



ESTD: 1984

ADITYA DEGREE COLLEGE

Affiliated to Adikavi Nannaya University | Approved by APSCHE | Accredited by NAAC with B⁺⁺ Grade

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COURSE OUTCOMES – B.Sc MCCS

Semester	Course Code	Course Name	CO No.	Course Outcome
I	ENG-I	English - I A Course in Communication and Soft Skills	CO1	Use grammar effectively in writing and Speaking.
			CO2	Demonstrate the use of good vocabulary.
			CO3	Demonstrating of writing skills.
			CO4	Acquire ability to use Soft Skills in professional and daily life.
			CO5	Confidently use the tools of communication skills.
			CO6	Demonstrate good listening skills
	LSC-I	Life Skill Course - I Entrepreneurship Development (ED)	CO1	Recall the concept of Entrepreneurship, its applications and scope.
			CO2	List the types of financial institutions that help the business at Central, State and Local Level.
			CO3	Recall Central and State Government policies, A ware of various tax incentives.
			CO4	Summarize on generating a broad idea for a starting an enterprise/start up.
			CO5	Discuss on preparing a Project Report for a start up and differentiate between financial, technical analysis an business feasibility.
			CO6	Operate data using charts and spread sheets.
	SDC-I	Skill Development Course - I Electrical Appliances	CO1	Able to explain basic electrical circuits, AC and DC fundamentals
			CO2	Analyse of Single Phase AC Circuits and Three phase circuits, the representation of alternating quantities and determining the power in these circuits
			CO3	Illustrate the effects of electric shocks along with its remedies while using electrical appliances
			CO4	To select the various protective devices used in Electrical wiring
			CO5	Able to acquire Basic Knowledge of various Electrical appliances like Refrigerator, Oven, Fan etc
			CO6	Able to understand the principle and operation of Illuminating devices,
	C-IA	Differential Equations	CO1	Solve linear differential equations.
			CO2	Convert non exact homogeneous equations to exact differential equations by using integrating factors.
			CO3	Know the methods of finding solutions of differential equations of the first order but not of the first Degree.
			CO4	Solve higher-order linear differential equations, both homogeneous and non homogeneous, with

				constant coefficients.
			C05	Demonstrate the concept and choose appropriate methods for solving differential equations.
	C-I	Inorganic and Physical Chemistry	C01	Recall the periodic table, properties of s,p,d and f block elements.
			C02	Learner will be able to interrupt and compare the properties of elements in various states.
			C03	Apply the concepts of gas equations, pH and electrolytes while studying other chemistry courses.
			C04	Learner will be able to characterize and analyse the properties of various states of matter.
			C05	Learner will be able to predict the molecular weights using colligative properties
			C06	Learner will be able to design the procedure for the separation of salt using common ion effect, solubility product.
	C-IC	Problem solving in C	C01	Explain the evolution and functionality of a digital computer.
			C02	Apply Logical skills to analyze a given problem.
			C03	Develop an algorithm solving given problem.
			C04	Demonstrate 'C' language constructs like iterative statements, Array processing, pointers.
			C05	Experiment 'C' language constructs to the algorithm to write a 'C' language program.
II	ENG-II	English - II	C01	Use reading skills effectively.
			C02	Interpret different types of texts.
			C03	Characterize what is being read.
			C04	Build up a repository of active vocabulary.
			C05	Use good writing strategies.
			C06	Write well for any purpose.
	LSC-II	Life Skill Course - II Information and Communication Technology ICT	C01	List the literature of social networks and their properties.
			C02	Explain which network is suitable for whom.
			C03	Discuss about the skills to use various social networking sites like twitter, flickr, etc.
			C04	Write few GOI digital initiatives in higher education.
			C05	Apply skills to use online forums, docs, spreadsheets, etc for communication, collaboration and research.
			C06	Compare internet threats and security mechanisms.
	SDC-II(A)	Skill Development Course - II Survey & Reporting	C01	Write the basics of survey and reporting needs and methods
			C02	Discuss on designing of a questionnaire
			C03	Demonstrate on a simple and valid survey and collect data
			C04	Summarize on interpret data and submit report.
	SDC-II(B)	Skill Development Course - II	C01	Identify the types of business communication and correspondence

