing principles & practices in various types of business organizations,
- Understands the Qualifications of a Company Auditor, Contents of the Audit Report and Special Concepts of Audit like Vouching and Investigation etc.

6214MAM15: Management accounting

A student who studies this course

- Develops the skills of analyzing the Financial Information
- Able to use Management Accounting techniques like Comparative Statement Analysis, Ratio Analysis, Funds Flow statement Analysis and Cash Flow Statement Analysis etc

DEPARTMENT OF ECONOMICS

1102ECO16: Micro Economics - Consumer Behavior

A Student who studies this course

- Understands the Micro economic analysis and its significance
- Recognizes the economic concepts like selection of wants, scarce resources and optimum utilization of resources.
- Obtain knowledge about Utility, Cost, Revenue and Demand analysis

2102ECO16: Micro Economics – Production and Price Theory

A Student who studies this course

- Classifies different types of markets
- Identifies price determination in different market situations
- Understands the Theories of Factors of Production

3102ECO15: Macro Economics - National Income, Employment and Money

A Student who studies this course

- Appreciate the view of macro economics and its importance
- Analyses different concepts and measuring methods of National income
- Acquires an idea about Indian Banking System

42102ECO15: Macro Economics – Banking and International Trade

A Student who studies this course

- Distinguish Stages in Trade cycle Analysis
- Assess the present banking system
- Identifies defects in Indian money market

5112ECO15: Economic Development and Indian Economy

A Student who studies this course

- Recognizes the basic concepts of economic growth and development
- Understands the basic features of Indian economy
- Express solutions for the Socio-economic problems like poverty, economic inequalities, unemployment and Food security

5122ECO15: India and Andhra Pradesh Economy

A Student who studies this course

- Recognize and Knows the importance of agriculture in India
- Obtain the knowledge about previous Indian Planning System and NITI Aayog
- Understands the problems of Andhra Pradesh Economy before and after bifurcation of the State

61ECOVIII F: Public Finance

A Student who studies this course

- Recognizes the public and private goods
- Distinguishes the public expenditure and public revenue
- Identifies the necessity of Government interference and public welfare

61ECOVIII A1: Agribusiness Environment in Andhra Pradesh

A Student who studies this course

- Realizes the nature and scope of Agribusiness Environment in Andhra Pradesh
- Understands the problems of Agriculture Finance in Andhra Pradesh
- Knows the Agriculture Marketing Policy in Andhra Pradesh

61ECOVIII A2: Agricultural output Marketing

A Student who studies this course

- Understands the Structure and Model of Agri-Marketing Organization
- Identifies the Marketing costs and margins, Marketing Finance and Marketing Structure
- Distinguishes Inter-regional and International Trade in agriculture, Terms of Trade, Balance of payments and WTO

61ECOVIII A3: Agricultural Input Marketing

A Student who studies this course

- Acquires the knowledge about Agriculture Output Marketing
- Understands agriculture input industries like Fertilizers and Pesticides
- Appreciates about importance of Agricultural mechanization

DEPARTMENT OF HISTORY

1103HIS16: Ancient Indian History and Culture (from earliest times to 600AD)

A Student who studies this course

- Understand the silent features of Indus Valley Civilization
- Evaluate the features of Buddhism and Jainism
- Identify the administration of Mauryans, Guptas, Satavahanas etc.,

2103HIS16: Early Medieval Indian History and Culture (from 647 AD to 1526 AD)

A Student who studies this course

- **Understand the Socio-economic and cultural contribution of Rajputs**
- **Identify the contribution of Delhi Sultanate Emperors**
- **Study the powers of Arabs**

3103HIS15: Late Medieval and Colonial History of India (1526 AD to 1857AD)

A Student who studies this course

- Trace the impact of Mughals administration in Hindustan
- Realize the permanent revenue system and subsidiary alliance
- Understand about the causes of 1857 Mutiny

4103HIS15: Social Reform Movement & Freedom Struggle (1820s to 1947 A.D)

A Student who studies this course

- Recognize the role of Raja Rammohan Roy in Indian Renaissance
- Identify the contribution of freedom fighters in Indian Independence Movement
- Understand the role of Sardar Patel contribution in integration of princely states\

5113HIS15: Age of Rationalization and Humanism (the world between 15th and 18th Centuries)

A Student who studies this course

- Understands the causes and results for the reformation
- Realize the causes of 1789 French Revolution and its effects
- Understands achievements Napoleon Bonaparte

5123HIS15: History and culture of Andhradesa (from 12th century to 19th century AD)

A Student who studies this course

- Analyze the importance of Andhra Pradesh Geographical conditions
- Understands the role of Satavahana's in Andhra Pradesh
- Realize the revenue systems of East India Company in Andhra Pradesh

