



॥ ऋते ज्ञानान्न मुक्तीः ॥

Dwarka Bahuuddeshiya Gramin Vikas Foundation's

Rajarshi Shahu College of Engineering, Buldana

Approved By AICTE New Delhi, NAAC Accredited, Affiliated to Sant Gadge Baba Amravati University



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE OUTCOMES OF ALL COURSES OF FIFTH SEMESTER & SIXTH SEMESTER BE CSE (COMPUTER SCIENCE AND ENGINEERING)

FIFTH SEMESTER

5KS01 DATABASE MANAGEMENT SYSTEMS

On completion of the course, the students will be able to:

1. Model, design and normalize databases for real life applications.
2. Discuss data models, conceptualize and depict a database system using ER diagram.
3. Query Database applications using Query Languages like SQL.
4. Design & develop transaction processing approach for relational databases.
5. Understand validation framework like integrity constraints, triggers and assertions.

5KS02 COMPILER DESIGN

On completion of the course, the students will be able to:

1. Describe the fundamentals of compiler and various phases of compilers.
2. Design and implement LL and LR parsers.
3. Solve the various parsing techniques like SLR, CLR, LALR.
4. Examine the concept of Syntax-Directed Definition and translation.
5. Assess the concept of Intermediate-Code Generation and run-time environment.
6. Explain the concept code generation and code optimization

5KS03 COMPUTER ARCHITECTURE & ORGANIZATION

On completion of the course, the students will be able to:

1. Discuss basic structure of computer.
2. Understand the basic operation of CPU.
3. Compare and select various Memory and I/O devices as per requirement.
4. Solve the concepts of number representation and their operation.
5. Explain the concept of parallel processing and pipelining.

5KS04 COGNITIVE TECHNOLOGIES

On completion of the course, the students will be able to:

1. Describe the Cognitive computing and principles of cognitive systems.
2. Identify role of Natural Language Processing in cognitive system.
3. Outline application of advanced analytics in cognitive computing.
4. Justify role of Cloud and Distributed Computing in Cognitive Computing.
5. Assess the process of building a Cognitive Application.
6. Identify the Emerging Areas and Future Applications of Cognitive Computing.

5KS04 DATA SCIENCE AND STATISTICS

On completion of the course, the students will be able to:

1. Demonstrate proficiency with statistical analysis of data.
2. Build skills in transformation and merging of data for use in analytic tools.
3. Perform linear and multiple linear regression analysis.
4. Develop the ability to build and assess data-based models.
5. Evaluate outcomes and make decisions based on data

5KS04 INTERNET OF THINGS

On completion of the course, the students will be able to:

1. Understand the basics of IoT.
2. Understand design methodology and platforms involved in IoT.
3. Apply the knowledge to interface various sensors with IoT development.
4. Design and Implement IoT system for real time application

5KS04 INTRODUCTION TO CYBER SECURITY

After completion of this course, the students should be able to:

1. Know fundamentals of Cybercrimes and Cyber offenses.
2. Realize the Cyber threats, attacks and Vulnerabilities.
3. Explore the industry practices and tools.
4. Comprehend the Access Control and Authentication Process.
5. Implement Intrusion Detection and Prevention.

5KS05 PRINCIPLES OF MARKETING FOR ENGINEERING

On completion of the course, the students will be able to:

1. Identify the importance of the digital marketing for marketing success,
2. Manage customer relationships across all digital channels and build better customer relationships.
3. Create a digital marketing plan, starting from the SWOT analysis and defining a target group.
4. Identify digital channels, their advantages and limitations, to perceiving ways of their integration taking into consideration the available budget.

5KS05 Open Elect. I (i) FUNDAMENTALS OF FINANCE & ACCOUNTING

On completion of the course, the students will be able to:

1. Define bookkeeping and accounting.
2. Explain the general purposes and functions of accounting.
3. Explain the differences between management and financial accounting.
4. Describe the main elements of financial accounting information – assets, liabilities, revenue and expenses.
5. Identify the main financial statements and their purposes.

5KS05 ENTREPRENEURSHIP

On completion of this course, the students should be able to:

1. Analyze the business environment in order to identify business opportunities.
2. Identify the elements of success of entrepreneurial ventures.
3. Evaluate the effectiveness of different entrepreneurial strategies.
4. Specify the basic performance indicators of entrepreneurial activity.
5. Explain the importance of marketing and management in small businesses venture,
6. Interpret their own business plan.

-----add java intro. Open elective syllabus-----

5KS06 DATABASE MANAGEMENT SYSTEMS LAB

On completion of the course, the students will be able to:

1. Design ER model for any kind of application.
2. Design and develop database.
3. Apply normalization.
4. Query the database.
5. Apply various integrity constraints.
6. Build indices, views.
7. Implement triggers, assertions.

5KS07 COMPILER DESIGN – Lab

On completion of the course, the students will be able to:

1. Identify the fundamentals of compiler and its phases.
2. Use the powerful compiler generation tools such as Lex and Yacc.
3. Write a lexical scanner, either from scratch or using Lex.
4. Develop program for solving parser problems.
5. Examine the various optimization techniques.

5KS08 EMERGING TECHNOLOGY LAB I

On completion of the course, the students will be able to:

1. Demonstrate proficiency with statistical analysis of data.
2. Build skills in transformation and merging of data for use in analytic tools.
3. Perform linear and multiple linear regression analysis.
4. Develop the ability to build and assess data-based models.
5. Evaluate outcomes and make decisions based on data.

5KS08 DATA SCIENCE AND STATISTICS – LAB

On completion of the course, the students will be able to:

1. Demonstrate proficiency with statistical analysis of data.
2. Build skills in transformation and merging of data for use in analytic tools.
3. Perform linear and multiple linear regression analysis.
4. Develop the ability to build and assess data-based models.
5. Evaluate outcomes and make decisions based on data.

