

Course code	Course Name	Course Outcome
M.Sc., Applied Mathematics – Programme Code - 4020		
4020.1	Real Analysis	Describe fundamental properties of the real numbers that lead to the formal development of real analysis;
		Demonstrate an understanding of limits and how they are used in sequences, series, differentiation and integration;
		To understand the concepts of Improper integrals, functions of several variables
4020.2	Ordinary Differential Equations	Will be able to explain the concept of DE.
		Will be able to solve system of linear differential equations.
		Converts separable and homogeneous equations to exact differential equation by integrating factors.
4020.3	Probability & Statistics	To make inferences about a sample based on information we get from a population.
		Basic probability axioms and rules and moments of discrete and continuous random variables.
		Use appropriate statistical methods in the analysis of simple data sets interpret and clearly present output from statistical analysis in a clear concise and understandable manner.
4020.4	Algebra	Students known about the normal sub groups
		How to apply finite generated groups
		To understand ideal and homomorphisms
		Applications of rings.
4020.5	C-Programming	Read ,understand and trace the execution of programs written in a c language
		Write programs that perform operations using derived data

		Implement programs with pointers and arrays perform pointer arithmetic and use the preprocessor
4020.6	C-Programming Lab	Read ,understand and trace the execution of programs written in a c language
		write programs that perform operations using derived data
		Implement programs with pointers and arrays perform pointer arithmetic and use the preprocessor
4020.7	Complex Analysis	Explain the fundamental concepts of complex analysis and their role in modern mathematics and applied contexts
		Demonstrate accurate and efficient use of complex analysis
		Demonstrate capacity for mathematical reasoning through analyzing, proving and explaining concepts from complex analysis
		Apply problem-solving using complex analysis techniques applied to diverse situations in physics, engineering and other mathematical contexts
4020.8	Numerical methods	Finite difference operators are also introduced to understand a different approach in interpolation.
		Reader will appreciate the error analysis explained suitability of degree of polynomial.
		Locate and use good mathematical software and use numerical methods for solving a problem.
		Assess the reliability of numerical results and determine the effect of round off error.
4020.9	Mathematical Methods	Describe several areas of mathematics beyond calculus .

		<p>Understand the fourier transform is constructed to represent an arbitrary function over a given range then the transformation represents that function periodically extended beyond that range.</p> <p>It will able to apply integral expression for the forwards and inverse fourier transform to a range of non periodic wave forms.</p>
		To know about calculus of variations in Euler's equation.
4020.10	Fluid dynamics	<p>Apply the basic applied mathematic tools that support fluid</p> <p>Create models of inviscid steady fluid flow over simple profiles and shapes.</p> <p>To understand the viscous flow and stress and strain. Some solvable problems in viscous flow.</p>
4020.11	Partial Differential Equations	<p>Able to use a numerical method of solution known as Euler's</p> <p>Use analytical methods of solutions by direct integrations, separation of variables and the integrating factor method.</p> <p>How to classify the linear partial differential equation with constant and variable co-efficients</p>
4020.12	Numerical methods Lab	<p>Finite difference operators are also introduced to understand a different approach in interpolation.</p> <p>Reader will appreciate the error analysis explained suitability of degree of polynomial.</p> <p>Locate and use good mathematical software and use numerical methods for solving a problem.</p> <p>Assess the reliability of numerical results and determine the effect of round off error.</p>

4020.13	Advanced Complex analysis	Explain the fundamental concepts of complex analysis and their role in modern mathematics and applied contexts.
		Apply problem solving using complex analysis techniques apply to diverse situations in physics engineering and other mathematical contexts.
4020.14	Linear Programming	Understand how it exploits the linear nature of the problem to yield good average case performatic while failing to be efficient in the wrost case.
		Under stand the meaning of weak and strong duality and their role in the designs and verification of algorithm solutions to optimization problems
		Know the strategy of game theory and assignment problems
4020.15	Topology	Basic notions of metric and topological spaces,
		Methods and techniques of proving basic theorems on topological spaces and continuous mappings
		Know how the topology on a space is determined by the collection of open sets, by the collection of closed sets, or by a basis of neighborhoods at each point, and you know what it means for a function to be continuous.
4020.16	Discrete Mathematical Structures	Some fundamental mathematical concepts and terminology.
		How to use and analyse recursive definition.
		How to count some different types of discrete structures.
		Explain Boolean algebra and homomorphism and how to apply it in engineering
4020.17	Theoretical Computer Science(Elective1)	Know the important models of computation and you can examine them with mathematical precision.

		Know the model computation using finite automata and characterize simple languages with regular expressions and context free grammars.
		Understand how the Turing machine models everything that can be computed using a real computer.
4020.18	Fortran Lab	Know ware and why fortran is still in use today.
		Know what a compiler is and why some languages must be compiled.
		Explain difference between compile time and run time errors.
4020.19	Functional Analysis	The student has knowledge of central concepts from functional analysis, including the Hahn-Banach theorem, the open mapping and closed graph theorems, the Banach-Steinhaus theorem, dual spaces, weak convergence, and the spectral theorem for bounded self-adjoint operators.
		Skills: The student is able to apply his or her knowledge of functional analysis to solve mathematical problems
4020.20	Operation Research	Under stand the mathematical tools that are needed to solve optimization problems.
		Develop a report that describes the model and the solving techniques analysis the results to the decision making processes in management engineering.
		How to construct the buildings and highways by using network analysis.
		Having the knowledge about the product management and stock market.
4020.21	Methods of Applied Mathematics	Find dominant balances in DE with small parameter.

		In simple cases find complete asymptotic expansions of integrals.
		The final part of the course focuses on P.D.E.
		Understand the matrices and linear equations how to they use in transformations.
4020.22	Integral transforms	Student will gain a range of techniques employing the Laplace and Fourier transforms in the solution of ODE & PDE.
		Appreciation of generalized functions their calculus and applications.
		Solved problems on finite fourier transformations and parseval's theorem.
		Having the knowledge of hankel transform of the derivation of a function.
4020.23	Graph Theory(Elective 2)	To introduce graph as a powerful modeling tool that can be used to solve practical problems in various fields
		Algorithms to find components of a graph and the strongly connected components of a diagraph.
		Understand the coloring , matchings and applications of graph theory in operation research.
4020.24	Mat-Lab	Define the general structure of mat lab
		Describe the work space and command line.
		Write programs in mat lab M-files.
		Create conditional control and loop control
		Use the special functions of mat lab

4020.25	Project	Student should be able to apply the relevant knowledge and skills which are acquired with in the technical area to a given problem.
		With in given constraints even with limited information independently analyze
		Reflect on evaluate and critically assess one's own and others scientific results.

Course code	Course Name	Course Outcome
M.Sc., Computer Science – Programme Code - 4025		
4025.1	Discrete Mathematical Structure	Basics of sets and relations
4025.2	Data Structures & File Structures	Aspects of Data Structures and File Management
4025.3	Computer Organization and Architecture	Know about basic Computer Architecture
4025.4	Object oriented Programming using C++ & JAVA	Know about Objects, Classes, Interfaces and Inheritance
4025.5	Advanced Computer Networks	Basic Network Topologies, Flow control, Error control and Routing Protocols
4025.6	Data Structures using C++	Implement different data structures usage in C language
4025.7	Computer Organization Lab	Able to visualize the basic connectivity of the logic gates on the CO kits provided
4025.8	Formal Languages & Automata Theory	Learn about Turing Machines and their applicability
4025.9	Relational Data Base Management Systems	Know how Data can be stored and managed
4025.10	Advanced operating Systems	Structures, Features and important Components of Operating Systems

4025.11	Data Warehousing & Data Minig	Storing Large Databases and Retrieving from the same using algorithms
4025.12	Web Technologies	Know about the various web designing languages and protocols
4025.13	Advanced JAVA Programming Lab	Threading, Applet Programming, Web designing
4025.14	Relational Data Base Management Systems Lab	Query and extract relevant and specific information from databases efficiently
4025.15	Artificial Intelligence	Knowledge and Intelligence and how to incorporate the same into machines

4025.16	Object Oriented Software Engineering	Software Development Life Cycle Models, coding, testing and deploying Software
4025.17	Information Security and Cryptography	Basic attacks on networks, security measures and current security applications
4025.18	Big Data Analytics	Big Data, Hadoop, Map Reduce Technologies
4025.19	Operations Research	Various aspects of Optimizing problems
4025.20	Object Oriented Software Engineering Lab & Mini Project	Develop a software package using object oriented and UML concepts
4025.21	Network Programming and Web Programming Lab	Design web pages and implement Network Protocols

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Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., Telugu – Programme Code – 1002, 2002, 3002

Course Code	Paper Title	Course Outcome
1002.1 2002.1 3002.1	* "Knowledge Society" A.P.J.Abdul Kalam	Importance of Classical Ages literature
		Transformation of the Ages of Literature
		Importance of Modern period Literature
		Knowing various forms of modern literature Writing skill by learning grammar
1002.2 2002.2 3002.2	Sahithi Koumudi	Importance of Krishnadevaraya period
		Present day Agrarian society of A.P. State
		Trends of Modern period
		Grasping scenario of society of prama
1002.3 2002.3 3002.3	Sahithi Sourabham	Prominence of Bhakti literature
		Romanticism in modern literature
		Knowing the meter of various verses
		Figures of Speech and Techniques
		Creative outlook by learning prosody

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Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road – Kakinada

B.Sc., Computer Science – Programme Code – 2225

Course Code	Paper Title	Course Outcome
2225.1	Computer Fundamentals & Photoshop	To explore basic knowledge on computers and Photoshop's beauty from the practical to the painterly artistic and to understand how Photoshop will help you create your own successful images
	Credits :3 1 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester	
2225.2	Programming in 'C'	1. Appreciate and understand the working of a digital computer 2. Analyze a given problem and develop an algorithm to solve the problem 3. Improve upon a solution to a problem 4. Use the 'C' language constructs in the right way 5. Design, develop and test programs written in 'C'
	Credits :3 1 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester	

2225.3	Object Oriented Programming using JAVA	<ol style="list-style-type: none"> 1. Understand the concept and underlying principles of Object-Oriented Programming 2. Understand how object-oriented concepts are incorporated into the Java programming language 3. Develop problem-solving and programming skills using OOP concept 4. Understand the benefits of a well structured program 5. Develop the ability to solve real-world problems through software development in high-level programming language like Java 6. Develop efficient Java applets and applications using OOP concept 7. Become familiar with the fundamentals and acquire programming skills in the Java language.
Credits :3 1 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester		
2225.4	Data Structures	<ol style="list-style-type: none"> 1. Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented in memory and used by algorithms 2. Describe common applications for arrays, records, linked structures, stacks, queues, trees, and graphs. 3. Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs 4. Demonstrate different methods for traversing trees 5. Compare alternative implementations of data structures with respect to performance 6. Compare and contrast the benefits of dynamic and static data structures implementations 7. Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack. 8. Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing.
Credits :3 1 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester		

2225.5	Data Base Management Systems	<ol style="list-style-type: none"> 1. Design and model of data in database. 2. Store, Retrieve data in database
	Credits :3 2 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester	
2225.6	Software Engineering	<ol style="list-style-type: none"> 1. Ability to gather and specify requirements of the software projects. 2. Ability to analyze software requirements with existing tools 3. Able to differentiate different testing methodologies 4. Able to understand and apply the basic project management practices in real life projects 5. Ability to work in a team as well as independently on software projects.
	Credits :3 2 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester	
2225.7	Computer Networks	<ol style="list-style-type: none"> 1. Identify the different components in a Communication System and their respective roles. 2. Describe the technical issues related to the local Area Networks 3. Identify the common technologies available in establishing LAN infrastructure.
	Credits :3 2 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester	
2225.8	Foundations of Data Science	<ol style="list-style-type: none"> 1. Able to apply fundamental algorithmic ideas to process data. 2. Learn to apply hypotheses and data into actionable predictions 3. Document and transfer the results and effectively communicate the findings using visualization techniques.
	Credits :3 2 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester	

2225.9	Big Data Technology	<ol style="list-style-type: none"> 1. Learn tips and tricks for Big Data use cases and solutions. 2. Learn to build and maintain reliable, scalable, distributed systems with Apache Hadoop. 3. Able to apply Hadoop ecosystem components.
<p>Credits :3 2 Theory period of one hour per week over a semester 1 Tutorial period of one hour per week over a semester 1 Practical period of two hour per week over a semester</p>		
2225.10	Project Work	<ol style="list-style-type: none"> 1. Motivate to work in emerging/latest technologies. 2. Help to develop ability, to apply theoretical and practical tools/techniques to solve real life problems related to industry, academic institutions and research laboratories.
<p>Credits :2 1 Practical period of two hour per week over a semester</p>		

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Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., Physics – Programme Code – 2021

Course Code	Paper Title	Course Outcome
2021.1	MECHANICS AND PROPERTIES OF MATTER	i. Vector analysis is to understand the identification of scalar and vector fields. The magnitude and direction is known for each physical quantity.
		ii. Mechanics of continuous media is to understand the bending of beams in the construction of buildings and bridges
		iii. To understand motion of satellites using central forces
		iv. To study relative motion of bodies with respective velocity of light using special theory of relativity.
		Credits : Theory periods of four hour duration per week over a semester.
2021.2	WAVES AND OSCILLATIONS	i. Fundamentals of vibrations to study the simple harmonic motion and Vibration in different types.
		ii. Vibrating string to give the idea of musical notes and vibrations in strings.
		iii. Ultrasonic's are used to understand the frequencies of various bodies at very high range, chose frequency range in greater than 20000Hz.
		iv. To understand bending of beams.
		Credits : Theory periods of four hour duration per week over a semester.
2021.3	OPTICS	i. To understand Aberrations in lens, which is useful to prepare Optical lenses?
		ii. To determine the velocity of light using Michelson interferometer.
		iii. To understand about Polari meter.
		iv. To study the breakage bones in human body by taken laser beam.
		v. To understand about Telecommunication system using Fiber Optics.
		Credits : Theory periods of four hour duration per week over a semester.
2021.4	THERMODYNAMICS & RADIATION PHYSICS	i. To understand Operations of heat engines which is useful to work in Thermal Power Station?
		ii. To understand the Liquefaction of gases using Joule-Thomson effect.