61HISVIIA: History of Modern Europe (from 19th century to 1945 A.D)

A Student who studies this course

- Learn the legacy of Britishers in Europe Continent
- Recognizes the importance of 1830,1848 Revolutions in France
- Understands the 1917 Russian Revolution and its effects

61HIS-VIII-A1: Cultural Tourism in Andhra Pradesh

A Student who studies this course

- Highlight the significance of cultural tourism in Andhra Pradesh

- Study the importance of different Monuments in A.P
- Create awareness among the public about historical and devotional constructions In Andhra Pradesh

61HIS-VIII-A2: Popular Movements in Andhra Desa (1848 to 1956 A.D)

A Student who studies this course

- Identify the contribution of freedom fighters in Andhra pradesh
- Study the importance of reform movement by Kandukuri Veereshalingam, Raghupati Venkata Ratnam Naidu etc.,
- Evaluate the gentlemen’s agreement – 1956

61HIS-VIII-A3: Contemporary History of Andhra Pradesh (1956-2014)

A Student who studies this course

- Narrate the background of formation of Andhra Pradesh
- Understands about the Dalit Movement in Andhra Pradesh
- Realize the Socio-economic and political problems in Andhra Pradesh after bifurcation

DEPARTMENT OF COMPUTER SCIENCE

1305CSE16: Computer Fundamentals and Photoshop

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

- Demonstrate the fundamental concepts of computers and number systems.
- Identify different peripheral devices, operating systems, and storage devices.
- Illustrate the essence of number systems.
- Create graphics and manipulate images using different tools and plug-ins of Photoshop
- Design ads using layers and filters

2305CSE16: Programming in C

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

- Formulating algorithmic solutions to problems and implementing algorithms in C
- Understanding branching, iteration and data representation using arrays.
- Choose the loops and decision making statements to solve the problem and Develop user-defined functions and use them to solve the given problem.
- Understand the dynamics of memory by the use of pointers and Structures

3305CSE15: Object Oriented Programming using Java

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

- Understanding of the principles and practice of object oriented analysis and design in the construction of robust, maintainable programs which satisfy their requirements
- Demonstrate the principles of object oriented programming
- Write programs on multithreading and Implement error-handling techniques.
- Ability to make use of members of classes found in the Java API
- Develop efficient Java applets and applications using OOP concept

4305CSE15: Data Structures

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

- Develop knowledge of basic data structures for storage and retrieval of ordered or unordered data.
- Choose appropriate data structure as applied to specified problem definition.
- Handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures.
- Choose appropriate sorting/searching technique for a given problem.

5315CSE15: Database Management Systems

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

- Demonstrate the basic concepts of database systems.
- Design ER models to represent simple database application scenarios and apply normalization to improve the database design.
- Make use of SQL Queries to store and retrieve data in a database.
- Create Cursors in a database.

5325CSE15: Software Engineering

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

- Classify Process models used in software development.
- Plan, schedule and track the progress of the projects.
- Identify requirements, and prepare analysis models.
- Identify design attributes involved in software design.
- Apply testing principles on software project and understand the maintenance concepts.

63CSS-VIIC: Web Technologies

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

- Summarize tools used in internet and WWW.
- Interpret the inner working of E-mail.
- Design web pages using HTML.

- Design interactive web pages using Cascading Style sheets.

63CSS-VIIIA1: Visual Basic Programming (Cluster A)

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

- Apply the basic concepts of Object Oriented Programming.
- Use a modern IDE to visually and programmatically create programs with GUI.
- Understand and use the event-driven model and its interaction with the modern multitasking operating system.
- Build Code in VB and develop applications using VB Controls.
- Design menus and MDI form.

63CSS-VIIIA2: PHP (Cluster B)

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

- Understand how server-side programming works on the web.
- Demonstrate the fundamental programming concepts in PHP.
- Create PHP programs using Arrays and Functions.
- Design interactive and dynamic web sites.

1204CFP16: Computer Fundamentals and Photoshop (Paper-I)

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

- Demonstrate the fundamental concepts of computer.
- Identify different peripheral devices, operating systems, and storage devices.
- Create graphics and manipulate images using different tools and plug-ins of Photoshop
- Design ads using layers and filters

2204PRC16: Programming in C (Paper-II)

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

- Formulating algorithmic solutions to problems and implementing algorithms in C
- Understanding branching, iteration and data representation using arrays.
- Choose the loops and decision making statements to solve the problem and Develop user-defined functions and use them to solve the given problem.
- Understand the dynamics of memory by the use of pointers and Structures

3204OAT15: Office Automation Tools

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

- Learn the basic concepts of MS Word and MS Excel.
- Use formatting options and construct formulas using built-in functions.
- Create and modify Charts.

