

TECNIA INSTITUTE OF ADVANCED STUDIES
NAAC Accredited Grade 'A' Institute
Department of Computer Applications
BCA Ref. No.

TIAS/BCA/2021-22/

BCA 213	Cyber Security	Exhibit knowledge to secure corrupted systems, protect personal data, and secure computer networks in an Organization.	Analyze and evaluate the cyber security needs of an organization.
		Practice with an expertise in academics to design and implement security solutions.	Determine and analyze software vulnerabilities and security solutions to reduce the risk of exploitation.
		Understand key terms and concepts in Cryptography, Governance and Compliance.	Measure the performance and troubleshoot cyber security systems
		Develop cyber security strategies and policies	Implement cyber security solutions and use of cyber security, information assurance, and cyber/computer forensics software/tools
BCA 212	Introduction to data Science	Building the fundamentals of data science	Apply data visualisation in big-data analytics
		Developing design skills of models for big data problems	Utilize Matrix decomposition techniques to perform data analysis
		Gaining practical experience in programming tools for data sciences	Apply data pre-processing techniques
		Empowering students with tools and techniques used in data science connectivity.	Apply Basic Machine Learning Algorithms
BCA 214	Introduction to Artificial Intelligence	Become familiar with basic principles of AI toward problem solving, inference, perception, knowledge representation, and learning.	Demonstrate fundamental understanding of artificial intelligence (AI) and expert systems

		Investigate applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models.	Apply basic principles of AI in solutions that require problem solving, inference perception, knowledge representation, and learning.
		Experiment with a machine learning model for simulation and analysis.	Demonstrate proficiency in applying scientific method to models of machine learning.
		Explore the current scope, potential, limitations, and implications of intelligent systems.	Discuss the basics of ANN and different optimizations techniques.
BCA 216	Network Security	To understand basics of Cryptography and Network Security.	Provide security of the data over the network.
		To be able to secure a message over insecure channel by various means.	Do research in the emerging areas of cryptography and network security.
		To learn about how to maintain the Confidentiality, Integrity and Availability of a data.	Implement various networking protocols.
		To understand various protocols for network security to protect against the threats in the networks.	Protect any network from the threats in the world.
BCA 311	Data Visulation & Analytics	Students will gain an understanding of data visualization and shape of data.	Students will be able to prepare data for visualization
		Students will study about interaction techniques.	Students will be able to use web technology to create visualizations
		To read and analyze visualization of spatial data, data reduction and data analytics.	Students will be able to apply data transformations such as aggregation and filtering for visualization.
		Course will develop skills to both design and critique visualizations.	Students will be able to use advanced techniques to conduct thorough and insightful analysis, and interpret the results correctly with detailed and useful information.

BCA 313	Machine Learning with Python	To understand the basic theory underlying machine learning.	Explain Machine Learning concepts, classifications of Machine Learning and write simple programs using python.
		To be able to formulate machine learning problems corresponding to different applications.	Describe Supervised Learning concepts.
		To understand a range of machine learning algorithms along with their strengths and weaknesses	Describe unsupervised learning dimensionality reduction techniques.
		To be able to apply machine learning algorithms to solve problems of moderate complexity.	Discuss simple Machine Learning applications in a range of real-world applications using Python programming
BCA 315	Web Security	Students will get hands-on experience on web programming.	Students will be able to analyze and resolve security issues on web to secure internet.
		Design and implement security applications for web.	Students will be able to design, develop and evaluate secure application for web security.
		Students will learn how to employ new defense techniques and architectures for web security	Learners will be able to develop security policies and procedure to manage web security risks.
		Design and implement exploits for real security bugs.	Learners will be able to interpret and investigate security web incidents.
BCA 314	Deep Learning with Python	To learn and understand the concepts of Deep learning with python	Define and demonstrate the use of built-in data structures “lists” and “dictionary”
		To learn and understand python looping, control statements and string manipulations.	Design and implement a program to solve a real world problem.
		Students should be made familiar with the concepts of GUI controls and designing GUI applications.	. Design and implement GUI application and how to handle exceptions and files.

		To learn and know the concepts of file handling, exception handling and database connectivity.	Make database connectivity in python programming language.
BCA 316	IT Act & Cyber Law	Students will gain an understanding of basic concept of Cyber Crimes .	Students will be able to get the information related to the cyber crimes issues
		Students will study about IT Acts to deal with crime related issues	Students will be able to use secure his web application against the issues related to cyber crimes
		To read and analyze laws related to Cyber Fraud ,Phising and various methods for the same	Students will be able to apply patterns and various other methods to counter the cyber crimes
		Course will help to analyze the basic concept of SQL Injection query to protect our weba plications	Students will be able to use advanced techniques to implements the cyber crimes issues