



ADITYA DEGREE COLLEGE – KAKINADA

CO – PO MAPPING – BCA PROGRAM

Course Code	Course Name	CO No.	Semester -1 Course Outcome	Program Outcomes																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
ENG-I	English-I (A Course in Communication and Soft Skills)	CO1	Use grammar effectively in writing and Speaking.	2	3								1	2				2		
		CO2	Demonstrate the use of good vocabulary.	3	3								2	1					2	
		CO3	Demonstrate an understanding of writing skills.	2	2								1	3					2	
		CO4	List Soft Skills in professional and daily life.	3	3								3	2					1	
		CO5	List the tools of communication skills.	3	3								3	2					1	
LSC-1	Life Skill Course - I (ENTREPRENEURSHIP DEVELOPMENT)	CO1	Recall the concept of Entrepreneurship, its applications and scope.	3	2					2								2		
		CO2	List the types of financial institutions that help the business at Central, State and Local Level.	2	3					1									2	
		CO3	Recall Central and State Government policies, A ware of various tax incentives.	2	3					2									1	
		CO4	Summarize on generating a broad idea for a starting an enterprise/start up.	3	1					2										2
		CO5	Discuss on preparing a Project Report for a start up and differentiate between financial, technical analysis an business feasibility.	2	2					2										3
		CO6	Operate data using charts and spread sheets.	3	2					3										1
SDC-1	Skill Development Course - I (Insurance Promotion)	CO1	List the field level structure and functioning of insurance sector and it's role in protecting the risks.	2	2			2				2								
		CO2	Recall pertaining skills and their application for promoting insurance coverage	2	3			3				2								
		CO3	Explain the Insurance Agent examination conducted by IRDA	3	2			1				2								
		CO4	Summarize 'promoting insurance coverage practice' as one of the career options.	2	1			3				1								

		CO6	Identify proper use of user defined functions	2		1	3							2	1					
C3	Numerical and Statistical Methods	CO1	Apply appropriate numerical methods to obtain appropriate solutions to difficult mathematical problems.	3		2	3	2						2	1					
		CO2	Apply various statistical techniques such as Measures of Central Tendency and Dispersion.	2		2	3	3							2	1				
		CO3	Demonstrate relationship between variables using the method of Correlation and Fit Analysis.	2		2	3	1							2	1				
		CO4	Solve programs of various Numerical Methods and Statistical techniques for solving mathematical problems.	3		2	3	2							2	1				
C3-P	Numerical and Statistical Methods-Lab	CO1	Identify the system of equations using various methods	3		2	3	1						2	2					
		CO2	Solve the roots of the equation using various methods of techniques	2		2	3	2							2	2				
		CO3	Solve the different integral values using various techniques.	2		1	3	3							1	1				
		CO4	Solve the standard deviation and rank correlation coefficient, coefficient of skewness for tabular data.	2		2	3	3							1	1				

Semester -2

Program Outcomes

Course Code	Course Name	CO NO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
ENG-II	English - II (A Course In Reading & Writing Skills)	CO1	Use reading skills effectively.	3	2								3	3				2	
		CO2	List the different types of texts.	3	1									3	2				1
		CO3	Summarize what is being read.	3	3									2	2				1
		CO4	Demonstrate repository of active vocabulary.	3	3									1	2				1
		CO5	List the good writing strategies.	3	1									2	1				1
		CO6	Write well for any purpose.	2	1									2	1				2
LSC-II	Life Skill Course - II (INFORMATION & COMMUNICATION)	CO1	List the literature of social networks and their properties.	3									2	3					
		CO2	Explain which network is suitable for whom.	2										3	2				

		CO2	Demonstrate the fundamental concepts of DBMS with special emphasis on relational data model.	3		1	2						3	3				
		CO3	Demonstrate normalization theory and apply such knowledge to the normalization of a database	3		1	3						3	2				
		CO4	Design database schemas based on the model.	2		2	3						2	2				
		CO5	Create a small database using SQL.	1		2	3						2	1				
		CO6	Apply Use, Store and Retrieve data in database.	1		2	3						1	1				
C6-P	Data Base Management System Lab	CO1	Write the basic knowledge of SQL queries and relational algebra.	3		2	2						3	1				
		CO2	Construct database models for different database applications.	3		1	1							3	2			
		CO3	Apply normalization techniques for refining of databases.	3		2	2							3	1			
		CO4	Operate on various triggers, procedures, and cursors using PL/SQL.	2		2	3							3	1			