5KS09 C-Skill Lab – III

On completion of the course, the students will be able to:

1. Explain the various tools, packages and modules required for Web Development.
2. Discuss the workings of web server, cookies, routes, etc.
3. Develop a mobile application using JS Framework.
4. Design GUI using JS framework and/or Libraries.
5. Create applications using Angular, React, Node and Express.

SIXTH SEMESTER

6KS01 SECURITY POLICY & GOVERNANCE

On completion of the course, the students will be able to:

1. List and discuss the key characteristics of Information Security, Leadership and Management
2. Differentiate between Law and Ethics.
3. Describe why ethical codes of conduct are important to Information Security.
4. Discuss the importance, benefits and desired outcomes of Information Security Governance
5. Discuss the process of developing, implementing and maintaining various types of Information Security Policies.
6. Define Risk Management and its role in the organization.

6KS02 DESIGN AND ANALYSIS OF ALGORITHMS

On completion of the course, the students will be able to:

1. Carry out the analysis of various Algorithms for mainly Time complexity.
2. Apply design principles and concepts to algorithm design.
3. Understand different algorithmic design strategies.
4. Analyze the efficiency of algorithms using time complexity.
5. Apply the standard sorting algorithms.

6KS03 SOFTWARE ENGINEERING

On completion of the course, the students will be able to:

1. Decide on a process model for a developing a software project.
2. Classify software applications and identify unique features of various domains.
3. Design test cases of a software system.
4. Understand basics of Project management.
5. Plan, schedule and execute a project considering the risk management.
6. Apply quality attributes in software development life cycle.
7. Understand quality control and to ensure good quality software.

6KS04 NATURAL LANGUAGE PROCESSING

On completion of the course, the students will be able to:

1. Understand how to tag a given text with basic Language features.
2. Design an innovative application using NLP components.
3. Implement a rule-based system to tackle morphology/syntax of a language.
4. Design a tag set to be used for statistical processing for real-time applications.
5. Compare and contrast the use of different statistical approaches for different types of NLP applications.

6KS04 BIG DATA ANALYTICS

On completion of the course, the students will be able to:

1. Work with big data tools and its analysis techniques.
2. Analyze data by utilizing clustering and classification algorithms.
3. Learn and apply different algorithms and recommendation systems for large volumes of data.
4. Perform analytics on data streams.
5. Learn NoSQL databases and management.

6KS04 SENSORS AND ACTUATORS

On completion of the course, the students will be able to:

1. Fabricate some of those sensors.
2. Simulate sensors and characterize before fabricating it.
3. Design application with sensors and actuators for real world.

6KS04 CRYPTOGRAPHY

On completion of the course, the students will be able to:

1. Classify the symmetric encryption techniques.
2. Illustrate various public key cryptographic techniques.
3. Evaluate the authentication and hash algorithms.
4. Discuss authentication applications.
5. Summarize the intrusion detection and its solutions to overcome the attacks.
6. Understand basic concepts of system level security.

6KSO5 COMPUTATIONAL BIOLOGY

On completion of the course, the students will be able to:

1. Understand what types of biological questions can be investigated using computers, and what limitations computational methods impose on the understanding of biology.
2. Describe the properties of DNA, RNA, and proteins, the relationships among these molecules.
3. Analyze how to convert a biological question into a computational problem that can be solved using computers.
4. Explain general approaches for solving computational problems, and will be able to apply these approaches to new problems you encounter.
5. Understand how implement the algorithms by writing computer programs.

6KSO5 CYBER LAWS & ETHICS

On completion of this course, the students should be able to:

1. Understand Cyber Space, Cyber Crime, Information Technology, Internet & Services.
2. List and discuss various forms of Cyber Crimes.
3. Explain Computer and Cyber Crimes.
4. Understand Cyber Crime at Global and Indian Perspective.
5. Describe the ways of precaution and prevention of Cyber Crime as well as Human Rights.

6KS05 INTELLECTUAL PROPERTY RIGHTS

On completion of the course, the students will be able to:

1. Demonstrate a breadth of knowledge in Intellectual property.
2. Assess fundamental aspects of Intellectual Property Rights.
3. Discuss Patents, Searching, filling and drafting of Patents.
4. Discuss the basic principles of geographical indication, industrial designs, and copyright.
5. Explain of Trade Mark and Trade Secret.
6. Investigate current trends in IPR and Government initiatives in fostering IPR.

6KS06 DESIGN AND ANALYSIS OF ALGORITHMS – LAB

On completion of the course, the students will be able to:

1. Carry out the analysis of various Algorithms for mainly Time complexity.
2. Apply design principles and concepts to algorithm design.
3. Understand different algorithmic design strategies.
4. Analyze the efficiency of algorithms using time complexity.
5. Apply the standard sorting algorithms.

6KS07 SOFTWARE ENGINEERING LAB

On completion of the course, the students will be able to:

1. Understand basic Software engineering methods and practices, and their appropriate application.
2. Describe software process models such as the waterfall and evolutionary models.
3. Discuss role of project management including planning, scheduling and, risk management.
4. Explain data models, object models, context models and behavioral models.
5. Understand of different software architectural styles and Process frame work.

6KS09 C SKILL LAB IV– LAB (DevOps)

On completion of the course, the students will be able to:

1. Install and setup of Jenkins on your systems.
2. Create and run jobs in Jenkins.
3. Add and manage plugins. Use plugins in jobs.
4. Create and run pipelines in Jenkins.
5. Setup, configure, and deploy jobs.