		iii. To know getting Low Temperature using Adiabatic demagnetization.
		iv. To determine Temperature of the Sun using Thermal Radiation
	Credits : Theory periods of four hour duration per week over a semester.	
2021.5	ELECTRICITY, MAGNETISM & ELECTRONICS	i. To understand about Dielectrics in the construction of Transformers & Capacitors.
		ii. To understand the types of Material like conductors, Semiconductors using Hall Effect.iii. To study about Electromagnetic waves propagating in space, which is useful in the transformation of radio signals?
		iv. To understand the preparation of gate circuits, which are used in the construction of signal lights?
		Credits : Theory periods of four h
2021.6	MODERN PHYSICS	i. To understand about the Scattering of Radiations for the study of Spectrum analysis
		ii. To understand about dual nature of matter waves
		iii. To understand Radioactivity decay. For the determination of different radiations
		iv. To understand X-ray Crystallography for lab Technique
	Credits : Theory periods of three hour duration per week over a semester.	
2021.7	RENEWABLE ENERGY	i. To understand about Renewable Energy and Energy conservation. Second law of Thermodynamics
		ii. To understand the depletion of Ozone layer and Global warming and biological damage due to
		iii. How to use Solar energy in various types.
		iv. To understand Tidal energy using to generate electricity
		v. To understand biomass energy using to generate electricity
	Credits : Theory periods of three hour duration per week over a semester.	
2021.8	SOLAR THERMAL & PHOTOVOLTAIC ASPECTS	i. To understand basics of Solar radiation to using Solar intensity
		ii. To understand about Description of Flat plate Collector and liquid heating and energy balancing equations.
		iii. To understand about multifunction solar cells and production of single crystals silicons
		iv. To understand about fabrication of solar cells and I-V characteristics and inverters and batteries purpose
	Credits : Theory periods of three hour duration per week over a semester.	
2021.9	WIND, HYDRO, AND OCEAN ENERGIES	i. To understand about wind generation and wind energy conversion principles
		ii. To understand about Axial momentum and Rotor characteristics

		iii. To understand about wind energy applications
		iv. To understand about Environmental impact of wind forms
	Credits : Theory periods of three hour duration per week over a semester.	
2021.10	ENERGY STORAGE DEVICES	i. To understand about Energy storages and chemical energy storages and hydrogen for energy storage
		ii. To understand about secondary Lithium solid state solvent battery and nano tubes in electrodes
		iii. To understand about capacitor and battery compression and applications
		iv. To understand about difference between batteries and fuel cells and power conditioner advantages and disadvantages
	Credits : Theory periods of three hour duration per week over a semester.	

Course code	Course Name	Course Outcome
M.C.A. – Programme Code -4026		
4026.1	Computer Fundamentals and Programming in C	Able to write basic programs in C
4026.2	Data Structures	Know the various data types for storage
4026.3	Discrete Mathematical Structures	Know about sets and relations
4026.4	Computer Organization	Know about basic Computer Architecture
4026.5	Management Accountancy	Know how to manage accounts
4026.6	C and Data Structures	Implement different data structures usage in C language
	Programming Lab	
4026.7	Computer organization Lab	Able to visualize the basic connectivity of the logic gates on the CO kits provided
4026.8	Probability, Statistics & Queuing Theory	Understand the various Probability and Statistical measures
4026.9	Data Base Management Systems	Know how Data can be stored and managed
4026.10	Object Oriented Programming with C++ & JAVA	Know about Objects, Classes, Interfaces and Inheritance
4026.11	Formal Languages & Automata Theory	Learn about Turing Machines and their applicability
4026.12	Information Systems & Organizational Behavior	Know about the role of Organization and its impact on individual behavior
4026.13	Data Base Management Systems Lab	Query and extract relevant and specific information from databases efficiently
4026.14	Object Oriented Programming	Understand and Apply Object Oriented Concepts in C++ and JAVA
	Lab	
4026.15	Computer Networks	Basic Network Topologies and Protocols
4026.16	Artificial intelligence and Expert Systems	Knowledge and Intelligence and how to incorporate the same into machines
4026.17	Design and Analysis of Algorithms	Different ways to design an algorithm efficiently
4026.18	Operating Systems	Structures, Features and important Components of Operating Systems

4026.19	Web Technologies	Know about the various web designing languages and protocols
4026.20	Operating Systems Lab	Acquaintance with Unix lab environment
4026.21	Web Technologies Lab	Web Designing and Protocol Implementation
4026.22	Information Security and Cryptography	Basic attacks on networks, security measures and current security applications
4026.23	Operations Research	Various aspects of Optimizing problems
4026.24	Computer Graphics	Graphical designing for better visualization
4026.25	Object Oriented Software Engineering	Software Development Life Cycle Models, coding, testing and deploying Software
4026.26	Data Warehousing and Data	Storing Large Databases and Retrieving from the same using algorithms
	Mining	
4026.27	Object oriented software Engineering Lab	Implement object oriented and UML concepts and develop a software package
4026.28	Data Mining using R Programming Lab	Mining algorithms in R Studio
4026.29	Wireless and Adhoc Networks	Routing and Connection of various Adhoc and Wireless Networks
4026.30	Cyber Security	Information security, Cyber Laws, Cyber Security Policies and Cyber Management
4026.31	Big Data Analytics	Big Data, Hadoop, Map Reduce Technologies
4026.32	Cloud Computing	Cloud architecture, SaaS, PaaS, IaaS and migration to Cloud
4026.33	Software Testing and Quality Assurance	Software Testing tools and SQA standards
4026.34	Advanced Programming : Cyber Security and Data Analytics Lab	Implement Cryptography algorithms, Install and run Hadoop and Map Reduce
4026.35	.NET Lab	Online applications with database connectivity
4026.36	Project Work	Apply entire course knowledge to design and develop a genuine working package

Course code	Course Name	Course Outcome
B.A – HISTORY – Programme Code - 1011		
1011.1		Know about Early man and Indus valley Civilization

	Indian History and Culture up to 647 AD	<p>About Vedic Civilization, Heritage and culture</p> <p>16 Mahajanapadas</p> <p>Understand Graiku Invasions and Centerlization of states during Moryas</p> <p>Know about Golden age of Guptas. Harshavardhana</p>
	Credits : Theory periods 60 minutes per week over a semester.	
1011.2	Indian History and Culture from 647 to 1526	<p>Studying a brief political survey of South Indian Samgama age, pallavas, Chalukya's, Rastrakutas art and Archetecture</p> <p>Know about village Administrative of Chdas, Rajputs, Muslim</p> <p>Learn the Age of Delhi Sultanate and Muslime Culture</p> <p>Learn the Impact of Islam on Indian Society and Culture</p> <p>Studying Vijayanagara Empire and their Culture</p>
	Credits : Theory periods 60 minutes per week over a semester.	
1011.3	Indian History and Culture from 1526 to 1761	<p>Studying the Survey of the Source Moughal and Marothas</p> <p>Studying Second Afghen Empire - Shershow Achievement and his Administration</p> <p>Learn Administration and Deline of Moughal Empire</p> <p>Know about Society, Economy, Agriculture trade and commerce, Religion and Hindu, Muslima relations</p> <p>Know about Rise of Marathas : Sivaji Age of Peshawar</p>
	Credits : Theory periods 60 minutes per week over a semester.	
1011.4	Indian History and Culture from 1757 to 1964	<p>Studying Advent of European Powers, Indian under East India Company</p> <p>Studying Anti Colonial upsurge. Peasant and Tribal movements - Pavoll of 1857</p>
	Credits : Theory periods 60 minutes per week over a semester.	
		Studying - Factors of Socian changes Indian penaisance : Socio Religious Movements
	Credits : Theory periods 60 minutes per week over a semester.	

		Know about Indian National Movement
		Studying Emergence of Communal Trends Independent India ites per week over a semester.
1011.5	History of Modern world 1453 to 1821	Studying Feudalism - Geographical discoveries
		Know the Renaissance Movement Peformation and counter Reformation Movements
		Learn Emergence of Nation States
		Studying the French Revoluation
	Credits : Theory periods 60 min	ites per week over a semester.
1011.6	History and Culture of Andhra Peoes from Satavahanas to 1857 AD	Learn Andhra during 12th and 13th Centuries A.D. Kakateyas and the age of Reddy Kingdoms.
		Learn Andhra Between 14th & 16th countries A.D. Vijayanagara Empire
		Learn Andhra through 16th and 17th Centuries A.D. the Qutcub Shahis of Golkonda
		Learthe 18th and 19th Centuries in Andhra East Indian Company's Authority
		Learn 18th and 19th Centries in Andhra Impact of Company Rule in Andhra
		Land Revenue Settlements Impact of 1857 Revenue in Andhra
	Credits : Theory periods 60 min	ites per week over a semester.
1011.7	History of Modern Europe (From 19th Century to 1945 A.D.)	Learn about Industrial Revoluation
		Studying Unification Movements in Italy & Germany
		Studying Communist Revolution Russia
		Know about world war I and League Nations
		Studying World War II Fascism & Nazism and the United Nations
	Credits : Theory periods 60 min	ites per week over a semester.

1011.8	Cultural tourism in Andhra Pradesh	Know about the concepts of Tourism
		Know the Types of Tourism
		History and Tourism
		Studying Planning and Development of A.P. Tourism
		Studying Modalities of Tourism
Credits : Theory periods 60 minutes per week over a semester.		
1011.9	Popular movements in Pradesh	Learn for compitatives Social and Self respect Movements
		Studying Freedom Movement in Andhra (1885-1920)
		Studying Freedom Movement in Andhra (1920-1947)
		Studying Movement for separate Andhra State (1953)
		Learn about Movement for formation of Andhra Pradesh (1956)
Credits : Theory periods 60 minutes per week over a semester.		
1011.10	Contemporary History of Andhra Pradesh (1956-2014)	Know about Socio, Economic changes in Andhra Pradesh
		Learn the Growth of Lebtist Ireology
		Learn the Dalit Movement
		Studying early trends towards Bifurcation
		Credits : Theory periods 60 minutes per week over a semester, Studing Bifurcation of Andhra Pradesh Power Politics

Course code	Course Name	Course Outcome
B.Com., Commerce – Programme Code – 3030		
3030.1	Accounting 1	Preparing Financial Statements in Accordance with Journal Accepted Accounting Principles
		Preparation Cash Book to various concernce.
		Effectly define the needs of the various usess of Accounting data
3030.2	Business Organization & Management	Create Strategies tailored to a team to improve employee engagement

		Develop actionable plans address your most significant Management challenges
		Lead with strength as a Manager
3030.3	Business Economics	Apply the concept of opportunity cost
		Employ marginal analysis for decision making
		Analyze causes and consequences of unemployment inflation and economic growth
3030.4	Accounting II	Recognize and understand ethical issues related to the accounting profession
		Preparation of Profit or loss in consignment Accounts
		Learning depreciation methods in Accounting standards
3030.5	Business Environment	Outline how an entity operates in a business environment
		Describe how financial information is utilized in business
		Know how political, legal and Social factors impact on Business
3030.6	Business Economics – II	Able to analyse Economic behaviour in Practice
		Perform cost benefit analysis for making consumer behaviour
		Behaviour theory on consumer surplus
3030.7	Corporate Accounting	Discern the Financial position of a company
		Identify the new format of Balance sheet as per revised schedule VI in company Act 2013
		An understanding of the Principles of Accounting for investments in associates.
3030.8	Business Statistics	Statistical reasoning and international methods
		Data analysis using statistical computing tools and software
		Probability and the mathematical foundations of statistics
3030.9	Banking Theory & Practice	To carry out Financial analysis of banks and insurance companies
		To keep up with developments in Financial markets
		To improve knowledge on Banking and Insurance concepts and to gain an insight on Financial Services
3030.10	Accounting for service organization	Preparation of Financial position of a Banking companies
		Preparation of the double Accounting system in Electricity Companies

		Prepare Financial Statements in Insurance Companies
3030.11	Business Law	To impart knowledge of the important business laws along with relevant case laws.
		To develop knowledge about various Agreements and contracts and also various modes of Discharge of contracts.
		To acquire knowledge about sale of goods Act, 1930, conditions and warranties, contract of sale and Agreement to sell, cyber laws etc.,
3030.12	Income Tax	To get knowledge about the Income Tax Laws and also basic concepts of Income Tax
		To get information how to calculate Income from salary, deductions from Salary
		To know about Income from Salary and other sources, capital gains, calculation of total Income and Individual Income and Assessment
3030.13	Cost Accounting	Apply cost accounting, Methods to evaluate and project business performance
		To develop knowledge and understanding of the operations and maintenance of cost systems
		To prepare Financial statements in accordance with general accepted Accounting Principles
3030.14	Commercial Geography	Evaluating the impacts of human activities on Natural Environment
		To improve student understanding of Indian Geography
		To develop the skills to locate important latitudes and longitudes passing through India
3030.15	Central Banking	To develop knowledge about Banking system in India, Central Bank and R.B.I
		To acquire knowledge about evolution of Central Bank, Functions, Credit control methods followed by Central Bank
		To know about Reserve Bank of India. Functions and objectives of RBI, monetary policy CRR,CLR,SLR, Repo rate, currency circulation Bank rate, Inflation, Foreign Exchange rates etc.,
3030.16	Rural and Form credit	To obtain knowledge in Rural credit policies, classification of Rural Credit, GCC Financial Inclusion.