Semester -3

Program Outcomes

Course Code	Course Name	CO NO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
ENG-III	English - III (A Course In Conversational Skills)	CO1	Discuss on Speaking fluently in English.	3	2	1							3	2				2	
		CO2	Demonstrate confidently in any social interaction.	2	2	1								2	2				3
		CO3	Summarize on professional discourse.	2	2	1								2	2				1
		CO4	Demonstrate critical thinking.	3	2	3								1	1				1
		CO5	Identify conversational skill by observing the professional interviews.	3	2	1								2	2				2
LSC-III	Life Skill Course - III (ENVIRONMENTAL EDUCATION)	CO1	List the nature, components of an ecosystem and that humans are an integral part of nature.	3									2	2					
		CO2	Write the importance of environment, the goods and services of a healthy biodiversity, dependence of humans on environment.	3										2	2				

C7-P	Accounting and Financial Management Lab	CO1	Describe the steps for how to create, delete, shut, alter a company using Tally	3		2	3							3	1					
		CO2	Demonstrate creation of different type of Vouchers using Tally	3		2	3								3	1				
		CO3	List Trial Balance, Ledger Balance, Profit and Loss Accounts, Balance Sheet using Tally	3		2	3								2	1				
C8	Object Oriented Programming through Java	CO1	Demonstrate good object-oriented programming skills in Java	3		1	2							3	3					
		CO2	Apply and implement selected design patterns in Java	3		1	2								3	1				
		CO3	Identify the capabilities and limitations of Java	2		2	3								3	1				
		CO4	Summarize common errors in Java and its associated libraries	2		3	3								3	1				
		CO5	Develop excellent debugging skills	3		3	2								2	1				
C8-P	Object Oriented Programming through Java Lab	CO1	Summarize the necessity for Object Oriented Programming paradigm and over structured programming	3		1	2							3	3					
		CO2	Develop java programs, analyze, and interpret object oriented data and report results.	3		1	3								3	2				
		CO3	Design an object oriented system, AWT components or multithreaded process as per needs and specifications.	3		2	3								2	1				
		CO4	Demonstrate an ability to visualize and work on laboratory and multidisciplinary tasks like console and windows applications both for standalone and Applets programs	3		2	3								2	1				
		CO5	Write simple GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles.	2		2	2								1	1				
		CO7	Describe the programming skills in the Java language.	3		3	2								2	2				
		CO8	Design a computer program to solve real world problems based on object-oriented principles.	3		3	3								1	1				

C9	Operating Systems	CO1	Demonstrate the main components and Structure of Operating System& their functions.	3			1						3	3					
		CO2	Summarize various ways of Process Management& CPU Scheduling Algorithms.	3			3							3	2				
		CO3	Operate on various device and resources like Memory, Time and CPU Management techniques in distributed systems.	3			3							3	2				
		CO4	Apply different methods for Preventing Deadlocks in a Computer System.	2			3							3	1				
		CO5	Create and build an Application/Service over the UNIX operating system.	2			3							2	1				
C9-P	Operating Systems Lab	CO1	Write and execute simple Unix commands in Unix environment	3		2	3						3	3					
		CO2	Operate on editing a text files using the standard commands.	3		2	3							3	3				
		CO3	Operate on Shell scripts to perform various operations	3		2	3							3	2				
		CO4	Develop different scheduling Algorithms using operating system concepts	3		3	3							2	2				
		CO5	Operate various file/directory handling commands.	3		2	3							3	3				

Semester -4

Program Outcomes

Course Code	Course Name	CO NO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
C10	Cyber Laws	CO1	Summarize ongoing developments in law relating to information technologies.	3									2	1					
		CO2	Explain areas of doctrinal and political debate surrounding rules and theories;	3										2	1				
		CO3	List the rules and theories in terms of internal coherence and practical outcomes.	2										2	1				
		CO4	Discuss on the analysis and evaluation contained in primary and secondary sources.	2										2	1				
C10-P	Cyber Laws Lab	CO1	Identify how to recovering deleted files from a hard disk.	3		1	3						2	1					

