

#### DNR COLLEGE OF ENGINEERING & TECHNOLOGY, Bhimavaram BALUSUMUDI, BHIMAVARAM, W.G. Dist., A.P., PIN-534 202 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

#### **Course Outcomes (COs)**

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | ADVANCED DATA STRUCTURES AND ALGORITHM    | Class / Sem | I/I       |
|               | ANALYSIS                                  |             |           |
| Faculty Name: | Dr. B V S VARMA                           | Regulation  | R16       |

#### **Course Outcomes**

After completing this course, the student will be able to:

| CO      | CO Statement  | Taxonomy <sup>#</sup> |
|---------|---|-----------------------|
| Number  |   |                       |
| C5211.1 | Apply Algorithm for solving problems like sorting, searching, insertion<br>and deletion of data           | Apply                 |
| C5211.2 | Ability to apply and implement learned algorithm design techniques and data structures to solve problems. | Apply                 |
| C5211.3 | Ability to create different algorithm design techniques (brute-force, divide and conquer, greedy, etc     | Create                |
| C5211.4 | Basic ability to analyze algorithms and to determine algorithm correctness and time efficiency class.     | Analyze               |
| C5211.5 | Understand the concept of Dynamic memory management, data types, algorithms, Big O notation.              | Understand            |
| C5211.6 | Describe the hash function and concepts of collision and its resolution methods                           | Evaluate              |

<sup>#</sup> Remember; Understand; Apply; Analyze; Evaluate; Create

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | Advanced Operating Systems                | Class / Sem | I/I       |
| Faculty Name: | K S R PRASAD                              | Regulation  | R16       |

**Course Outcomes** 

After completing this course, the student will be able to:

| CO      | CO Statement  | Taxonomy <sup>#</sup> |
|---------|---|-----------------------|
| Number  |   |                       |
| C5312.1 | Understands the different services provided by Operating System at different level.                             | Understand            |
| C5312.2 | Understands the use of different process scheduling algorithm and synchronization techniques to avoid deadlock. | Apply                 |
| C5312.3 | Able to learn different memory management techniques like paging, segmentation and demand paging etc.           | Analyse               |
| C5312.4 | Analyze various scheduling algorithms.  | Analyse               |
| C5312.5 | Apply protection and security in distributed operating systems.   | Apply                 |
| C5312.6 | Elaborate on concurrency control mechanisms in distributed database systems.                                    | Analyse               |

| Program Name: | M. Tech in Computer Science & Engineering  | AY          | 2019-2020 |
|---------------|--|-------------|-----------|
| Course Name:  | MATHMATICAL FOUNDATIONS OF COMPTER SCIENCE | Class / Sem | I/I       |
| Faculty Name: | N U B VARMA                                | Regulation  | R16       |

# **Course Outcomes**

After completing this course, the student will be able to:

| СО      | CO Statement   | Taxonomy <sup>#</sup> |
|---------|--|-----------------------|
| Number  |  |                       |
| C5111.1 | Apply organization of basic computer, its design and the design of control unit  | Apply                 |
| C5111.2 | Demonstrate the working of central processing unit and RISC and CISC Architecture  | Demonstrate           |
| C5111.3 | Describe the operations and language of the register transfer, micro operations and input-output organization                | Apply                 |
| C5111.4 | Understand the organization of memory and memory management hardware   | Understand            |
| C5111.5 | Elaborate advanced concepts of computer Architecture, parallel processing, inter processor communication and synchronization | Analyse               |
| C5111.6 | Summarize the memory organization and pipelining concepts  | Summarize             |

<sup>#</sup> Remember; Understand; Apply; Analyze; Evaluate; Create

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | RESEARCH METHODOLOGY and IPR              | Class / Sem | I/I       |
| Faculty Name: | B VAMSIDHAR                               | Regulation  | R16       |

#### **Course Outcomes**

After completing this course, the student will be able to:

| CO<br>Number | CO Statement  | Taxonomy <sup>#</sup> |
|--------------|---|-----------------------|
| C5511.1      | Understand the research problem and research process.                 | Understand            |
| C5511.2      | Understand research ethics.   | Understand            |
| C5511.3      | Prepare a well-structured research paper and scientific presentations | Analyse               |
| C5511.4      | Explore on various IPR components and process of filing.              | Apply                 |
| C5511.5      | Understand Scope of Patent Rights                                     | Understand            |
| C5511.6      | Understand the adequate knowledge on patent and rights                | Understand            |

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | Object Oriented Software Engineering      | Class / Sem | I/I       |
| Faculty Name: | L BUJJI BABU                              | Regulation  | R16       |

# **Course Outcomes**

After completing this course, the student will be able to:

| СО      | CO Statement   | Taxonomy <sup>#</sup> |
|---------|--|-----------------------|
| Number  |  |                       |
| C5411.1 | Basic knowledge and understanding of the analysis and design of complex systems.     | Understand            |
| C5411.2 | Apply the Object Oriented Software-Development Process to design software            | Apply                 |
| C5411.3 | Analyze and Specify software requirements through a SRS documents.                   | Analyze               |
| C5411.4 | Design and Plan software solutions to problems using an object-oriented strategy.    | Design                |
| C5411.5 | Model the object oriented software systems using Unified Modelling<br>Language (UML) | Analyse               |
| C5411.6 | Estimate the cost of constructing object oriented software.                          | Apply                 |



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## **Course Outcomes (COs)**

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | Machine Learning                          | Class / Sem | I/II      |
| Faculty Name: | B V S VARMA                               | Regulation  | R16       |