3030.17	Business Leadership	To get knowledge in Rural Credit Agency farm credit, Kisan Credit Cards (KCC) principles of Farm credit.
		To study farm credit Analysis, Analysis of 3 Rs. Analysis of 3 c's of credit, Rural Credit Survey Report
		To Develop knowledge about Business leadership, Traits, skills and styles
		To get knowledge about taking Decision making Leadership practices, organisational culture
		New profiles of a few inspirational leaders in Business, JRP TATA, Aditya Birla, LN Mittal etc.,
3030.18	Project work – I	To aim at educate the students what is project work and its concepts and obtaining knowledge how to prepare project work
		To objective of the project is to get real knowledge about the constitution of Bank and their functions
		To know the Activities, Loans sanctions interest rates and functions and also loan recoveries adopted policies by the Banks like SBI, HDFC etc.,
3030.19	Marketing	identity care concepts of Marketing and Role of Marketing in

		Knowledge of Social, Legal, ethical and Technological forces on Marketing Decision making
		Ability to develop Marketing strategies based on product, price, place and promotion
3030.20	Auditing	To impart knowledge pertaining to basic concepts of Auditing
		To acquire oneself with auditing procedures and Report writing
		Recognize circumstances providing for increased exposure to fraud and define preventive internal control measures
3030.21	Management Accounting	To acquire knowledge in Management Accounting, Financial Statement analysis and interpretation
		To gain knowledge about Ratio Analysis, Liquidity, Profitability and also solvency Ratio
		To know about cash Flow statement, Fund flow statements and Break-Even - Analysis
3030.22	Financial Services	To impart knowledge to study Financial services system adopted in India in order to assist

		To get knowledge about Banking and Non-Banking companies, venture capital and De-mart services etc.,
		To know about credit Ratings, Types and symbols, Crisil, Care, NSDL, CSDL and Mutual funds etc.,
3030.23	Marketing & Financial Services	Learning outcomes, after studying this courses, you should be able to unddrstand and indentify customers, consumers and clients and their needs and expectations
		Honours Bachelor of Business administration recommend profitable B2 B and B2 C customer relations management strategies that are consistent with organisational marketing objectives
		Communicate the major concepts in the functional areas of accounting, marketing, Finance, information technology and Management
3030.24	Project Work – II	To Develop the knowledge in Financial services rendered by Banking and Non-Banking activities prepared by the students as a project
		To get knowledge throug Project Work done by the students in the field of lease nad High purchase of some organisation like BAJAJ, SONO VISION etc.,
		To get knowledge in CREDIT CARDS, NSDL, CSDL etc.,

IDEAL COLLEGE OF ARTS AND SCIENCES

(AP State Government Aided, Autonomous, NAAC Accredited B⁺⁺)

Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., Mathematics – Programme Code – 2020

Course Code	Paper Title	Course Outcome
2020.1	Differential equations	1.The play a vital role in solving different problem comming across Science and Technology.
		2.Various methods of solving equation right rom Linear differential equation to change of variables.
		3.Acquiring Techniques dealing orthogonal Trajectories
		4.Dealing Higher order linear differential equation and solving them.
		5.The methods of solving non Homogeneous linear differential equation with constant Coefficients..
		6.The methods of solving variation of parameters. Lenear differential equation with non - constant Coefficients and cauchy eulers equation.
Credits : 6, Theory periods of one hour duration per week over a semester & 5 credits.		
2020.2	Solid geometry	1. Algebric equations of three Dimensional geometric aspects.
		2.The properties of planes with assigned algebraic equation.
		3.Right line - understanding the concept of Shortest distance between two lines in a space.
		4.Describe equation of sphere through 4 points understanding the concepts of Tangent planes polar planes.
		5.Cones : Equation of a cone getting idea of enveloping cone and cone having three mutually Perpendicular generators.
		6.Developing the ideas of Reciprocal cones, Right circular cones and euqation.
Credits : 6, Theory periods of one hour per week over a semester.		
2020.3	Abstract Algebra	1.Develop abstract thinking and has application in Chemistry.
		2.Develop the ideas from binary operations to groups and properties.
		3. Develop the idea of subgroups and union and inter section of sub groups.
		4.Describe the concepts of Quotient groups and their orders.

		5. Classify the differences of sub groups and normal subgroups.
		6. The ideas of "Homomorphism" inomorphim and kernal leading to the establishment of fundamental therorem of 'Homomorphsm' and cycle groups.
	Credits : 6, Theory periods of one hour duration per week over a semester.	
2020.4	Real Analysis	1. Inculcates critical thinking to lead a meaningful life with logic and rationality.
		2. Understanding basic properties of real numbers, sequences of numbers with limits. Bounded, Unbounded, Increasing, decreasing nature of sequences.
		3. Infinite series Identifying the relation between an infinite series and corresponding sequence. Deriving various tests like p-test, nth root test etc... to decide the nature of the series in terms of convergence or divergence.
		4. Continuity : Discussing existance of limits of Real valued function and continuous function.
		5. Mean value theorem : Describe the graphical meaning of derivatives using mean value theorems.
		6. Riemann Integration : Establishing necessary and sufficient condition for Rieman Integral .
	Credits : 6, Theory periods of one hour duration per week over a semester.	
2020.5	Ring Theory and vectn calculs	1. Vector calculs has may application in Physics and Mechanical Engineering.
		2. Idea of Ring Theoriey to the algebric stauctures field, sub rings and ideals.
		3. Homomorphism of rings.
		4. To find directional derivation of a fn along a tangent to a given curve.
		5. Findind volume intigrals and surface intigrals.
		6. Application of vector Integration using Gauss, green and stokes theorems.
	Credits : 6, Theory periods of one hour duration per week over a semester.	
2020.6	Linear Algebra	1. Application in Computer graphis and Gryptography.
		2. Vectorspaces - understanding algebra of subspaces and linear span, Linearly independent and dependent vector.
		3. Dimension of a Quotient space.
		4. From L.T def to Rank - nullity theorem.
		5. Application of L.T to catch up to the ideas of computer graphics and cryptography.

		6.Knowing the concepts of inner product spaces upto gram schmidt Orthogonalisation process with different inequalities and identities.
	Credits : 6, Theory periods of one hour duration per week over a semester.	
2020.7	Numerical Analysis	1.Generating error formula and finding relative error and percentage error find solution of algebraic and Transcendental equation with different methods.
		2.Interpolation of physical data estimating different function values at intermediary values of x
		3.Linear and non linear curve fitting,
		4.Dealing numerical differentiation and Integration methods for a discrete data, where ordinary calculus can not be applied.
		5.Solving numerical solutions of differential equation where standard methods have restrictions.
	Credits : 6, Theory periods of one hour duration per week over a semester.	
2020.8	Advanced numerical Analysis	1.Derive appropriate numerical methods to evaluate derivative at a point.
		2.Develop appropriate numerical methods to solve differential equation.
		3.Solve a linear system of equation using numerical methods.
		4.Derive numerical methods to calculate definite Integrals.
		5.Develop curve fitting methods.
	Credits : 6, Theory periods of one hour duration per week over a semester.	
2020.9	Special functions	1.To solve linear differential equation using power - series methods.
		2.Obtaining solution of Legendre's (second order) differential equation.
		3.Deriving Bessel function and properties like orthogonality and recurrence relation.
		4.Laguerre and Hermite polynomials with series solution and properties.
		5.Beta, Gamma function and their relation.
	Credits : 6, Theory periods of one hour duration per week over a semester.	
2020.10	Project work	Project work

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Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., English – Programme Code – 1001, 2001, 3001

Course Code	Paper Title	Course Outcome
1001.1 2001.1 3001.1	* "Knowledge Society" A.P.J.Abdul Kalam	* Knowledge leads to wealth generation.
		* Indian is a land of knowledge and it must be redicover.
		* Knowledge has many forms.
		* It is acquired through education, information intelligence and experience.
	* "The language of African Literature" Nagugiwa Thiongo	* English language and literature was taking the Africans further and further from themselves to otherselves from their world to other world
		* Colonial alienation.
	* "Road not Taken" - Rober Frost	* Importance of taking risks and follow one's heart in life even if the path is seemingly uncoventional.
		* Right decision leads to success.
	* "Night of the Scorpion" - Nissim Ezekiel	* Superstition of Indian people.
		* Peasants help to suffering mother.
		* Father's rational thinking.
		* Mother's everlasting love towards children.
1001.2 2001.2 3001.2	* "Scientific point of view" J.B.S.Haldane	* Science affects the average man and woman.
		* Science helps to solve Social, Economics and health problems.
		* It directs people in many ways.
		*Scientific knowledge is essential for all human.
1001.3	" On shaking hands " - A.G.Gardiner	* Shaking hands is an ingrained custom.

2001.3 3001.3		* Advantages and disadvantages of shaking hands.
		* Different modes of greetings when we meet or part.
	Ode to Autumn - John Keats	* The greatest Romantic poet.
		* It is a season of mists and mellow fruitfulness.
		* Poets love towards nature and its beauties.
		* Poet uses imagery to appeal to our senses.
	* "I am not that woman" - Kisnwar Naheed	* Gender bias.
		* Male domination.
		* Discrimination, Commodity.
		* Raised voice against Discrimination.
		* Crushed on the name of customs and traditions - equal opportunities.
	* "The boy who broke the Bank" - Ruskin Bond	* Suspense and humour.
		* Rumours leads to misunderstanding and destruction.
		* Misled people.
		* Sound bank collapsed.
	* "Half a Rupee worth" - R.K.Narayan	* Serves a good introduction to Indian life.
		* Impact of war on business.
		* Corrupt practices.
		* Subbaiah's growth and sudden demise due to fate.
		* We can calculate the worth of a person's life.
* "The Proposal" - Anton Chekhov	* Causes and effects of extreme emotions.	
	* Cultural awareness.	
	* Understand the style of presentation of a common theme.	
	* We can gain negotiation skills.	
1001.4 2001.4	* "Shyness, My shield" - M.K.Gandhi	* Studied law and became a member in vegetarian society.
		* He turned a disadvantage in him into an advantage.

3001.4		* His hesitation taught him economy of words.
		* Silence is a part of spiritual discipline and votary of truth.
	* "Why people Really Love Technology" - Alexis madrigal Genevieve Bell	* Techology changed the world
		* 44% to 45% of women are using internet in the world.
		* Social networking sites are useful for communication.
		* Get information without spending money.
		* Sea of changes in the world with technology.
	* "On upon a time " - Gabriel Okara	* The poet feels sorry for the ancient African culture is not seen now.
		* Once upon a time they used to laugh with their hearts and eyes, but now they only laugh with their teeth.
		* Once they used to shake hands with their hearts, now they shake hands without heart.
		* Human relationships have become commercial that depend on loss or gain.
		* Enphasing on values and morals.
	* "Digging" - Seamus Heaney	* Value of manual labour of forming community.
		* Farmers provide food to the people.
		* Father, Grand father did manual labour with a sade.
	* Their strength is praiseworthy as diggers.	
	* The poet is not digging with spade like his father and grand father, but with a pen.	
1001.5 2001.5 3001.5	* "The Interpreter of Maladies" - Jhumpa Lahari	* Cultural differences between India and America
		* Selfishnes and indifference of mother towards her children.
		* Communication gap and dissatisfaction.
	* "My beloved charioteer" - Shashi Deshpande	* Relationships of mother, grand mother and daughter.
		* Mother daughter relationship and women's role as a wife.
		* Three geeration of three women.
		* Three different mind sets living together.
		* Positive change.
	*"Kanya Sulkam" - Gurajada Appa Rao	* Social satire.

	* Social evils - men control women.
	* No freedom for women, no education.
	* Child marriages, bride price
	* No widow remarriages.
	* Social reformation.

M.B.A. HRM, Finance, Marketing Programme Codes : 4030, 4031, 4032

Course code	Course Name	Course Outcome
4030.1 4031.1 4032.1	Perspectives of Management	<ol style="list-style-type: none"> 1. The objective of the subject is familiarizing the students with basic principles and practice of Management which is essential for entrepreneurs as well as employees. 2. The subject is designed in such a way which introduces the concept of management in initial units and its practical implications in the following units. 3. In the first and second chapters evolution and basic principles are introduced to the members. 4. In third and fourth units various day to day functions of management are explained 5. in the last unit control mechanism for effective functioning of the organization along with case studies is discussed. <p>Credits: 4 Theoretical period of 4 hours per week over a semester</p>
4030.2 4031.2 4032.2	Accounting for Managers	<ol style="list-style-type: none"> 1. This subject is very significant any organization apart of financial decision making. Management accounting provide needful accounting information for preparation of financial statement i.e. Trading Account, Profit and Loss account and Balance Sheet. Management accounts are responsible for identifying collecting, measuring, analyzing and communicating information to the management. 2. Cost accounting is branch of accounting which deals control of cost preparation of cost sheet and it helps preparation of budget. The students are able to understand methods of costing, Element of cost, marginal costing techniques ie. BEP , CVP analysis. 3. The marginal cost statement is basic document format for management accounting.