		CO2	Recall how to Gather,view and locate various file formats and evidences	3	1	3							2	1						
		CO3	Compute on cyber crime scenarios	2	2	3							2	1						
		CO4	Solve programs on data from packets	1	2	3							2	1						
C11	Data Mining and Ware Housing	CO1	List the types of the data to be mined and present a general classification of tasks and primitives to integrate a data mining system.	3	2	1							3	1						
		CO2	Apply preprocessing statistical methods for any given raw data	2	2	2								2	1					
		CO3	Summarize interesting patterns from large amounts of data to analyze and extract patterns to solve problems, make predictions of outcomes	3	3	3									2	1				
		CO4	Identify the roles that data mining plays in various fields and manipulate different data mining techniques	2	3	2									2	1				
		CO5	Apply proper data mining algorithms to build analytical applications.	2	3	3									2	1				
		CO6	List the wide range of emerging and newly-adopted methodologies and technologies to facilitate the knowledge discovery.	2	3	3									2	1				
C11-P	Data Mining and Ware Housing Lab	CO1	List the various kinds of tools.	3	1	2							3	2						
		CO2	Demonstrate the classification, clustering and etc. in large data sets.	3	1	3								2	1					
		CO3	Solve mining algorithms as a component to the exiting tools.	3	3	3									2	1				
		CO4	Apply mining techniques for realistic data.	2	2	2									2	1				
C12	Web Programming	CO1	Identify the Building Blocks of PHP, Access array elements	3	1	3							3	3						
		CO2	List various functions and handle data using files	3	1	2								3	2					
		CO3	Develop Forms, Sessions, Cookies	3	1	3									3	1				
		CO4	Develop & implement JavaScript	3	2	3									3	2				
C12-P	Web Programming Lab	CO1	Build HTML Pages	3	1	3							3	3						
		CO2	Solve programs using JavaScript for Validations	3	2	3									3	2				
		CO3	Solve programs in PHP	3	1	3									3	2				

		CO4	Develop forms and connect to database using MYSQL	2		2	2							2	1					
C13	Data Communications & Networking	CO1	Define computer networks, list network configurations, types, topologies, the applications of computer networks in different fields, network models and description of physical layer.	3			1							3	3					
		CO2	Explain flow and error control at the data link layer with associated protocols.	3			3								3	2				
		CO3	List the shared channel access methods, associated protocols and Wired & Wireless LAN standards and implementations.	3			1								3	2				
		CO4	List the types of networking devices / equipments and also explain the addressing scheme used at the network layer.	3			3								3	1				
		CO5	Explain how network layer, transport layer and application layer facilitates the transfer of message from one node to another in a global network	3			1								3	1				
C13-P	Data Communications & Networking Lab	CO1	List the wired computer network topologies.	3		1	1							3	3					
		CO2	Describe how to use the relevant network model for the specified data communication system.	3		1	2								3	3				
		CO3	Solve how to Configure the network component and assign IP address	2		2	2								3	1				
		CO4	Use transmission medium and modem for data transmission.	2		2	3								3	1				
		CO5	Solve on error detection/correction and flow control of data in the data network.	2		3	3								3	1				
C14	Data Analytics Using R	CO1	Identify new approaches to dramatically improve their ability to grasp information hiding in their data	3		1	2							2	2					
		CO2	Describes any effort to help people understand the significance of data by placing it in a visual context.	3		1	2								2	2				

	CO3	Develop product-prototypes implementing software engineering methods.	2			3							2	1				
	CO4	Operate on the system and its design in object oriented manner approach using UML with open source tools	1			3							2	2				

Semester -5

Program Outcomes

Course Code	Course Name	CO NO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
6A	Machine Learning Using Python	CO1	Identify the characteristics of machine learning.	3		1	1						3	3					
		CO2	Summarize the Model building and evaluation approaches	3		1	1							2	2				
		CO3	Apply Bayesian learning and regression algorithms for real-world Problems.	2		3	3							2	1				
		CO4	Apply supervised learning algorithms to solve the real-world Problems.	2		3	3							2	1				
		CO5	Apply unsupervised learning algorithms for the real world data.	2		3	3							1	1				
6A-P	Machine Learning Using Python Lab	CO1	Write the implementation procedures for the machine learning algorithms	3		3	3						2	2					
		CO2	Solve Python programs for various Learning algorithms.	3		3	3							1	1				
		CO3	Apply appropriate data sets to the Machine Learning algorithms	3		3	3							1	1				
		CO4	Identify and apply Machine Learning algorithms to solve real world problems	3		3	3							1	1				
7A	Digital Imaging	CO1	List Types of Graphics, Types of Objects, Types of video editing tools	3			1						3	2					
		CO2	Identify editing and altering photographs for through a basic tool box	3			2							2	1				
		CO3	Recall about using the layers.	3			2							2	1				
		CO4	Operate on the selection tools, repair tools	3			2							2	1				
		CO5	Apply filters and can show their skills.	2			2							2	1				