		Business Communication	CO2	List the processes like receiving, filing and replying
			CO3	Explain about preparing good business communications
			CO4	Write about organizational communication requirements and presentations.
			CO5	Discuss search engine, payment gateways and SEO techniques.
	C-2A	Three Dimensional Analytical Solid Geometry	CO1	Acquire the knowledge of planes.
			CO2	Explain basic idea of lines, sphere and cones.
			CO3	Demonstrate the properties of planes, spheres and cones.
			CO4	Express the problems geometrically and then to get the solution.
	C-2B	Organic And General Chemistry	CO1	Formulate the mechanism of organic reactions by recalling and correlating the fundamental properties of the reactants involved.
			CO2	Learner identify many organic reaction mechanisms including free radical substitution, electrophilic addition and electrophilic substitution.
			CO3	Understand and explain the differential behaviour of organic compounds based on fundamental concepts learnt
			CO4	Apply the stereochemical concepts for different organic compounds and reactions.
			CO5	Learner can differentiate diastereomers and enantiomers.
			CO6	Learner can predict the configurations of organic compounds based on D,L and R,S and E,Z configurational Rules.
			CO7	Learner can synthesize types of Alkanes , Alkenes , Alkynes.
	C-2C	Data Structures Using C	CO1	Demonstrate available data structure for data storage and processing.
			CO2	Comprehend data structure and their real-time applications – stack, queue, linked list, trees and graph.
			CO3	Choose a suitable data structure for an application.
			CO4	Develop ability to implement different sorting and search methods.
			CO5	Have knowledge on data structure basic operations like insert, delete, search, update and traversal.
			CO6	Design and develop problems using various data structure.
III	ENG-III	English - III	CO1	Speak fluently in English.
			CO2	Participate confidently in any social interaction.
			CO3	Face any professional discourse.
			CO4	Demonstrate critical thinking.
			CO5	Enhance conversational skill by observing the professional interviews.
	LSC-III(A)	Life Skill Course - III Environmental Education (EE)	CO1	Demonstrate the nature, components of an ecosystem and that humans are an integral part of nature.

			CO2	Outline healthy biodiversity and dependence of humans on environment.
			CO3	Justify the ways and ill effects of destruction of environment, population explosion on ecosystems and global problems consequent to anthropogenic activities.
			CO4	Discuss the laws/ acts made by government to prevent pollution, to protect biodiversity and environment as a whole.
			CO5	Acquaint with international agreements and national movements, and realize citizen's role in protecting environment and nature.
LSC-III(B)	Life Skill Course - III Analytical Skills(AS)	CO1	Understand the basic concepts of arithmetic ability, quantitative ability, logical reasoning, business computations and data interpretation and obtain the associated skills.	
		CO2	Acquire competency in the use of verbal reasoning.	
		CO3	Apply the skills and competencies acquired in the related areas.	
		CO4	Solve problems pertaining to quantitative ability, logical reasoning and verbal ability inside and outside the campus.	
SDC-III	Skill Development Course - III Online Business	CO1	Identify the online business and its advantages and disadvantages	
		CO2	Recall new channels of marketing, their scope and steps involved	
		CO3	Summarize the procurement, payment process, security and shipping in online business	
		CO4	Develop new marketing tools for online business	
		CO5	List the search engine, payment gateways and SEO techniques.	
C-III A	Abstract Algebra	CO1	Acquire the basic knowledge and structure of groups, subgroups and cyclic groups.	
		CO2	Get the significance of the notation of a normal subgroups.	
		CO3	Get the behavior of permutations and operations on them.	
		CO4	Study the homomorphisms and isomorphisms with applications.	
		CO5	Demonstrate the ring theory concepts with the help of knowledge in group theory and to prove the theorems	
		CO6	Demonstrate the applications of ring theory in various fields.	
C-III B	Organic Chemistry And Spectroscopy	CO1	Students will be able to reproduce the preparation , properties and reactions of haloalkanes , haloarenes and oxygen containing functional groups	
		CO2	Learner can summarize different reaction mechanism of carbonyls and carboxylic acids	
		CO3	They can apply the synthetic chemistry learnt to do functional group transformations	
		CO4	Learner will be able to differentiate between different types of spectroscopic techniques.	
		CO5	Learner can conclude the structure of an organic compound using IR, UV-Visible and NMR spectroscopy	

			CO6	Will be able to formulate and propose the plausible mechanisms for any relevant reaction.
	C-III C	Database Management System	CO1	Gain knowledge of data base and DBMS.
			CO2	Demonstrate the fundamental concepts of DBMS with special emphasis on relational data model.
			CO3	Demonstrating of normalization theory and apply such knowledge to the normalization of a data base.
			CO4	Model data base using ER diagrams and design data base schemes based on the model.
			CO5	Design a small database using SQL.
			CO6	Store, retrieve data in data base.
IV	C-IV A1	Mathematics Real Analysis	CO1	Get clear idea about the real numbers and real valued functions.
			CO2	Obtain the skills of analysing the concepts and choose appropriate methods for testing convergence of a sequence/ series.
			CO3	Test the continuity and differentiability and Riemann integration of a function.
			CO4	Know the geometrical interpretation of mean value theorems.
	C-IV A2	Linear Algebra	CO1	Demonstrate the concepts of vector spaces, subspaces, basis's, dimension and their properties.
			CO2	Demonstrate the concepts of linear transformations and their properties.
			CO3	Demonstrate Cayley- Hamilton theorem to problems for finding the inverse of a matrix and higher powers of matrices without using routine methods.
			CO4	Learn the properties of inner product spaces and determine orthogonality in inner product spaces.
	C-IV B1	Inorganic, Organic and Physical Chemistry	CO1	Learner can define the laws of absorption of light energy by molecules and can reproduce subsequent photochemical reaction
			CO2	an interpret the concept of Quantum efficiency and mechanisms of photochemical reactions.
			CO3	Will be able to solve the numericals in thermodynamics by applying the efficiency formula.
			CO4	They can differentiate between two different carbohydrates (hexos) i.e Glucose and Fructose
			CO5	They will be able to predict the stability of carbonyl by applying 18 election rule.
			CO6	Invent different proteins by linking different amino acids together.
	C-IV B2	Inorganic and Physical Chemistry	CO1	Can identify the order and molecularity of given reaction.
			CO2	They can understand concepts of boundary conditions and quantization, probability distribution, most probable values, uncertainty and expectation values
			CO3	Will be able to apply the quantization to spectroscopy
			CO4	Learner can analyse the structure by various types of spectra.