		<p>4. The objective of management accounting is to help managers active the mission and strategies established for business enterprises.</p> <p>5. Budgeting is a formal process of financial planning and control. Budgeting control measure for performance of various department . The concept of Zero base budgeting is not adjusted in Indian Scenario due to cost product analysis basis.</p>
		Credits 4. Theoretical periods of 4 hours per week over a semester
4030.3 4031.3 4032.3	Business Environment	<p>1. The objective of the subject is familiarize the students with domestic as well as international business environment in the light of globalization.</p> <p>2. Scope, important, challenges of Indian as well as International environment are discussed in detail.</p> <p>3. Competitive act, changes in business environment, challenges of sustainable development are explained.</p> <p>4. Balance of payment, Trade Theories, Barriers of trade, Exchange rate mechanism are discussed.</p> <p>5. Detailed knowledge regarding globalization, MNC's , Economic integration, Opportunity and threats are elaborately discussed with the help of case studies.</p> <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
4030.4 4031.4 4032.4	Managerial Economics	<p>1. To understand nature and scope of managerial economics and able to distinguish profit maximization vs wealth maximization.</p> <p>2. Understand the concepts relating to demand analysis which includes determinants of demand, Law of demand and elasticity of demand.</p> <p>3. Understand the concept relating to production analysis like production function and economics of large scale.</p> <p>4. Able to understand all types of market structure.</p>
		<p>5. Understand National Income concepts like inflation types and causes of inflation and measures to control inflation.</p> <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>

<p>4030.5 4031.5 4032.5</p>	<p>Managerial Communication Skills</p>	<ol style="list-style-type: none"> 1. The objectives of this course is to develop communication skills through equipping the students with the necessary techniques and skills. 2. In this course the first chapter deals with improving verbal and non verbal communication skills and developing listening skills. 3. Managing organization in that formal and informal intra and inter personal communication are discussed. 4. Managing motivation to influence interpersonal communication, Interpersonal perception, Role of emotion in inter personal communication are discuss. 5. Business writing skills, oral presentation, meeting report writing structure and organization of press report are discussed in the remaining chapters 6. The ultimate objective of this subject is to inspire them and enlight their actives and willing cooperation in the performance of their jobs <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
<p>4030.6 4031.6 4032.6</p>	<p>Organisational Behaviours</p>	<ol style="list-style-type: none"> 1. Able to understand challenges and opportunities of organizational behavior and identify foundations of individual behavior 2. Understand motivation and leadership theories and its effect on individual performance. 3. Identity organisational conflicts, its causes and consequences and resolving conflicts. 4. Understand the significance of organisational change and learn how change leads to orgnisatonal development.
		<ol style="list-style-type: none"> 5. Understand the concept of organizational culture and its components and know how to create and ethical organsiation. <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>

4030.7 4031.7 4032.7	Quantitative Techniques for management	<ol style="list-style-type: none"> 1. To get familiarized in mathematical and statistical techniques and their application in business decision. 2. The first chapter contains introduction of quantitative techniques and their scope, functions which helps the student to create basic idea about statical techniques. 3. Second chapter contains central tendency, correlation and regression. It gives basic knowledge of variables and how these are interrelated and find degree of correlation bm variables by using different mathematical techniques 4. Third chapter deals with probability and probability distribution. It make student to understand the basic concept of uncertainty and how to deal with uncertainty in business decision making. 5. Last fourth and fifth chapters are designed with testing of Hypothesis. It deals with sampling techniques and practical implementation of sampling techniques using z, t f and chi tests Credits 4. Theoretical periods of 4 hours per week over a semester
4030.8 4031.8 4032.8	Marketing management	<ol style="list-style-type: none"> 1.To understand importance and scope of marketing Management and marketing management tasks 2.To understand the role of marketing information system and Marketing Research in Marketing decisions 3. Understanding Consumer Environment and Customer buying decision process 4. able to design and develop marketing mix strategies using the elements product, price, place ,promotion 5.Desigining and managing marketing communications and promotion mix strategies and to observe emerging trends in marketing
		Credits 4. Theoretical periods of 4 hours per week over a semester

<p>4030.9 4031.9 4032.9</p>	<p>Financial Management</p>	<p>1.This subject is very important to the students with to learn the basic principles of Financial Management and Techniques</p> <p>2. Financial Management helps to the Business Enterprise for the purpose of resource mobilization and funds allocation. It is concerned with acquisition, Financing and Management to asset to achieve organizational goals</p> <p>3.Fiancial Management goals are wealth maximization and profit maximization which is related to the financing mix and capital structure</p> <p>4.Funds flow and cash flow statement are analyzed by the firms for working capital position and changes of statement of working capital</p> <p>5.Captial Budget techniques’ are used for long term investment projects</p> <p>6. Dividend decisions related to dividend policies ,payment of dividend represents the financial position of firms</p> <p>7.Fiancial Management helps the firm for funds moblisation through capital formation and leads to efficient investment decisions</p> <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
<p>4030.10 4031.10 4032.10</p>	<p>Human Resource Mangement</p>	<p>1. The subject aims at inculcating and developing human resource management skills. The growing importance of human resources for the success of the organization can’t be ruled out. Even intellectuals and top level management are involving HR managers in the strategic decision making of the organization.</p> <p>2. As part of the subject introduction, importance and planning of the human resources is elaborately discussed.</p> <p>3. This part helps in benchmarking the skills, qualifications and job specifications.</p> <p>4. Measurement of performance and identification of training and development needs and maintenance of harmonious relations in the industry are discussed elaborately in the later units.</p>
		<p>The subject helps the students to acquire the skills to manage the human resources in an optimum manner and enhance the returns of the organization</p> <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>

4030.11 4031.11 4032.11	Operations Management	1.Able to differentiate between production and operation management and understand types of manufacturing systems and role of production and operation manger. 2. Identify different stages in production planning and control 3. Clearly understand the concepts of Plant location and plant layout and identify material handling equipment 4.understand the concept of productivity and factor effecting productivity 5.Understand the concept of material management which includes material requirement planning ,economic orde5r quantity ,ABC analysis and just in time production Credits 4. Theoretical periods of 4 hours per week over a semester
4030.12 4031.12 4032.12	Computer Application in Management	1. The objective of the course is to provide an insight into basic features computer systems and applications in managerial decision making 2.First chapter deals with introduction to computer concepts and elements of computer and basic computer architectures 3.Applications of MS-Word in business correspondence letter ,tables, mail merge and calculation various financial function 4.This chapter deals with MS power point ,creation of slides ,animation, slide show control and customizing presentations 5.Over view of networks communication processors ,media, network topologies and network protocols Credits 4. Theoretical periods of 4 hours per week over a semester
4030.13 4031.13 4032.13	Operations Research	1. To make student familiarize with principles and techniques of operations research in business decision making to optimize the profits

		<ol style="list-style-type: none"> 2. As a part of this course, first deals with linear programming, graphical method, simplex method and big M method. It gives student an opportunity to go insights of business operations and reduce the operational cost. 3. It deals with transportation and assignment methods which involves in allocation of right person at right place/ project. 4. It deals with dynamic programming, game theory which makes student learn how to reduce operational cost and get maximum profits. 5. Rest of fourth and fifth chapters deal with queuing theory, non linear programming project management techniques like PERT and CPM <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
<p>4030.14 4031.14 4032.14</p>	<p>Research Methodology for Management</p>	<ol style="list-style-type: none"> 1. This subject provided basic understanding of research methodology and their application of modern analytical tools and techniques for the purpose of business decision making. 2. First chapter deals with research process & types of researches which helps students to know how to conduct a research in practical. 3. Second chapter creates an awareness about sampling techniques. 4. Third and fourth chapter deals with data collection, preparation of questionnaire and collect data regarding research object. 5. Fifth chapter deals with non parametric test by using mathematical techniques like multi regression analysis, sign test, median test. <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>

4030.15 4031.15 4032.15	Entrepreneurship	<ol style="list-style-type: none"> 1. The objective of this course is to expose the students to the subject entrepreneurship and small business manager. So as to prepare them to establish and a new enterprise and effectively manage the same. 2. Importance, characteristics and qualities of entrepreneurship are discussed in the first chapter. 3. In the second chapter role of government, role of IDBI, NIESBUD, financial institutions, commercial banks, Entrepreneurial development institutions, commercial banks, entrepreneurial development institutes are discussed. 4. The third chapter deals with training programme to inculcate entrepreneurial spirit. 5. Women entrepreneurship role and importance, creativity and entrepreneurship sources and methods of ideas planning are discussed in the remaining chapters. <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
4030.16 4031.16 4032.16	VUCA Management	<ol style="list-style-type: none"> 1. Volatility, Uncertainty, complexity and ambiguity are the burning problems of the day in business circles. Bottlenecks and cutthroat competitions have become quite common in the globalization era. 2. Management experts and strategists are working day and night to resolves these issues. 3. Basic idea about the derivatives market to hedge the financial risk is discussed here. 4. The objective of introducing the subject is preparing the future managers with proper understanding of the business fluctuations and uncertainties and making them prepared with the counter strategies to meet the VUCA environment. 5. Various possible uncertainties in the areas of marketing, finance, production and technology are elaborately discussed and thorough knowledge is provided in solving the issues. <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>

<p>4030.17 4031.17 4032.17</p>	<p>Corporate Legal Frame Work</p>	<ol style="list-style-type: none"> 1. The objective of the course is assisting the students in understanding the corporate laws affecting the operations of business environment 2. Knowledge in the areas of Contract Act. essentials of a valid Contract, Breach of Contract are elaborately explained. 3. Difference between Sales and Agreement to Sell, Transfer of Ownership are explained 4. Contract of Agency, Negotiable Instruments Act Partnership Act, Dissolution of Partnership are discussed. 5. Detailed Knowledge of Companies Act ,Articles and Memorandum of Association ,Shareholding patterns, Winding of Company are discussed <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
<p>4030.18 4031.18 4032.18</p>	<p>Strategic Management</p>	<ol style="list-style-type: none"> 1. Able to identify the difference between Business Policy and Strategic Management 2. Understand types of generic strategies available to achieve firm's long term objectives. 3. Able to do Environmental Analysis and Spot various opportunity available and threats posed to a company. Also identify internal Strengths and Weakness. 4. Understand the concept of Mckinsey's 7'S Frame work and its importance in strategy implications 5. Understand the criteria and characteristics of effective evaluation system in strategy control. <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
<p>4030.19</p>	<p>Industrial Relation (ELECTIVE) 2012-18</p>	<ol style="list-style-type: none"> 1.The objective of this course is to enlighten the principles and practical application Industrial relations 2.In this course first chapter deals with basic concepts of Industrial relation and their functional practices in organisation 3. Second chapter makes the student understand the Trade unionists and their movements. The role of Trade union in Industries

		<p>4. As a part of the course third chapter deals with promotion of Harmonious Relations and Machinery for prevention and settlement of Industrial disputes. Students get aware of different practices like Conciliation, Adjudication and arbitration in settlement of Industrial disputes.</p> <p>5. Fourth and Fifth chapters deals with Grievances handling and collective bargaining practices it make student to know how these practices like collective bargaining practices it make student to know how these practices like collective bargaining ,participative management helps in organisation to improve performance of employee and reduce Industrial disputes</p>
		Credits 4. Theoretical periods of 4 hours per week over a semester
4030.20	Compensation and Welfare Management (ELECTIVE) 2012-18	<ol style="list-style-type: none"> 1. The objective of this subject is familiarizing the students with the concepts of compensation and welfare in industrial sectors. 2. It helps in designing the competitive pay to attract and retain skill in the organization in a cost effective manner. 3. Concepts of performance linked pay, executive compensation and various new trends in compensation decision are introduced here. 4. Various enactments regarding compensation fixation and legal proceedings in violation of these enactment are introduced. 5. Provision and maintenance of basic amenities and intra and extra mural welfare activities are introduced here.
		Credits 4. Theoretical periods of 4 hours per week over a semester
4030.21	Performance Management and Counseling (ELECTIVE) 2012-18	<ol style="list-style-type: none"> 1. The Objective of the course is to enlighten the students with the concepts and strategies of performance management and counseling 2. In the first chapter topics like Introduction and functions of performance management gives clarity about the role of performance Management in Organisation.