7A-P	Digital Imaging Lab	CO1	List different types of images and how to use basic and advanced features of GIMP Software for creating and image editing tools.	2		3						2	1					
		CO2	Design visiting cards and cover page of a book	2		2							2	1				
		CO3	Design Brochures, Phamphlets, Title designing ,Image modicfications using image tools.	2		2							2	1				
		CO4	Operate on layers, filters,vector graphics using image editing tools.	1		3							2	1				
6B	Cyber Security And Malware Analysis	CO1	Identify the computer networks, networking tools and cyber security	3		2						2	2					
		CO2	Describe about NIST Cyber Security Framework	2		2							2	1				
		CO3	Identify the OWASP Vulnerabilities	2		2							2	1				
		CO4	Operate various Malware analysis tools	2		2							2	1				
		CO5	Identify about Information Technology act 2000	2		2							2	2				
6B-P	Cyber Security And Malware Analysis Lab	CO1	Identify on Cyber security and protection of electronic systems and information from malware attacks.	2		3						2	1					
		CO2	Operate on configuration of LAN using switch and router	2		2							2	1				
		CO3	Understand and Implementaton of Trojan tools.	2		2							2	1				
		CO4	Identify and implemnt the packet sniffing mechanism using wireshark tool	2		2							2	1				
7B	Internet Of Things	CO1	Identify various applications of IOT in real world and industry domain															
		CO2	Recall the revolution of Internet in Mobile Devices, Cloud & Sensor Networks	3		1							3	1				
		CO3	Identify building blocks of Internet of Things and characteristics	3		1							3	1				
		CO4	Design and develop IOT devices	2		3							2	1				
7B-P	Internet Of Things Lab	CO1	Operate on IOT, Arduino/ Raspberry Pi, and also able to install software setup of Arduino/Raspberry Pi.	2		3						2	1					
		CO2	List of different operating systems for Raspberry Pi / Beagle board.	3		3							2	1				

		CO3	Identify the different supporting OS platforms of Raspberry-Pi/ Beagle board	3			3						2	1					
		CO4	Use Raspberry Pi/ Beagle board circuit with external resources	2			3						2	1					
6C	Mobile Application Development	CO1	Identify basic terms ,tools and software related to android systems	3			1						2	1					
		CO2	Describe components of IDE, understand features of android development tools	3			2							2	1				
		CO3	Describe the layouts and controls	2			3							2	1				
		CO4	Explain the significance of displays using the given view	2			2							2	1				
		CO5	Explain the features of services and able to publish android Application	2			2							2	1				
		CO6	Develop interesting Android applications using MIT App Inventor	2			3							2	1				
6C_P	Mobile Application Development Lab	CO1	Identify the android platform	3			2						2	1					
		CO2	Design and implementation of various mobile applications	3			3							2	1				
7C	Pc Hardware And Networking	CO1	Identify the computer peripherals, software and hardware devices	3			1						3	3					
		CO2	Describe the basics of networks and networking tools	3			2							3	3				
		CO3	Describe the Network Addressing and sub-netting	3			3							3	2				
		CO4	Explain the Networks protocols and management	3			2							3	1				
		CO5	Identify Basic Network administrator roles	2			2							2	1				
7C-P	Pc Hardware And Networking Lab	CO1	Operate on Basic of Computer assembling and trouble shooting.	3			3						3	3					
		CO2	Operate on Computer networking and trouble shooting	3			3							3	1				