- Examine database concepts and explore the Microsoft Office Access environment & Build a new database with related tables and design a form.
- Query a database using different methods and generate a Report.

4203OOP15: Object Oriented Programming with C++

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

- Understand the concept and underlying principles of Object-Oriented Programming.
- Develop problem-solving and programming skills.
- Learn how to overload functions.
- Design C++ classes and implement constructors.

5271PRJ15: Programming in Java

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

- Understand the basic concepts of Object-Oriented Programming and Java programming.
- Develop problem-solving and programming skills in Java.
- Work with Input, Output and Control statements.
- Gain knowledge on the use of classes and objects.
- Understand the use of arrays and threads.

5281WET15: Web Technology

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

- Summarize tools used in internet and WWW.
- Interpret the inner working of E-mail.
- Design web pages using HTML.
- Design interactive web pages using Cascading Style sheets.

63COA-VIIIA1: E-commerce Applications

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

- Understand the concepts of Electronic Commerce.
- Learn the concepts of Supply Chain Management.
- Differentiate the types of Electronic Payment System.
- Understand and use of scripting language, Java script.
- Learn Java script control constructs.

63COA-VIIIA2: Database Management System

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

- Demonstrate the basic concepts of database systems.
- Design ER models to represent simple database application scenarios and apply normalization to improve the database design.

- Make use of SQL Queries to store and retrieve data in a database.
- Create Cursors in a database.

Foundation Courses

2051ICT16: Computer Fundamentals and Office Tools (ICT-1) (FC-3)

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

- Understand the fundamental concepts of computers.
- Create, edit and print documents.
- Create and manipulate slides with outlines & notes and Design and create worksheets.

3051ICT15: Internet Fundamentals and Web Tools (ICT-2) (FC-5)

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

- Write well-structured professional emails.
- Understand the importance of communicating safely and respectfully online.
- Create web pages.

DEPARTMENT OF STATISTICS

1313SWM17 - Descriptive Statistics and Probability

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

- Know the objectives and definition of statistics
- Way of presentation of data
- Know the computational procedures of different basic statistical measures
- Understand the concepts of probability

2313SWM16 – Mathematical Expectation and Probability Distributions

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

- Know the concept of expected value of Random Variable
- Properties of various discrete and continuous probability distributions
- Fitting of various discrete and continuous probability distributions

3313SWM15: Statistical Methods

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

- Know the techniques of bivariate data
- Concept of Regression
- Analysis of attributes

4313 SWM15 : Theory of Estimation & Testing of Hypothesis

After completing the course, the student will be able to know–

- problem of estimation
- methods of estimation
- why testing problem
- various concepts of testing of hypothesis
- concept of sampling distributions
- procedures of non-parametric tests

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5313SWM15: Sampling Techniques and Design of Experiments

After completing the course, the student will be able to know-

- Complete census and Sampling survey
- Census
- techniques and their estimates
- Analysis of Variance
- experimentation
- Designs viz., CRD, RBD, LSD
- factorial experiments

The Concept of
Sampling (vs)
Various Sampling
The concept of
Principles of
Basic Statistical
The concept of

5323SWM15: Quality and Reliability

After completing the course, the student will be able to know-

- Quality and its measures
- attributes and variables
- reliability
- distribution as life model

The concept of
Control charts for
The concept of
Exponential

63SWM-VII A: Applied Statistics

After completing the course, the student will be able to know-

- the time series data
- Index Numbers

How to analyze
The concept of

- demographical rates
- Various

63SWM-VII B: Demography and Vital Statistics

After completing the course, the student will be able to know-

Meaning and objectives of Demography

- table
 - mortality and fertility
 - fecundity
 - its effect on population growth
 - for population growth
 - Reproductions
- Preparation of life
Different rates of
Fertility and
Reproduction and
Various measures
Gross and Net

63SWM-VII A₁: Optimization Techniques

After completing the course, the student will be able to know-

- Optimization
 - Solution of LPP
 - Transportation Problem – Formulation and Solution
 - Assignment Problem – Formulation and Solution
- Objectives of
Formulation and
The
Th Cou e

63SWM-VII A₂: Numerical Analysis

After completing the course, the student will be able to know-

- Finite Differences
 - operators and their internal relations
 - Backward interpolation formulae
 - Central Differences
 - unequal intervals
- The Concept of
Finite difference
Forward and
The Concept of
Interpolation in

B.A. (E.S.CA.):

The Course consists of three group subjects viz., Economics, Statistics and Computer Applications

1312SNM15/16: Elementary Mathematics

After completing the course, the student will be able to know-

- permutations and combinations concept of
- set theory and functions The concepts of
- expressions using Binomial Theorem The Expansion of
- differentiation and integration The concept of
- The Matrix Theory