		<p>3 .It deals with performance analysis ,factors influencing performance of individuals in Orgranisation and methods for appraisal of performance creates basic idea about how to assess the performance of Individuals and the methods in practice.</p> <p>4.It deals with performance review counseling which helps students to know the advantage of counseling to improve the performance</p> <p>5. Rest of the chapters deal with Training and Development, rewarding performance and the performance management practices used in assessing performance of Individuals like 360-Degree Appraisal, assessment centre</p> <p>Credits 4. Theoretical periods of 4 hours per week over a semeste</p>
4030.22	Strategic Human Resource Management (ELECTIVE) 2012-18	<ol style="list-style-type: none"> 1. Alignment of human resources in corporate as well as business strategies is the latest trend in business circles of globalized era. 2. The objective of this subject is creating awareness in the minds of future managers about the strategic involvement of human resources to gain edge over competitors. 3. Competency building and competency mapping practices of the organization are explained 4. Strategic selection, training, compensation and skill development tools and techniques are studied with the help of case studies. 5. Concepts of human capital, knowledge based economies, talent management practices are explained to train the future managers to get the edge <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
4030.23	International Human Resource Management (ELECTIVE) 2012-18	<ol style="list-style-type: none"> 1.The Objective of the course is to get familiarize with the concepts and strategies of International human resource management. 2. the first chapter deals with introduction of International HRM and the Challenges at International level which gives basic concept knowledge about subject to the students

		<p>3. Second and Third chapter deals with International recruitment and Selection Process and Training and Development of Global Mangers. It helps the student to get aware of different practices of Selection ,Training of Global Employees by different Organizations</p> <p>4. Fourth chapter is designed with concept like Compensation Management. It deals with practical approaches of Compensation in Global Assignments.</p> <p>5. The Last chapter makes an awareness of concept of Industrial Relations at International Level. Student would get an idea how trade union work at international level to protect Global employees.</p>
		Credits 4. Theoretical periods of 4 hours per week over a semester
4031.24	Financial Markets and Services (ELECTIVE) 2012-18	<p>1. This subject enlightens the students to learn concepts of Indian financial system and Impact of Finical growth and economical development.</p> <p>2. To understand structure of Financial system and challenge stock market operations, capital market reforms primary market functioning-closing SEBI functioning.</p> <p>3. Financial services are an integral part of Financial system it has wide scope of mobilization in mutual Funds, Finical Intermediaries, Merchant Banking activities.</p> <p>4. This subject delighted to the student’s new Financial services, Venture Capital, leasing-Hire purchasing assets.</p> <p>5. Credit Rating Agencies like CRSIL, ICRA, CARE FUBH,MOODY’S, ONIDA, provide information about in understanding Risk and Return Factors</p> <p>6. Micro Fiancé concept specially for rural areas and SHG relevant to women Empowerments and Financially gain various segments</p>
		Credits 4. Theoretical periods of 4 hours per week over a semester
4031.25	Security Analysis and Portfolio Management (ELECTIVE) 2012-18	<p>1. The objective of this course is to enlighten the students with the concept and practical application of Security analysis and Portfolio Management.</p>

		<ol style="list-style-type: none"> 2. Concept of Investment and speculation, Investment process, sources of investment, Security Markets like Primary and Secondary are dealt in the chapter 3. Return and Risk measurements types, Intrinsic value approaches to valuation Bonds, Preference Share and Equity shares are included in the second chapter 4. Third Chapter deals with Fundamental and Technical analysis and concept and forms of Market efficiency 5. In the fourth and fifth chapter Elements of Portfolio Management, Portfolio models like Markowitz mode, sharp single Index model and capital Asset Pricing model and Evaluation of Mutual funds are involved.
		Credits 4. Theoretical periods of 4 hours per week over a semester
4031.26	Financial Derivatives (ELECTIVE) 201218	<ol style="list-style-type: none"> 1. The objective of this course is introducing the concepts of innovative financial engineering tools like forwards, futures, options and swaps. 2. Basic idea of hedging strategies is provided and hedging strategies are explained elaborately 3. Growing importance of futures trading is explained and ways of effective trading in futures market is explained. 4. Options trading and multiple option trading strategies to maximize the return are elaborately discussed. 5. Elaborate knowledge of hedging strategies and ways of increasing the return on investment are explained with the help of case studies and live models.
		Credits 4. Theoretical periods of 4 hours per week over a semester
4031.27	Behavioral Finance (ELECTIVE) 2016-18	<ol style="list-style-type: none"> 1. To enlighten the students with the concepts and practical application of Behavioral Finance. 2. In this course first chapter deals with the introduction to Behavioral finance like Nature, Scope, objectives and application, Investment Decision cycle Judgment under uncertainty.

		<ol style="list-style-type: none"> 3. Second chapter deals with utility/preference function expected utility theory and Rational thought: Decision making under risk and Uncertainty 4. Third chapter deals with Behavioral factors and Financial markets like efficient markets Hypothesis etc 5. The remaining chapters deals with Behavioral Corporate Finance and Emotions and Decision making
		Credits 4. Theoretical periods of 4 hours per week over a semester
4031.28	International Financial Management (ELECTIVE) 2012-18	<ol style="list-style-type: none"> 1. This subject is very significant to the students for understanding Global Business Environment view. 2. To understand International Monetary systems through formation of IMF (IBRD, WTO which replaced GATT 3. To enlighten Euro-Market, South East Asian crisis 4. IMF helps the MNC's and PSU relating to International Operations 5. To learn Foreign Exchange market SWAP Accounting exposure and operating systems 6. The objective of International Financial management to observe Euro-Markets ADR's GDR's 7. To understand International multinational Capital Budgeting and Foreign Investment 8. It helps International Accountings Reports, Financial reporting Foreign Currency transactions.
		Credits 4. Theoretical periods of 4 hours per week over a semester
4032.29	Consumer Behavior and Customer Relationship Management (ELECTIVE) 2012-48	<ol style="list-style-type: none"> 1. It makes student understand the Consumer Behaviour why taking purchase decision and application of different practices to maintain relationship with customer. 2. Overview about consumer decision making process and reaction to external environment like legal political technological factors are discussed 3. Able to understand psychological charters of consumer like Perception, Learning etc.,

		<p>4.The third chapter deals with Social cultural and cross cultural factors and family reference groups</p> <p>5.The last chapter deals post purchase behavior how consumer reacts, after using the product it gives an idea to the marketer about consumer satisfaction level and retain customer by using relation methods.</p>
		Credits 4. Theoretical periods of 4 hours per week over a semester
4032.3	Services Marketing (Elective) 2012-18	<ol style="list-style-type: none"> 1. Understand the nature and characteristics of Services 2. Identify s services marketing Mix which includes product ,price, place, promotions ,people, process and physical equipment. 3. Understand Market segmentation , targeting and positioning strategies for services. 4. Exposer to Quality concepts like quality audit and total quality management for services. 5. Understand and differentiate between Internal Interactive , External Marketing and Identify service deficiency and Deficiency Recovery Strategies.
		Credits 4. Theoretical periods of 4 hours per week over a semester
4032.31	Sales and Distribution Management (ELECTIVE) 2012-18	<ol style="list-style-type: none"> 1. To enlighten the students with the concept and practical application of Sales and Distribution Management 2. The First chapter deals with modern trends in Sales Management , Interdepartmental Relations and Orgranisation of Sales Department 3. The Second Chapter deals with analysis of Market potential, Sales Potential , forecasting Sales and Time and Territory management 4. The Third chapter deals concepts like Recruitments, Selection, Training, Evaluation of Salesmen performance. 5. The Final Chapter deals with structure and functions of Marketing channels, Channel design, Managing channel conflicts' and Supply Chain Management
		Credits 4. Theoretical periods of 4 hours per week over a semester

4032.32	Advertising and Brand Management (ELECTIVE) 2012-18	<ol style="list-style-type: none"> 1. The course objective is to enlighten the students with the concepts of Advertising and Brand management. 2. The first chapter deals with Introduction to Advertising, challenges and opportunities in Advertising. 3. The Second chapter deals with media planning ,Media Mix decisions and developing media strategy. 4. The third chapters deals with method of formulating Adverting Budgets, evaluation advertising effectiveness and advertising Agencies. 5. The reaming chapters include direct response advertising .Telemarketing ,Internet Advertising, Brand Management <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
4032.33	Retail Marketing Management (ELECTIVE) 2016-18	<ol style="list-style-type: none"> 1.To enlighten the student concepts and strategies of Retail marketing 2. The First chapter goes in light of concept of Retailing and Special characteristics of Retaining which helps students to know the basic concepts 3. The Second designed to give and idea about retail strategies which involves marketing strategies growth strategies and retail life cycle. 4 The Third chapter deals with retail location it helps student to get knowledge about the locations and site analysis and selection of best location for establishing of Retail outlet. 5 It enables to understand store layout and design, inventory management, and retail pricing strategies. <p>Credits 4. Theoretical periods of 4 hours per week over a semester</p>
4030.34 4031.34 4032.34	PROJECT WORK IN HUMAN RESOURCE MANAGEMENT, FINANCE AND MARKETING	Credits 6. The Student has to undergo project in any related Industry for period of 45 days and submit a Report and attend for VIVA-VOCE Examination by the University.

*** For three programmes in MBA i.e., HRM, Marketing, Finance 7 papers in Ist Semester, 7 papers in IInd Semester , 3 papers in III Semester, 1 paper and Project in IV Semester 1 paper and Project are common to all three programmes. The student opts 4 papers out of 6 papers in III semester and 6 papers out of 9 papers in IV Semester and a total of 10 papers in III & IV semesters basing on their specialization in addition to the above 18 common papers and one project.**

Course code	Course Name	Course Outcome
B.Sc., ZOOLOGY PROGRAMME CODE : 2524		
2524.1	Animal Diversity - Non-Chordates	Acquire knowledge on general taxonomical rules of classification.
		Learns zoological nomenclature of animals
		Classify, identify ,understand various invertebrate phyla
		Gains knowledge on economically important invertebrate animals and their culture
		Aware of invertebrate parasites that parasitize on animals
		Develop observation skills ,diagrammatic skills, identification skills on observation of various spotters
		credits 4 Theory periods of one hour per week over a semester
		1 Practical periods per batch of two hour per week over a semester
2524.2	Animal Diversity - Chordates	Acquire knowledge on general taxonomical rules of classification of chordates
		Classify, identify ,understand various invertebrate phyla
		Learns zoological nomenclature of chordates
		Classify, identify ,understand various vertebrate phyla
		Gains knowledge on migration of fish,birds and parental behavior of amphibians
		Develop observation skills ,diagrammatic skills, identification skills on observation of various spotters
		credits 4 Theory periods of one hour per week over a semester
		1 Practical periods per batch of two hour per week over a semester
2524.3	Cell Biology, Genetics and Evolution	Understand and study concepts of embryology like gametogenesis,types of eggs, cleavage patterns and extra embryonic membranes of animals

		Understand various systems and their functioning in the animal body
		Analyze ,recognize and appreciates the nature laws and interactions of a biotic and biotic
		Perform various physiological ecological practicals which help them to develop experimental skills and research work.
		credits 4 Theory periods of one hour per week over a semester
		1 Practical periods per batch of two hour per week over a semester
2524.4	Embryology, Physiology and Ecology	Gains knowledge on fundamentals of cell, its organelles and their role in living organism
		Acquire knowledge on the basic concepts of gene interactions ,hereditary ,linkages and genetical errors
		Understand the evolution of life and living organisms and various theories related to evolution.
		Learns techniques involved in slide making ,develops investigation skills by solving problems related to genetics and understand the theme of survival of the fittest
		credits 4 Theory periods of one hour per week over a semester
		1 Practical periods per batch of two hour per week over a semester
2524.5	Animal Biotechnology	comprehensive understanding of the principles and practices of biotechnology.
		Gains experimental technical skills in methods of biotechnology.
		Ability to think and solve problems in the field of biotechnology.
		Effectively communicate with biotech and other interdisciplinary professionals.
		credits 3Theory periods of one hour per week over a semester
		2 Practical periods per batch of two hour per week over a semester

2524.6	Animal Husbandry	<p>Describe the state of the animal husbandry profession and potential career opportunities</p> <p>After completing this course student can become entrepreneur</p> <p>Acquires knowledge in the areas of regularly checking animal's living in the area</p> <p>Preparing meals for them and feeding them</p> <p>Take care of their health and providing right medicine for dairy animals</p> <p>Understands the principles of dairy and poultry farm</p> <p>credits 3Theory periods of one hour per week over a semester</p> <p>2 Practical periods per batch of two hour per week over a semester</p>
2524.7	Electives: VIIB Cellular Metabolism And Molecular Biology	<p>Identify the 4 classes of macromolecules, their monomers, and their functions in cells.</p> <p>Describe the CELLULAR METABOLIC PATHWAYS and understand their significance in living organism</p> <p>Discuss energy transfer, enzyme function and the pathways of cellular respiration and protein synthesis.</p> <p>Describe structure and types of DNA and RNA and learns the structure of gene in prokaryotes and eukaryotes..</p> <p>Credits 3Theory period of one hour per week over a semester</p> <p>2 Practical period per batch of two hour per week over a semester</p>
2524.8	Electives VIIB I Principles of Aquaculture	<p>Utilize the developed expertise in concepts, theories, and emerging methodologies to succeed in tackling real-world issues in aquaculture and aquatic science.</p>
		<p>Conduct himself/herself in a manner consistent with an embodied sense of environmental stewardship.</p> <p>Assess, analyze, synthesize, and evaluate information objectively and deal professionally and ethically with clients, the public, and agency personnel</p>

		Demonstrate advanced knowledge and competency in taxonomy and natural history of aquatic flora and fauna..
		Demonstrate hands-on experience in aquatic sampling inventory and measurement techniques.
		Become an independent, self-motivated professional with the ability to recognize problems in their field of aquaculture and aquatic science and apply critical thinking and problem-solving skills.
		Utilize existing technology, products, and services to maximize work efficiency and success.
		credits 3Theory periods of one hour per week over a semester
		4 Practical periods per batch of two hour per week over a semester
2524.9	ELECTIVE: CLUSTER ELECTIVES –VIII-B 2 Aquaculture Management	Understand the structure and functions of aquatic ecosystems
		Observe culture techniques of phytoplankton and zooplankton species
		Understand pond lay-out, construction and preparation
		Learn hatchery and nursery operations
		Understand principles of "closed" aquaculture systems
		Analyze harvesting and marketing strategies
		Learn how to set-up and maintain aquarium systems
		Study of biology and life cycle of cultured species
		Learn various breeding and water quality monitoring techniques
		Study pathogens and diseases and their treatments
2524.10	CLUSTER ELECTIVE: –VIII-B3 : . Postharvest Technology	Understand technologies of post-harvest technology and its role in providing better quality produce to the consumer. Processing and preservation of fish and fish by-products
		Understand utilization of the produce and methods for shelf-life extension Learn storage and cold chain management i.e,Handling and Principles of fish Preservation
		Learns Processing and preservation of fish and fish by-products
		Study Quality Assurance, Management and Certification

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Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., Botany– Programme Code – 2523

Course Code	Paper Title	Course Outcome
2523.1	Microbial Diversity, Algae and Fungi	Understands the nature and basic concepts of microbes.
		To make students to understand the fundamental biology of fungi from molecular and cellular level.
		Students learn how to apply their knowledge to current issues and problems in food production.
		Credits : 4, Theory periods of one hour per week over a semester. Credits : 1, Practical period of two hours per week over a semester.
2523.2	Diversity of Archegoniates and plant Anatomy	Learns to conduct investigation on Evolution process.
		Understands the relationship among non flowering and flowering plants.
		Learns the importance of local timber Develop skills in slide preparation.
		Credits : 4, Theory periods of one hour per week over a semester. Credits : 1, Practical period of two hours per week over a semester.
2523.3	Plant Taxonomy and Embryology	Understands the Taxonomic relation ship between plant groups.
		Analyse the economic importance of cerels, pulses.
		Learn to grow high yielding varieties.
		Develops skills in identification of plant groups.
		Credits : 4, Theory periods of one hour per week over a semester. Credits : 1, Practical period of two hours per week over a semester.
2523.4	Plant Physiology and metabolism	Understands the different metabolisms of plants.
		Learns to apply growth hormones for promotion of plant growth.