#### **Course Outcomes**

After completing this course, the student will be able to:

| СО       | CO Statement   | Taxonomy <sup>#</sup> |
|----------|--|-----------------------|
| Number   |  |                       |
| C51121.1 | Domain Knowledge for Productive use of Machine Learning and Diversity of Data. | Understand            |
| C51121.2 | Demonstrate on Supervised and Computational Learning                           | Apply                 |
| C51121.3 | Analyze on Statistics in learning techniques and Logistic Regression           | Analyze               |
| C51121.4 | Illustrate on Support Vector Machines and Perceptron Algorithm                 | Design                |
| C51121.5 | Design a Multilayer Perception Networks and classification of decision tree    | Analyse               |
| C51121.6 | Estimate the cost of constructing object oriented software.                    | Apply                 |

<sup>#</sup> Remember; Understand; Apply; Analyze; Evaluate; Create

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | MEAN Stack Technologies                   | Class / Sem | I/II      |
| Faculty Name: | K VENKATA CHANDRAN                        | Regulation  | R16       |

#### **Course Outcomes**

After completing this course, the student will be able to:

| CO<br>Number | CO Statement  | Taxonomy <sup>#</sup> |
|--------------|---|-----------------------|
| C5212.1      | After the completion of the course, student will be able to         | Understand            |
| C5212.2      | Identify the Basic Concepts of Web & Mark up Languages              | Understand            |
| C5212.3      | Develop web Applications using Scripting Languages & Frameworks.    | Analyze               |
| C5212.4      | Make use of Express JS and Node JS frameworks                       | Design                |
| C5212.5      | Illustrate the uses of web services concepts like restful, react js | Illustrate            |
| C5212.6      | Adapt to Deployment Techniques & Working with cloud platform.       | Apply                 |

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | ADVANCED DATABASE AND MINING              | Class / Sem | I/II      |
| Faculty Name: | K S R PRASAD                              | Regulation  | R16       |

#### **Course Outcomes**

After completing this course, the student will be able to:

| СО      | CO Statement   | Taxonomy <sup>#</sup> |
|---------|--|-----------------------|
| Number  |  |                       |
| C5312.1 | Understand fundamental concepts of data warehousing and OLAP techniques            | Understand            |
| C5312.2 | Apply data-cubing techniques and conduct multi-dimensional data analysis           | Apply                 |
| C5312.3 | Demonstrate advanced knowledge on the design and implementation of data warehouses | Apply                 |
| C5312.4 | Develop in-depth understanding of fundamental data mining algorithms               | Create                |
| C5312.5 | Apply data mining techniques for knowledge discovery                               | Apply                 |
| C5312.6 | Perform practical data mining using open source tools                              | Analyze               |

<sup>#</sup> Remember; Understand; Apply; Analyze; Evaluate; Create

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | PINCIPLES OF COMPUTER SECURITY            | Class / Sem | I/II      |
| Faculty Name: | L BUJJI BABU                              | Regulation  | R16       |

After completing this course, the student will be able to:

| СО      | CO Statement   | Taxonomy <sup>#</sup> |
|---------|--|-----------------------|
| Number  |  |                       |
| C5312.1 | Analyze and evaluate the cyber security needs of an organization.  | Analyze               |
| C5312.2 | Determine and analyze software vulnerabilities and security solutions to reduce the risk of exploitation.                        | Apply                 |
| C5312.3 | Implement cyber security solutions and use of cyber security, information assurance, and cyber/computer forensics software/tools | Apply                 |
| C5312.4 | Comprehend and execute risk management processes, risk treatment methods, and key risk and performance indicators                | Evaluate              |
| C5312.5 | Design and develop a security architecture for an organization   | Create                |
| C5312.6 | Design operational and strategic cyber security strategies and policies.   | Create                |



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#### **Course Outcomes (COs)**

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | DEEP LEARNING                             | Class / Sem | II/I      |
| Faculty Name: | K VENKATA CHANDRAN                        | Regulation  | R16       |

## **Course Outcomes**

After completing this course, the student will be able to:

| СО      | CO Statement   | Taxonomy <sup>#</sup> |
|---------|--|-----------------------|
| Number  |  |                       |
| C5121.1 | Demonstrate the basic concepts fundamental learning techniques and | Understand            |
|         | layers   |                       |
| C5121.2 | Discuss the Neural Network training, various random models.        | Understand            |
| C5121.3 | Classify the Probabilistic Neural Networks.                        | Analyze               |
| C5121.4 | Implement tools on Deep Learning techniques.                       | Design                |
| C5121.5 | Learn deep learning methods for working with sequential data       | Understand            |
| C5121.6 | Apply such deep learning mechanisms to various learning problems.  | Apply                 |
| # D 1   |  |                       |

<sup>#</sup> Remember; Understand; Apply; Analyze; Evaluate; Create

| Program Name: | M. Tech in Computer Science & Engineering | AY          | 2019-2020 |
|---------------|---|-------------|-----------|
| Course Name:  | OPERATIONAL RESEARCH                      | Class / Sem | II/I      |
| Faculty Name: | N U B VARMA                               | Regulation  | R16       |

#### **Course Outcomes**

After completing this course, the student will be able to:

| CO      | CO Statement   | Taxonomy <sup>#</sup> |
|---------|--|-----------------------|
| Number  |  | -                     |
| C5221.1 | Recognize the importance and value of Operations Research and linear programming in solving practical problems in industry | Understand            |
| C5221.2 | Interpret the transportation models' solutions and infer solutions to the real-world problems.                             | Understand            |
| C5221.3 | Recognize and solve game theory and assignment problems.   | Analyze               |
| C5221.4 | Gain knowledge of drawing project networks for quantitative analysis of projects   | Design                |
| C5221.5 | know when simulation and dynamic programming can be applied in real world problems   | Understand            |
| C5221.6 | Recognize and solve game theory and assignment problems.   | Apply                 |