			C05	Can evaluate the stability of complexes by crystal field stabilization energy.
			C06	Learner will be able to construct an electrochemical Cell.
	C- IV C1	Object oriented programming using java	C01	Demonstrate the benefits of a well-structured program.
			C02	Demonstrate different computer programming paradigms.
			C03	Demonstrate underlying principles of object – oriented programming in java
			C04	Develop problem-solving and programming skill using OOP concepts
			C05	Develop the ability to solve real-world problems through software development high-level programming language like java
	C-IV C2	OPERATING SYSTEMS	C01	Know computers system resources and the roll of operating system in resource management.
			C02	Demonstrate operating system architectural design and its services.
			C03	Gain knowledge of various types of operating system including Unix and Android.
			C04	Demonstrate various process management concepts including scheduling, synchronization, and deadlocks.
			C05	Have a basic knowledge about multithreading.
			C06	Comprehend different approaches for memory management.
	V	C-V A1	Numerical Methods	C01
C02				Demonstrate various finite difference concepts and interpolation methods.
C03				Workout numerical differentiation and integration whenever and wherever routine methods are not applicable.
C04				Find numerical solutions of ordinary differential equations by using various numerical methods.
C05				Analyze and Justify the accuracy of numerical methods.
C- V A2		Mathematical Special Functions	C01	Demonstrate the Beta and Gamma functions, their properties and relation between these two functions, Demonstrate the orthogonal properties of Chebyshev polynomials and recurrence relations.
			C02	Find power series solutions of ordinary differential equations
			C03	solve Hermite equation and write the Hermite Polynomial of order (degree) n, also find the generating function for Hermite Polynomials, study the orthogonal properties of Hermite Polynomials and recurrence relations.
			C04	Solve Legendre equation and write the Legendre equation of first kind, also find the generating function for Legendre Polynomials, Demonstrate the orthogonal properties of Legendre Polynomials.

			C05	Solve Bessel equation and write the Bessel equation of first kind of order n, also find the generating function for Bessel function Demonstrate the orthogonal properties of Bessel unction.
C- V B1	Synthetic Organic Chemistry	C01	Identify the importance of reagents used in organic synthetic reactions	
		C02	Understand the importance of the retro synthesis in organic chemistry	
		C03	Acquire knowledge on basic concepts in different pericyclic reactions	
		C04	Comprehend the application of the different reactions in the synthetic organic chemistry	
		C05	Apply the concept of reagents in others chemical reactions	
		C06	Learner will be able to prepare paracetamol from phenol	
C- V B2	Analysis Of Organic Compounds	C01	Identify the importance of mass spectrometry in the structure elucidation of organic compounds	
		C02	Acquire the knowledge on structure elucidation of organic compounds	
		C03	Understand the various chromatography methods in the separation and identification of the organic compounds and differentiate the nature of organic compounds	
		C04	Investigate types of organic compounds	
		C05	Can be able to design easier separated methods from the knowledge gained in the solvent extractions for separation of organic compounds	
C- V C1	Web Interface Designing Technologies	C01	Demonstrate and appreciate the web architecture and services.	
		C02	Gain knowledge about various components of a website.	
		C03	Demonstrate skills regarding creation of a static website and an interface to dynamic website.	
		C04	Learn how to install word press and gain the knowledge of installing various plugins to use in their websites.	
C- V C2	Web Applications Development using PHP& MYSQL	C01	Write simple programs in PHP.	
		C02	Demonstrate how to use regular expressions, handle exceptions, and validate data using PHP.	
		C03	Use Built functions and construct User defined functions in PHP programming.	
		C04	Write PHP scripts to handle HTML forms.	
		C05	Write programs to create dynamic and interactive web based applications using PHP and MYSQL.	
		C06	Know how to use PHP with a MySQL database and can write database driven webpages.	