		Develop skill to perform procedures as per laboratory standard in the area of Biochemistry
		Credits : 4, Theory periods of one hour per week over a semester. Credits : 1, Practical period of two hours per week over a semester.
2523.5	Cell Biology, Genetics and plant Breeding	Understand the Nature and basic concepts of cell Biology and genetics.
		Demonstrate the knowledge of common and advanced laboratory practices in cell biology.
		Learns the methods of crop improvement.
		Credits : 3, Theory periods of one hour per week over a semester. Credits : 1, Practical period of two hours per week over a semester.
2523.6	Plant Ecology and Phyto geography	Learns about the balanced Ecosystem.
		Understands the loss of Biodiversity.
		Learns to promote Biodiversity.
		Credits : 3, Theory periods of one hour per week over a semester. Credits : 1, Practical period of two hours per week over a semester.
2523.7	Nursery gardening and flori culture	Learns to grow and Manage Nursery.
		Understand the computer application in land scoping.
		Develop skills in propagation methods.
		Learns to become an enterprenuer.
		Credits: 3, Theory periods of one hour per week over a semester. Credits: 1, Practical period of two hours per week over a semester.
2523.8	Plant diversity and Human Welfare	Learns to analyse how the plants can be used for Human Welfare.
		Learns solid and liquid waste management.
		Develops skills in enumerating the avenue plantations and their diversity in local town.

		Credits: 3, Theory periods of one hour per week over a semester. Credits: 1, Practical period of two hours per week over a semester.
2523.9	Ethnobotany & Medicinal Botany	Understand the plant utilization methods by tribal population for their food, medicinal uses.
		Learns the conservation of medicinal plants.
		Develop skill an traditional knowledge about plant medicines.
		Credits: 3, Theory periods of one hour per week over a semester. Credits: 1, Practical period of two hours per week over a semester.
2523.10	Pharmacognosy and Phytochemistry	Learn the Isolation techniques of active principles from various parts of popular medicinal plants.
		Understand to Isolation technique of volatile oils from plant - extraction methods.
		Acquire knowledge about crude drugs.
		Understands the use of medicinal plants in Phytochemistry and Pharmacognosy
		Credits: 3, Theory periods of one hour per week over a semester. Credits: 1, Practical period of two hours per week over a semester.

Course code	Course Name	Course Outcome
B.A – ECONOMICS – Programme Code - 1012		
1012.1	Micro Economics	On Completion of the course the students are able to Understand
		Fundamental concepts of Economics
		Partial and General Approaches in Economics
		Consumer Behavior Utility Analysis-Cardinal and Ordinal Approaches
		Theories of Production.
		Concepts of Costs and Revenue, Break-Even Analysis.
		Credits:4; 5 Periods of One hour per week over a semester
1012.2	Micro Economics	On Completion of the course the students are able to Understand
		Isoquants-Expansion path.
		Price Determination and Equilibrium of various types of Markets.

		Price Determination of Factors of production.
		types of wages and wage differences.
		Aware of Collective Bargaining and Concepts of Minimum Wage
		Rent, Profit and Interest Theories.
		Credits:4; 5 Periods of One hour per week over a semester
1012.3	Macro Economics	On Completion of the course the students are able to Understand
		Macro Economic Analysis.
		Concepts, Estimation and Difficulties in Measuring National Income.
		Functions, Classification and Theories of Money.
		Implementation and Effects of Demonetization in India.
		Theories of Output and Employment.
		Consumption and Investment Functions.
		Credits:4; 5 Periods of One hour per week over a semester
1012.4	Macro Economics	On Completion of the course the students are able to Understand
		Causes and Consequences of Business Cycles.
		Effects and Measures to Control Inflation.
		Advantages and Theories of International Trade
		Stock Markets and Concepts of Insurance.
		Measurement of Economic Development
		Fiscal, Monetary and Exchange rate Policies.
		Credits:4; 5 Periods of One hour per week over a semester
1012.5	Contemporary Indian Economy	On Completion of the course the students are able to Understand
		Trends in Indian National Income.
		Remedial Poverty, Unemployment.
		Occupational Structure in India and in the State of Andhra Pradesh
		Structure, Objectives, Aims and Achievements of Indian PlanningNITI Ayog.
		Agriculture in India and in the State of Andhra Pradesh
		Tax Reforms and GST.

		Credits: 4; 5 Periods of One hour per week over a semester
1012.6	Quantitative Techniques	On Completion of the course the students are able to Understand
		Functions and Importance of Statistics.
		Collection of Data.
		Measures of Central Tendency.
		Measures of Dispersion.
		Measures of Correlation and Regression
		Determination of Matrix.
		Credits:4; 5 Periods of One hour per week over a semester

1012.7	Agricultural Economics	On Completion of the course the students are able to Understand
		Role of Agricultural Sector in Indian Economy.
		Inter-Dependence Between Agriculture and Industrial Sectors.
		Input-Output and product Relationship in Farm Production.
		Growth and Productivity Trends in Indian Agriculture.
		Farm size and productivity Relationship in Indian Agriculture.
		Agro-Industries in Agribusiness enterprises.
		Credits:4; 5 Periods of One hour per week over a semester
1012.8	Agri business Environment in Andhra Pradesh	On Completion of the course the students are able to Understand
		Role of agriculture process in Andhra Pradesh
		Backward and forward linkages of agriculture
		Sources of Agricultural finance
		Trends in exports of Agriculture products
		Structure of Agricultural markets
		Credits 4 : 5 periods of One hour per week over a semester
1012.9	Agricultural Output Marketing	On Completion of the course the students are able to Understand
		Marketing structure of major agricultural products
		Challenges in Agricultural marketing
		Support prices for Agri products
		Inter regional and International Trade in Agriculture

		W T O and Indian Agricultura
		Credits 4 : 5 periods of One hour per week over a semester
1012.10	Agricultural Input Marketing	On Completion of the course the students are able to Understand
		Distinative feature of Agri input marketing
		Strangth and weakness on Indian seed Industry
		Fertilizer, Production and Marketing
		Bio pastisides, role and supply
		Need for the development of Agricultural machanization
		Credits 4 : 5 periods of One hour per week over a semester

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Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., Chemistry – Programme Code – 2022

Course Code	Paper Title	Course Outcome
2022.1	Inorganic & Organic Chemistry	To understand the chemistry of compounds of P-block elements
		To understand the classification, properties and applications of organometallic compounds
		To have a basic understanding about the classification and nomenclature of organic compounds, fundamentals of organic reaction mechanism, aromaticity and stereochemistry
		To make students capable of understanding and studying organic reactions
		To develop skills required for qualitative analysis and inorganic preparations
Credits : 3, Four theory hours per week over a semester. Credits : 2, One Practical class of two hours week over a semester		
2022.2	Physical and General Chemistry	To learn the laws of symmetry
		To learn structures of crystals, to study crystal defects
		To study the intermolecular forces in gases and liquids
		To understand the dynamics of the molecules in the gases and liquids
		To study the liquefaction of gases
		To study valence bond and molecular orbital theory

		To study the behaviour of binary liquid mixtures, CST, azeotropes
		COMPARES THE VB THEORY AND MOLECULAR ORBITAL THEORY
		ABLE TO APPRECIATE THE APPLICATIONS OF COLLOIDS AND ADSORPTION
		understands stereo isomerism of carbon compounds
	Credits : 3, Four theory hours per week over a semester. Credits : 2, One Practical class of two hours week over a semester	

2022.3	Inorganic and Organic Chemistry	To understand the general characteristics of the d and f block elements
		To study the physical and chemical properties of d and f block elements
		To study the methods of preparation, properties, structure and bonding of metal carbonyls
		to understand various theories of bonding in metals
		to study the application of m.o. theory to conductors, nonconductors and Semiconductors
		To study the chemistry of some selected functional groups
		To learn the chemistry of alcohols, phenols, carboxylic acids, derivatives of Carboxylic acids
		To understand and study Organic reaction mechanisms.
		To study the preparation and applications of active methylene compound
		To develop skills in different laboratory titrations
	Credits : 3, Four theory hours per week over a semester. Credits : 2, One Practical class of two hours week over a semester	
2022.4	Spectroscopy and Physical Chemistry	To understand laws of absorption and applications of Spectrophotometry
		To study the principle and applications infra red, electronic and magnetic resonance spectroscopy Under stands the application of colligative properties in the determination of molecular weight
		Understands heterogenous equilibria and the application of phase rule

		To derive the phase rule, To study the phase diagrams of one and two component systems understand and apply the concepts in electrochemistry
		Gains knowledge of principles of electrolysis and galvanic cells
	Credits : 3, Four theory hours per week over a semester. Credits : 2, One Practical class of two hours week over a semester	

2022.5	Inorganic, Physical & Organic Chemistry	To study the Werner's theory of coordination compounds, isomerism in metal complexes
		To understand the properties and applications of coordination compounds
		To study the stability of metal complexes
		To understand and study mechanism of reaction of nitrocompounds and amines
		To study the laws of thermodynamics
		To understand the temperature dependence of enthalpy
		To derive Carnot's theorem
		Credits: 3, three theory hours per week over a semester. Credits: 2, one practical class of two hours per week over a semester
2022.6	Inorganic, Organic & Physical Chemistry	To understand the reactivity of metal complexes
		Gains knowledge Labile and Inert complexes
		To understand the role of metals in biological systems.
		To understand rate, order and molecularity of a reaction
		To derive the rate equations for zero, first, second and third order reactions understand concept of activation energy
		To learn in detail the chemistry of carbohydrates, heterocyclic compounds, amino acids, proteins and nucleic acids
		To have a thorough idea on the structures of carbohydrates and some heterocyclic compounds.
		To understand the structure and functions of proteins
		To study photochemical reaction mechanism

Credits: 3, three theory hours per week over a semester.
 Credits: 2, one practical class of two hours per week over a semester

2022.7	Analytical Methods in Chemistry	To understand different types of titrations and the theory behind titrimetric analysis
		To study principles of gravimetric analysis
		To study types of errors ,how to analyse and minimize errors
		To study different separation techniques and application
		To understand various chromatographic techniques
		To study the principles and applications of paper and thin layer chromatography
Credits: 3, three theory hours per week over a semester. Credits: 2, one practical class of two hours per week over a semester		
2022.8	Organic Spectroscopic Techniques	To study the Nuclear Magnetic Resonance Spectroscopic principle and applications
		To understand how the NMR helps in structural elucidation of various organic compounds and medical applications
		To study the various concepts of UV & Visible Spectroscopy
		To study the Electronic spectra of polyatomic molecules and Quantitative determination of metal ions (Mn ²⁺ , Fe ²⁺ , NO ₂ ⁻ , Pb ²⁺)
		Electron Spin Resonance Spectroscopy its Applications including Detection of free radicals
Credits: 3, three theory hours per week over a semester. Credits: 2, one practical class of two hours per week over a semester		
2022.9	Advanced Organic Reactions	To study Organic photochemistry with special reference to carbonyl compounds and concept of photo reduction.
		To study photochemical reactions including stereo chemistry
		To understand the importance of protection of functional groups in synthetic chemistry.
		To understand the importance of named reactions and phase transfer catalysts
		To understand the novel synthetic reactions in synthetic chemistry

	Credits: 3, three theory hours per week over a semester. Credits: 2, one practical class of two hours per week over a semester	
2022.10	Pharmaceutical and Medicinal Chemistry	To study the important terms in pharmaceutical chemistry
		To study the Classification, structures and therapeutic activity of various drugs
		To study the Synthesis and therapeutic activity of Sulphadruugs, Anti malarials, Psycho therapeutic Drugs
		To study Antiasthma Drugs, Antianginals, Diuretics.
		To understand Immunity - CD-4cells, CD-8cells, Retro virus, Replication in human body.
		To understand the Drugs available in treatment of HIV
	Credits: 3, three theory hours per week over a semester. Credits: 2, one practical class of two hours per week over a semester	

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Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., M.Sc.App.Maths – Programme Code – 4020

Course Code	Paper Title	Course Outcome
4020.1	Real Analysis	1.Describe fundamental properties of the real numbers that lead to the formal development of real analysis.
		2.Demonstrate an understanding of limits and how they are used in sequences, series, differentiation and integration.
		3.To understand the concepts of improper integrals, functions of several variables.
		Credits : 4 Theory periods of 50 minutes per week over a semester.
4020.2	Ordinary differential equations	1. Will be able to explain the concept of DE.
		2. Will be able to solve system of linear differential equations.
		3. Converts separable and homogeneous equations to exact differential by integrating factors.
		Credits : 4 Theory periods of 50 minutes per week over a semester.
4020.3	Probability & Statistics	1. To make inferences about a sample based on information we get from a population.
		2. Basic probability axioms and rules and moments of discrete and continuous random variables.
		3. Use appropriate statistical methods in the analysis of simple data sets interpret and clearly present output from Statistical Analysis in a clear concise and understandable manner.
		Credits : 4 Theory periods of 50 minutes per week over a semester.
4020.4	Algebra	1. Students know about the normal sub groups.
		2. How to apply finite generated groups.
		3. To understand ideal and homomorphisms.
		4. Applications of rings.
		Credits : 4 Theory periods of 50 minutes per week over a semester.
4020.5		1. Read, understand and trace the execution of programs written in a C language
		2. Write programs that perform operations using derived data types.