Semester -1

Program Outcomes

Course Code	Course Name	CO NO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
TEL-I	Language H/T/S - I (Telugu)	CO1	1. రాజనీతి:- 11వ శతాబ్దపు కవుల జీవన విధానం, సాంఘిక పరిస్థితులు రాజ్యావలనలో రాజులు అనుసరించాల్సిన నీతిని తెలుసుకుంటారు.	3									2	1					
		CO2	2. దక్షయజ్ఞం:- శైవ, వైష్ణవాల మధ్య భేదాలే, అపాంకారం ఎలాంటి దుష్పరిణామాలకు దారితీస్తుందో నేర్చుకుంటారు.	2										3	2				
		CO3	3. ధామ్యధర్మపదేశం:- సేవకులు యజమానులను సేవించేటప్పుడు తీసికోవల్సిన ఆగ్రజ్జలను గ్రహిస్తారు.	3										3	1				
		CO4	4. పల్నాటిబెబ్బలి:- నాటికి నేటికి యుద్ధాలలో ఉన్న తేడాలను నేర్చుకుంటారు.	2										2	1				
		CO5	5. సీతారావణ సంవాదం:- స్త్రీలు కూడా కవిత్వాల వ్రాయగలరని, సీతలాంటి స్త్రీల గుణగణాలను రావణుని వంటి సీమల మనస్తత్వాలను నేర్చుకుంటారు.	3										2	1				
HIN-I	Language H/T/S - I (Hindi)	CO1	भारतीय सम्राटों की साहित्य, मित्रता और महानता का महत्व।	2									3	1					
		CO2	धर्मों, रुचियों का प्राचीन अंतर (वित्तीय, व्यवसाय और मानव का परिवर्तन)	3										2	1				
		CO3	भाषा और उसके व्याकरण कौशल का विकास करना	3										2	1				
		CO4	प्रशासनिक शब्दावली, अनुवाद- हिंदी से अंग्रेजी, अंग्रेजी से हिंदी	2										2	2				
		CO5	पत्र लेखन की संरचना। पत्र लेखन के प्रकार	2										2	2				

Semester -2

Program Outcomes

Course Code	Course Name	CO NO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
TEL-II	Language H/T/S - II (Telugu)	CO1	1. ఆధునిక కవిత్వం :- ఆధునిక కవిత్వం, భావకవిత్వం, అభ్యుదయ కవిత్వం, విప్లవకవిత్వాల గూర్చి నేర్చుకుంటారు.	3									2	1					
		CO2	2. కథానిక :- కథానిక అవిచ్ఛేదం, వికాసాలను గ్రహించా నూతన కథానికలు వ్రాయడానికి సిద్ధమవుతారు.	2										2	2				
		CO3	3. నవల:- నవల స్వరూప స్వభావాలను తెలుసుకొని జగన్మోహన్మహాశయ నవలలోని పాత్రలు 1947 నాటి సామాజిక పరిస్థితులు గ్రహిస్తారు.	2										2	2				
		CO4	4. నాటకం:- సాహిత్యంలో నాటక ప్రభావాన్ని, నాటక లక్షణాలను గ్రహిస్తారు.	3										2	1				
HIN-II	Language H/T/S - II (Hindi)	CO1	रोगों के बारे में जागरूकता, बालिकाओं की समस्या और पेट्टीटिज्म, भारत की महानता	2									3	1					
		CO2	कहानी लेखन के बारे में रचनात्मकता का विकास	3										2	1				
		CO3	सही वाक्य बनाकर भाषा का विकास करें	2										2	2				
		CO4	हिंदी शब्दावली, राजभाषा विकास	3										2	1				
		CO5	आत्म परिचय के बारे में जागरूकता। रिज्यूमे कैसे लिखें।	2										2	2				

Semester -3

Program Outcomes

Course Code	Course Name	CO NO	Course Outcome	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
TEL-III	Language H/T/S - III (Telugu)	CO1	1. భాషాలక్షణాలను, భాషానిర్మాణాన్ని, పదం, పదాంశం వాక్య నిర్మాణం తెలుసుకుంటారు.	2									3	2					
		CO2	2. కవి, సృజనాత్మక రచనలు, అలంకారికల భావాలను గ్రహిస్తారు.	3										2	1				
		CO3	3. అనువాదం, అనువాద పద్ధతులు, అనువాద సమస్యలు, పరిష్కారాలు తెలుసుకుంటారు.	3										2	1				
		CO4	4. మాధ్యమాలు ఎలా ఆవిర్భవించాయి. పత్రికారంగ వికాసం తెలుసుకుంటారు.	2										2	2				
		CO5	5. సామాజిక మాధ్యమాలు, సోషల్ మీడియా ప్రభావం వివిధరకాల మాధ్యమాలలో భాషాశైలి యాంకలంగ్ ఎలా చేయాలి నేర్చుకుంటారు.	2										2	2				
HIN-III	Language H/T/S - III (Hindi)	CO1	प्राचीन और आधुनिक कवि, संदेशोन्मुखी बातें, भारत की महानता और श्रम की समस्याएं	2									3	1					
		CO2	हिंदी साहित्य के महान, हिंदी साहित्य के अंग, देवी की पूजा	3										2	1				
		CO3	भाषा बोलने के कौशल का विकास करना	3										2	1				
		CO4	अन्य भाषाओं में हिंदी शब्दों के अर्थ को समझने के लिए	3										2	1				
		CO5	दैनिक बोलचाल में भाषा का प्रयोग	2										2	2				

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