2312SNM15/16: Descriptive Statistics

After completing the course, the student will be able to know-

- Objective and Limitations of Statistics Definition, Scope,
- – Preparation of questionnaire and schedule Collection of data
- data through diagrams and graphs Presentation of
- central tendency Measures of
- Dispersion Measures of

3312SNM-15: Statistical Methods-I

After completing the course, the student will be able to know-

- Moments The Concept of
- definitions of probability and their computational procedures Various
- Probability Compound
- Interpolation and the process of interpolation The Concept of

4312SNM-15: Statistical Methods-II

After completing the course, the student will be able to know-

- variate data The concept of bi

- correlation and regression
- curves

The concept of
Fitting of various

5312SNM15: Statistical Applications-I

After completing the course, the student will be able to know-

- estimation and methods of estimation
- testing of hypothesis
- distributions
- sample tests
- tests

The problem of
The concept of
Sampling
Large and Small
Non parametric

3522SNM15: Statistical Applications-II

After completing the course, the student will be able to know-

- demography and vital statistics
- of Mortality and fertility
- life table and its applications
- growth and its measurements
- Statistical Quality Control
- and Application of Control Charts

The concept of
Different rates
Preparation of
Population
The concept of
Construction

3523SNM15: Sampling Techniques

After completing the course, the student will be able to know-

- of sampling techniques
- Principles of sample survey
- sampling techniques and their estimates

Basic concepts
Different

63SNM-VII: Design of Experiments and Official Statistics

After completing the course, the student will be able to know-

- National Income and its computational procedure

The concept of

- Statistics Agricultural
- organization of NSSO and CSO Functions and
- Experimentation The concept of Analysis of Variance
- basic statistical designs viz., CRD, RBD and LSD Principles of Analysis of

63SNM A1: Testing of Hypothesis

After completing the course, the student will be able to know-

- of testing of hypothesis Basic concepts
- of Large and Small sample tests Organization
- Non-Parametric Tests Execution of

63SNM A2: Operations Research

After completing the course, the student will be able to know-

- Scope, Applications and Limitations of Operations Research Definition,
- and Solution of Linear Programming Problem Formulation
- Game Theory and its solution methods The concept of
- and solution of Assignment Problem Formulation

DEPARTMENT OF MATHEMATICS

DEPARTMENT OF MATHEMATICS

Sl.No	Programme & Code	Course	Semester	Course Code	Course Name
1	B.Sc	Mathematics	I	1308 MAT15	Differential Equations
			II	2308 MAT15	Analytical Solid Geometry
			III	3308 MAT15	Abstract Algebra
			IV	4308 MAT15	Real Analysis
			V	5318 MAT15	Rings and Metrics
			V	5328 MAT15	Linear Algebra
			VI	63 MAT VII A	Vector Calculus
			VI	63 MATVIIIA1	Laplace Transforms
			VI	63 MATVIII B1	Integral Transforms
			VI	Project Work	

PRR & VS GOVT. COLLEGE, VIDAVALUR, SPSR NELLORE DISTRICT
Course Out Comes

DEPARTMENT OF MATHEMATICS

1308 MAT15: Differential Equations

A student who studies this course

- Solves differential equations by different methods
- Identifies orthogonal trajectories

2308 MAT15: Analytical Solid Geometry

A student who studies this course

- Identifies skew lines and shortest distance between the lines
- Illustrates enveloping cone of a sphere
- Demonstrates inscribed sphere of a cone

3308 MAT15: Abstract Algebra

A student who studies this course

- Analyses nature of functions and relations
- Practices permutation groups

4308 MAT15: Real Analysis

A student who studies this course

- Knows about increasing sequence, decreasing sequence
- Classifies infinite series by Cauchy's test De 'Alembert ratio test

5318 MAT15: Rings and Metrics

A student who studies this course

- Knows about rings , ideals, homeomorphisms
- Different method to solve linear equations and use of cayley-hamolton theorem

5328 MAT15: Linear Algebra

A student who studies this course

- Labels linear independent vectors and dependent vectors
- Recognizes orthogonal vectors and operates Matrices

63 MAT VII A: Vector Calculus

A student who studies this course

- Knows divergent, Convergent curl of Vectors
- Vector differentiation Vector integration
- Its application in Physics

63 MATVIIIA1: Laplace Transforms

A student who studies this course

- Knows how solve differential equations using Laplace Transforms
- Knows its applications in Physics

63 MATVIII B1: Integral Transforms

A student who studies this course

- Knows how solve integral equations using Integral Transforms
- Knows its applications in Physics

Project Work

A student who studies this course

- Knows how to collect data from different sources
- Recognizes preparation and usage of Project outcome