	C-Programming	3. Implement programs with pointers and arrays perform pointer arithmetic and use the <code>inutes</code> preprocessor.
	Credits : 4 Theory periods of 50 minutes per week over a semester.	
4020.6	C-Programming Lab	1. Read, understand and trace the execution of programs written in a C language
		2. Write programs that perform operations using derived data types.
		3. Implement programs with pointers and arrays perform pointer arithmetic and use the preprocessor.
	Credits : 1 Theory periods of 50 minutes per week over a semester. 2. Practical period of 2 hours per week over a semester.	
4020.7	Complex Analysis	1. Explain the fundamental concepts of complex analysis and their role in modern mathematics and applied contexts.
		2. Demonstrate accurate and efficient use of complex analysis techniques.
		3. Demonstrate capacity for mathematical reasoning through analyzing, proving and explaining concepts from complex analysis.
		4. Apply problem - solving using complex analysis techniques applied to diverse situations in Physics, Engineering and other Mathematical contexts.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.8	Numerical methods	1. Finite difference operators are also introduced to understand a different approach in interpolation.
		2. Reader will appreciate the error analysis explained suitability of degree of polynomial.
		3. Locate and use good Mathematical software and use numerical methods for solving a problem.
		4. Assess the reliability of numerical results and determine the effect of round off error.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.9	Mathematical methods	1. Describe several areas of Mathematics beyond calculus.
		2. Understand the fourier transform is constructed to represent an arbitrary function over a given range then the transformation represents that function periodically extended beyond that range.
		3. It will able apply integral expression for the forwards and inverse fourier transform to a range of non periodicwave forms.
		4. To know about calculus of variations in Eluer's equation.

	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.10	Fluid dynamics	1. Apply the basic Applied Mathematics tools that support fluid dynamics,
		2. Create models of inviscid steady fluid flow over simple profiles and shapes.
		3. To understand the viscous flow and stress and strain. Some solvable problems in viscous flow.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.11	Partial differential equations	1. Able to use a numerical method of solution known as Euler's method.
		2. Use analytical methods of solutions by direct integrations separation of variables and the integrating factor method.
		3. How to classify the linear partial differential equation with constant and variable co-efficients.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.12	Numerical methods Lab	1. Finite difference operators are also introduced to understand a different approach in interpolation.
		2. Reader will appreciate the error analysis explained suitability of degree of polynomial.
		3. Locate and use good Mathematical software and use numerical methods for solving a problem.
		4. Assess the reliability of numerical results and determine the effect of round off error.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.13	Advanced complex Analysis	1. Explain the fundamental concepts of complex analysis and their role in modern mathematics and applied contexts.
		2. Apply problem solving using complex analysis techniques apply to diverse situations in Physics, Engineering and other Mathematics contexts.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.14	Linear Programming	1. Understand how it exploits the linear nature of the problem to yield good average case performance while failing to be efficient in the worst case.
		2. Understand the meaning of weak and strong duality and their role in the designs and verification of algorithm solutions to optimization problems.
		3. Know the strategy of game theory and assignment problems.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.15	Topology	1. Basic notions of metric and topological spaces.

		2. Methods and techniques of proving basic theorems on topological spaces and continuous mappings.
		3. Know how the topology on a space is determined by the collection of open sets, by the collection of closed sets or by a basis of neighborhoods at each point and you know what it means for a function to be continuous.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.16	Discrete Mathematical structures	1. Some fundamental mathematical concepts and terminology.
		2. How to use and analyse recursive definitions.
		3. How to count some different types of discrete structures.
		4. Explain Boolean algebra and homomorphism and how to apply it in Engineering.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.17	Theoretical Computer Science (Elective)	1. Know the important models of computation and you can examine them with mathematical precision.
		2. Know the model computation using finite automata and characterize simple languages with regular expressions and context free grammars.
		3. Understand how the Turing machine models everything that can be computed using a real computer.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.18	Fortran Lab	1. Know where and why Fortran is still in use today.
		2. Know what a compiler is and why some languages must be compiled.
		3. Explain difference between compile time and run time errors.
	Credits : 2 Theory periods of 50 minutes per week over a semester 2. Practical period of 2 hours per week over a semester	
4020.19	Functional Analysis	1. The student has knowledge of central concepts from functional analysis, including the Hahn-Banach theorem, the open mapping and closed graph theorems, the Banach-Steinhaus theorem, dual spaces, weak convergence and the spectral theorem for bounded self-adjoint operators.
		2. Skills : The student is able to apply his or her knowledge of functional analysis to solve mathematical problems.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.20	Operation Research	1. Understand the Mathematical tools that are needed to solve optimization problems.
		2. Develop a report that describes the model and the solving techniques analysis the results to the decision making processes in management engineering.

		3. How to construct the buildings and highways by using network analysis.
		4. Having the knowledge about the product management and stock market.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.21	Meghods of Applied Mathematics	1. Find dominate balance in DE with small parameter.
		2. In simple cases find complete asymptotic expansions of integrals
		3. The final part of the course focuses on P.D.E.
		4. Understand the matrices and linear equations how to they use in transformations.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.22	Integral transforms	1. Student will gain a range of techniques employing the Laplace and Fourier transforms in the soulution of ODE & PDE.
		2. Appreciation of generalized functions their calculus and applications.
		3. Solved problems on finite fourier transformations and parseval's theorem.
		4. Having the knowledge of hankel transform of the derivation of a function.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.23	Graph Theory	1. To introduce graph as a powerful modeling tool that can be used to solve practical problems in various fields.
		2. Algorithms to find components of a graph and the strongly connected components of a diagraph.
		3. Understand the coloring, matchings and applications of graph theory in operation research.
	Credits : 4 Theory periods of 50 minutes per week over a semester	
4020.24	Mat - Lab	1. Define the general structure of mat lab.
		2. Describe the work space and command line.
		3. Write progrms in mat lab M-files.
		4. Create conditional control and loop control.
		5. Use the special functions of mat lab.
	Credits : 2 Theory periods of 50 minutes per week over a semester 2. Practical period of 2 hours per week over a semester	
4020.25	Project	1. Student should be able to apply the relevant knowledge and skills which are acquired within the technical area to a given problem.
		2. With in given constraints even with limited information independently analyze.
		3. Reflect on evaluae and critically assess one's own and others scientific results.
	Credits : 2. Practical period of 2 hours per week over a semester	

IDEAL COLLEGE OF ARTS AND SCIENCES

(AP State Government Aided, Autonomous, NAAC Accredited B⁺⁺)

Dr.P.V.N.RAJU VIDYAPRANGANAM

Samalkot Road - Kakinada

B.Sc., Politics Science – Programme Code – 1013

Course Code	Paper Title	Course Outcome
1013.1	Basic concepts of Political Science	1.It provides explanatory frame works of Politics
		2. Understand the state relations
		3. Learn nations and Nationalism
		4. Understand rights and citizenship.
		5. Learn to Freedom, equality and justice
1013.2	Concepts, theories and Institutions	1.The course explains the constitutionalism
		2.Understand territorial division.
		3.Learn to Institutional forms of the modern state.
		4.Understand judiciary and democratic state .
1013.3	Indian Constitution	1.Learn to the making of the constitution.
		2.Understand philosophical premises of the Indian Constitution.
		3.It provides fundamental rights and directive principles of state Policy.
		4. Learn to Indian Federalism.
		5. Understanding working of the Indian Constitution.
1013.4	Indian Political Process	1.Approaches to study the political processes in Indian.
		2.Understand Social structure and democratic process.
		3.Learn religion and Politics
		4.Understand party and electoral processes in Indian.
1013.5	Indian Political Thought	1.The course helps to know the traditions of Ancient Indian Political thought.
		2.Learn renaissance thought.

		3.Understand early Nationalism.
		4.Learn riligious nationalism.
		5.Approaches to study democratic egalitarianism.
1013.6	Western Political Thought	1.Learn classical Western Political thought.
		2.Approaches to study early medievel to the beginning of modern thought.
		3.Understnad liberal thought.
		4.Learn liberal democratic thought.
		5.Understand Philosopical idealism and its critique.
1013.7	Principles of Public Administration	1.Learn the nature of Public Administration.
		2.Understanding administration theories.
		3.Learn the Principles of organization.
		4.Approaches to study structure of organization.
		5.Understand theories of motivation
1013.8	International Relations	1.Understnad basic concepts of International relations.
		2.Approaches to the study of International relations.
		3.Phases of International relations 1914-1915.
		4.Phases of International relations 1945 onwards.
		5.Learn the International organisation.
1013.9	Indian Foreign Policy	1.Evolution of Indian Foreign Policy.
		2.Learn the non- Alignment and UNO.
		3.Understand Indian realation with US and China.
		4.Learn the India and her nighbours.
1013.10	Contemporary Global issues	1.Understand conceptions of Globalizations.
		2.Learn the Anchors of Global Political Economy.
		3.Understand Nation State and Globalization.
		4.Learn the contemporary Globals issues.

ENVIRONMENTAL STUDIES PROGRAMME CODE : 602

Course code	Course Name	Course Outcome
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602.1	Environmental Studies	* On completion of the course the students are able to understand.
		* Need for public awareness on Environment.
		* Concept of Ecosystem, Biodiversity and its conservation.
		* Social Issues and the Environment.
		* Role of Individual in prevention of pollution.
		* Climate change, global warming, acid rain, ozone layer depletion.
		legislation, public awareness.
		* Concept of population, Explosion, Family Welfare programme.
		* Role of information Technology in Environment and human health

ETHICS AND VALUES PROGRAMME CODE : 607

Course code	Course Name	Course Outcome
607.1	Ethics and Values	* On completion of the course the students are able to understand.
		* Concept and Need for value Education.
		* The concept of happiness and prosperity as parts of value education.
		* The activities in self and activities in the body.
		* Family as a basic unit of Human Interaction and values in Relationship.
		* Concept of Harmony in Nature. The four order in Nature.
		* Value based life and profession.

**INFORMATION & COMMUNICATION TECHNOLOGY-I
PROGRAMME CODE - 608**

Course code	Course Name	Course Outcome
608.1	INFORMATION & COMMUNICATION TECHNOLOGY-I (for First Year B.A./B.Com.(General)/ B.Sc.(non computer students)) Paper Title: Computer Fundamentals and Office Tools	1. Describe the usage of computers and why computers are essential components in business and society.
		2. Build, edit and maintain spreadsheet solutions in Microsoft Excel to automate manual or outdated processes.
		3. Build and maintain databases in Microsoft Access in order to track and manage data
		4. Design, create, maintain, and enhance presentations in Microsoft PowerPoint in order to deliver ideas and information.
		5. Create, edit, enhance and review documents in Microsoft Word.
		Credits :2 1 Theory period of one hour per week over a semester. 1 Tutorial period of one hour per week over a semester

**INFORMATION & COMMUNICATION TECHNOLOGY-I PROGRAMME
CODE - 608**

Course code	Course Name	Course Outcome
608.2	INFORMATION & COMMUNICATION TECHNOLOGY-I (for First Year B.Sc. Computer Science) Paper Title: Operating System &	1. Learn essential operating systems skills including how to use, setup, configure, troubleshoot and maintain a current microcomputer operating system.
		2. Describe various types of Operating Systems and Application Software installation.
		3. Describe various type of Devices Installation.
		4. Describe PC care and Maintenance.

	Diagnostics Tools	5. Describe basics of Computer Network & Internet.
		Credits : 2 1 Theory period of one hour per week over a semester. 1 Tutorial period of one hour per week over a semester.

COMMUNICATION SOFT SKILLS PROGRAMME CODE - 609

Course code	Course Name	Course Outcome
609.1	* Skill PRO - I	* Vocabulary Building.
		* Grammar, listening, speaking, reading, writing.
		* Importance of Communication Skills.
		* Help the learners gain confidence.
		* Motivate learners to improve their communication skills for competitive examination
609.2	* Skill Pro - III (IV Semester)	* Communication skills and soft skills are very essential for the students to achieve success in their career.
		* Positive thinking, leade to success.
		* SWOT / SWOC
		* Emotional intelligence.
		*Body language.
		* Interview and presentation skills.
		* Resume and covering letter.
		* E - Correspondence.
		* Helpful for dreaming career.
609.3	* Skill Pro - II (IIIrd semester)	* Communication skills and soft skills are the most important in the life of every human being.

* Communication skills help the students to learn every day use and speaking skills with reference to debates, role plays, presentation skills, group discussions and interview skills

ANALYTICAL SKILLS PROGRAMME CODE - 610

Course code	Course Name	Course Outcome
610.1	Data Analysis	The data given in a Table, Graph, Bar Diagram, Pie Chart, Venn diagram or a passage is to be analyzed and the questions pertaining to the data are to be answered
610.2	Sequences and Series	Analogies of numbers and alphabets completion of blank spaces following the pattern in A:b::C: d relationship odd thing out; Missing number in a sequence or a series.
610.3	Arithmetic ability	Algebraic operations BODMAS, Fractions, Divisibility rules, LCM & GCD (HCF). Date, Time and Arrangement Problems: Calendar Problems, Clock Problems, Blood Relationship.
610.4	Quantitative aptitude	Averages, Ration and proportion, Problems on ages, Time-distance -speed.
610.5	Business computations	Percentages, Profit&loss, Partnership,simple compound interest.
		These are make student strong to face any competitive examinations for employment after graduation.

ENTREPRENEURSHIP PROGRAMME CODE : 611

Course code	Course Name	Course Outcome
611.1	ENTREPRENEURSHIP	1. The objectives of the course in to focus on Entrepreneurship and the characterstics, classification and also the Role of Entrepreneurship in Economic development of India.

	2. The course aims at the Idea generation and opportunity Assessment of Entrepreneurship
	3. It also covers project work project Appraisal Techniques, Financial Analysis and Market Analysis.
	4. It also covers NABARD, SI DBI, NIC, SFC, SSIDC and other Financial Assistance.
	5. Finally the course concentrated at Government Policy and Taxation benefits, Government Politics for SSI, etc.,

LEADERSHIP EDUCATION PROGRAMME CODE - 612

Course code	Course Name	Course Outcome
612.1	Leadership Education	Importance and Significance of Leadership
		Behavioural concepts and attitude formation
		Inter personal Behaviour and including relations
		To maintain moral values
		Team Building and developing Team resource

FINANCIAL ACCOUNTING IN TALLY PROGRAMME CODE : 613

Course code	Course Name	Course Outcome
613.1	FINANCIAL ACCOUNTING IN TALLY	1. The objective of the course is to acquaint students with the accounting concept, tools and techniques influencing business organization.
		2. Financial Accounting is here to stay and will only grow in expanse with time with a Diploma in ERP using Tally, you will evolve with the ever growing knowledge of financial.
		3. At the end of course student should be able to use accounting and business terminology.
		4. Industry relevant course available in I.C.A with following modules - Business Computer Application Business Accounting. Tally ERP9 Additional Accounting package - Business
		5. Best ERP and Accounting software for all Business Tally ERP.9

BUSINESS LEADERSHIP PROGRAMME CODE : 614

Course code	Course Name	Course Outcome
614.1	BUSINESS LEADERSHIP	1. It aims at how to prepare a good Leader and Skills, styles etc.,
		2. It also focuses on Decision making, Leadership practices and organisation culture.
		3. It also aims at true Inspiring Leader biography in the Business like JRD Tata Birla, LN Mittal, NR Narayana Murthy, Azim Premji et.,

BVOC., INDUSTRIAL AQUACULTURE AND FISHERIES

2019-2020

CODE	NAME OF PAPER	OUT COME
FIRST SEMESTER		
IAF-T2	Biology of Finfishes and shellfishes	<ul style="list-style-type: none"> ➤ By the end of the course the student will be equipped with the knowledge of taxonomy, morphology & physiology of fin & Shell fishes. ➤ Knowledge on the basic taxonomic tools for the identification of fin & shell fishes will be learnt by the student.
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
IAF-T3	Principles of Aquaculture	<ul style="list-style-type: none"> ➤ By the end of the course the student will be equipped with the aquatic ecosystem ➤ Knowledge on the pond ecosystem will be learnt by the student. ➤ Knowledge on the cultivable fishes will be learnt by the student.
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
IAF-T4	Fresh Water Aquaculture	<ul style="list-style-type: none"> ➤ At the end of the course student can able to gain the knowledge on the fresh water aquaculture practices. ➤ Knowledge on the culture systems be learnt by the student.
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
SECOND SEMESTER		
IAF-T6	Brackish water Aquaculture and Mari culture	<ul style="list-style-type: none"> ➤ Knowledge on the biology and biological cycle of the brackish water & marine cultivable species will be learnt. ➤ .Knowledge on the brackish water culture practices will be learnt by the student.

		➤ Knowledge on the Mari culture will be learnt by the student.
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
IAF-T7	Hatchery Technology in Aquatic Organisms	<ul style="list-style-type: none"> ➤ Knowledge on the biology and biological cycle of the brackish water & marine cultivable species will be learnt. ➤ .Knowledge on the brackish water culture practices will be learnt by the student. ➤ Knowledge on the Mari culture will be learnt by the student.
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
IAF-T8	Gear and Craft in Aquaculture	<ul style="list-style-type: none"> ➤ Student will learn the knowledge on the crafts. ➤ Mechanism involved in the operation of the fishing gear will be learnt by the student. Tools for the identification of fishery resources will be learnt by the student.
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		

DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY
B.Voc., Food Processing and Quality Management
2019-2020

Paper Code	Paper Name	Outcome
FPQM T1	Food Science and Nutrition -1	To understand the nutrition and health
		To Understand the dietary allowances for Indians
		To study the dietary guidelines
		To study the new concepts of Food
		To study the bioavailability, enrichment, deficiency and toxicity of vitamins and minerals
		To understand the basal metabolic rate and factors effecting BMR
		To develop skills in meal planning for different groups of people
	Credits: 4. Four theory hours per week over a semester Credits : 2. One practical class of two hours week over a semester	
FPQM T2	Basic Food Microbiology	To understand the cultivation of Bacteria
		To study the algae protozoa and its destruction
		To study the history of food microbiology
		To understand the microorganism associated with food
		To understand the usage of microbes in food biotechnology
		To understand the extrinsic and intrinsic parameters affecting growth and survival of microbes
		To study the organic acids lipids, pectic substances
		To study the contaminants of various food stuffs
	Credits: 4. Four theory hours per week over a semester Credits : 2. One practical class of two hours week over a semester	
FPQM T3	Food Chemistry	To understand the structure of water, effect of hydrogen bonding
		To study the determination methods of moisture in food
		To understand the composition , structure, reactions of Carbohydrates
		To study the various properties of Starch
		To understand the composition , structure, reactions, functions of Proteins
		To study the classification of proteins
		To understand the enzyme specificity and its mechanism

		To understand the composition , structure, reactions, functions of fats and oils
		To study the structure, chemical and physical properties of pigments and flavors in food
	Credits: 4. Four theory hours per week over a semester Credits : 2. One practical class of two hours week over a semester	
FPQM T4	Principles of Food Preservation	To study the mechanism of food spoilage and its end products
		To understand the various food preservation methods
		To understand the usage of food additives
		To study the pasteurization and sterilization and canning
		To study the freezing methods and IQF technology
		To study the drying techniques and water activity of food
	Credits: 4. Four theory hours per week over a semester	
FPQM T5	Food Science and Nutrition – 2	To study the levels of body composition and body compartments
		To develop skills estimation of body composition
		To develop skills skin fold measurements
		To study the glycemic index and glycemic load
		To understand the metabolic utilization and regulation of blood glucose
		To study the digestion, absorption, transportation of protein
		To understand the urea cycle
		To study the digestion, absorption, transportation of lipids in body
		To understand the plasma lipoprotein and cholesterol biosynthesis
		To understand the inborn errors of protein metabolism
	Credits: 4. Four theory hours per week over a semester Credits : 2. One practical class of two hours week over a semester	
FPQM T6	Processing of Milk and Milk Products	To study the nutritional importance of Milk
		To understand the physiochemical properties of Milk
		To understand the microbial spoilage of milk roll of milk products in cookery.
		To study the Clarification and filtration process, standardization by using Pearson’s square method,
		To understand the Cream separation- centrifugal cream separator, bactofugation.
		To understand the various categories of milk in industry
		To gain develop skills of manufacturing various dairy products
		To understand SIP system of dairy plant,
	Credits: 4. Four theory hours per week over a semester	

	Credits : 2. One practical class of two hours week over a semester	
FPQM T7	Basics of Food Engineering	To study the base and derived engineering units
		To understand the Modes of heat transfer
		To study the construction of various heat exchangers
		To understand the Mixing index, Mixing Equipment
		To study the Clarification and concentration process
		To study the physical properties of various fruits and grains
		To understand the Irradiation in foods
	Credits: 4. Four theory hours per week over a semester Credits : 2. One practical class of two hours week over a semester	
FPQM T8	Food Quality Management	To study the Quality Management System- ISO 9000 and its Management Principles
		To study the Food Safety Management System- Key role, Principles of FSMS, ISO-22000
		To study Sanitation principles and Sanitizing methods
		To understand Risk assessment and management during food preparation.
		To gain a knowledge on industrial practices
		To study the HACCP principles and limitations
		To study the various food laws
	Credits: 4. Four theory hours per week over a semester	

BVOC., SUSTAINABLE AGRICULTURE

2019-2021

CODE	NAME OF PAPER	OUT COME
FIRST SEMESTER		
SAGT1	Fundamentals of soil science	Knowledge about soil forming rocks and minerals, their weathering and soil forming processes and climatic factors affect them
		Understand the role of soil forming factors and processes in soil formation
		To study the physical properties of soil
		To study the classification of soils in india

		To The knowledge gained in this course will be useful in understanding the behavior of soils in crop production and management
		To study about soil PH and soil colliods
		To study about soil organic matter
		To study about soil pollution
		To develop skills in collection of different soil samples and testing methods
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
SAGT2	Fundamentals of agronomy	<p>At the end of the course the student should be able to</p> <ul style="list-style-type: none"> ➤ Express knowledge gained on the principles of agronomy ➤ Recognize the various nutrients and their effects on plant health ➤ Plan irrigation measures for plant growth and development ➤ Manage weeds in a field ➤ Plan for sustainable agricultural production ➤ Apply scientific methods and tools in field preparation and for designing cropping
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
SAGT3	Fundamentals of horticulture	<p>By the end of the course the student will be equipped with the knowledge of</p> <p>Orchard planning Training and pruning in horticultural crops</p> <p>Water management , Manures and manuring Weed management in Orchard, Plant growth regulators</p> <p>plant propagation methods potting repotting pre planting treatment knowledge</p> <p>Digging and filling of pits, Water management Manures and manuring</p> <p>Weed management in Orchard Plant growth regulators Maturity indices for fruits</p>

		Fruit drop
		Along with propagation they know nursery management ,management of propagation and propagation structures like green houses ,polyhouses, shadenet
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
SAGT4	Fundamentals of entomology and insect ecology	<p>At the end of the course the student should be able to</p> <ul style="list-style-type: none"> ➤ Classify the phylum of arthropoda,identify the insects based on different order and types of insects and pupae Insect orders of agricultural importance ➤ Insect ecology ,environment and its components,effect of biotic factors – food,natural enemies ➤ Pests definition ,categaries of pests,causes for pest outbreak,losses caused by pests. ➤ Gain the knowledge of identification ,symptoms of damage caused by pests of rice,coconut,banana,pepper ➤ Pests of brinjal bittergourd and cowpea,nematode pests of crops, ➤ Common stored pests,pest monitoring,pest surveillance and pest forecasting,
Credits: 4 Four theory hours per week over a semester		

CODE	NAME OF PAPER	OUT COME
SECOND SEMESTER		
SAGT5	Manures ,fertilizers and soil fertility management	By the end of the course the student will be equipped with the knowledge of Importance of organic manures,properties and methods of preparation of bulky and concentrated manures.
		INM,chemical fertilizers classification,complex fertilizers,nano fertilizers,soil amendments,fertilizers storage
		Deficiency and toxicity symptoms of essential plant
		nutrients,factors affecting nutrient availability to plants
		Soil testing,plant analysis,rapid plant tissue tests.
		Methods of fertilizer recommendations to crops,factor influencing nutrient use efficiency,methods of application under rainfed and irrigated conditions.
<p>Credits: 4 Four theory hours per week over a semester</p> <p>Credits: 2 One practical class of two hours for week over a semester</p>		
SAGT6	Plantation crops ,spices and fruits	To know about the production of quality planting materials
		To study on nursery management
		To gain knowledge on management of plantation crops
		To study about the distribution, management, irrigation methods in spices

		To acquire knowledge on production and export of fruits
		To know about maturity indices, grading, packaging of different fruits
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
SAGT7	Fundamentals of plant breeding and seed technology	To be able to classify the field crops based on different criteria
		To study about the morphology of different plant parts
		To gain knowledge on modes of reproduction and methods of breeding
		To understand the characters of good quality seeds
		To learn seed testing procedures
		To demonstrate seed treatments
		To understand about seed packaging and storage
Credits: 4 Four theory hours per week over a semester		
Credits: 2 One practical class of two hours for week over a semester		
SAGT8	fundamentals of agricultural engineering	to study about the primary tillage and secondary tillage equipments
		to study about working and different types of of sprayer

		to study about different soil conservative methods
		to study about different material conveying equipments
		to study about combine harvester and horticultural tools and gadgets
		to study about farm ponds and percolation tanks
		to study about drip and sprinkler irrigation

Credits: 4 Four theory hours per week over a semester