

## DEPARTMENT OF INFORMATION TECHNOLOGY

### Course Name: Energy and Environment Engineering (Grading System) Semester III

Students will be able to

ES 301.1	<b>Understand</b> environment friendly renewable Energy sources
ES 301.2	<b>Illustrate</b> about mutual co relationship of organism. By carefully using the principles of ecology.
ES 301.3	<b>Conduct</b> scientific study of environmental system (air, water, soil and land), the inherent or induced changes on organisms .
ES 301.4	<b>Understand</b> the link between air pollution levels and chemical composition
ES 301.4	<b>Assess</b> the quantities and types of solid wastes generated, assess the efficacy of present disposal method.

### Course Name: Discrete Structure (Grading System) Semester III

Students will be able to

IT 302.1	<b>Learn</b> the concept of Set Theory
IT 302.2	<b>Describe</b> concept of algebraic Structures.
IT 302.3	<b>Illustrate</b> the Proposition Logic IT and Finite state machine.
IT 302.4	<b>Formulate</b> the Graph Theory and Application
IT 302.5	<b>Apply</b> hases Diagram Pose lattice concepts

### Course Name: Data Structure (Grading System) Semester III

Students will be able to

IT 303.1	<b>Define</b> Data Structure and Algorithms
IT 303.2	<b>Discuss</b> stacks and queues
IT 303.3	<b>Implement</b> Binary trees and AVL trees
IT 303.4	<b>Differentiate</b> between different sorting techniques
IT 303.5	<b>Create</b> Graphs and trees by using nodes as data

<b>Course Name: Object Oriented Programming &amp; Methodology (Grading System)</b> <b>Semester III</b>	
<b>Students will be able to</b>	
<b>IT 304.1</b>	<b>Define</b> the Concepts of Classes and Objects
<b>IT 304.2</b>	<b>Describe</b> the concepts of Association, Aggregation and Delegation.
<b>IT 304.3</b>	<b>Illustrate</b> Polymorphism and Inheritance.
<b>IT 304.4</b>	<b>Learn</b> the concepts of Container Classes and Object oriented programming languages.
<b>IT 304.5</b>	<b>Implement</b> the object oriented concepts in C++ and Java.

<b>Course Name: Digital Circuits and Design (Grading System)</b> <b>Semester III</b>	
<b>Students will be able to</b>	
<b>IT 305.1</b>	<b>Elaborate</b> the structure of various number systems and its application in digital design.
<b>IT 305.2</b>	<b>Implement</b> combinational and logic circuits
<b>IT 305.3</b>	<b>Compare</b> the different types of Logic families
<b>IT 305.4</b>	<b>Design</b> sequential circuits and ECL and ,PMOS NMOS and CMOS.
<b>IT 305.5</b>	<b>Compare</b> A/D and D/A conversion Techniques

<b>Course Name: JAVA Programming Lab (Grading System)</b> <b>Semester III</b>	
<b>Students will be able to</b>	
<b>IT 306.1</b>	<b>Explain</b> fundamentals of Java, Java Virtual Machine.
<b>IT 306.2</b>	<b>Describe</b> Java collection framework, Data Structures, Collections and its algorithms.
<b>IT 306.3</b>	<b>Demonstrate</b> Multithreading, networking and JDBC.
<b>IT 306.4</b>	<b>Distinguish</b> Servlets, Java Server Pages and Multimedia.
<b>IT 306.5</b>	<b>Apply</b> advance web and internet programming.

**Course Name: Operating System (Grading System)**  
**Semester V**

Students will be able to

IT 501.1	<b>Describe</b> the fundamental components of a computer operating system
IT501.2	<b>Define</b> the policies for scheduling, deadlocks, memory management, synchronization, system calls
IT501.3	<b>Describe</b> the interactions among the various components of computing system
IT 501.4	<b>Design</b> the following OS components: System calls, Schedulers, Memory management systems, Virtual Memory and Paging systems
IT 501.5	<b>Implement</b> the above OS Scheduling through Programs

**Course Name: Computer Network (Grading System)**  
**Semester V**

Students will be able to

IT 502.1	<b>Define</b> various network models in simplifying networking architecture
IT502.2	<b>Examine</b> design issues and protocols of data link layer
IT502.3	<b>Analyze</b> MAC sub layer protocols for collision control and random access control
IT 502.4	<b>Compare</b> various routing algorithms and congestion control algorithms in different subnets
IT 502.5	<b>Examine</b> the protocols of transport layer, session layer, presentation layer and application layer in computer networking.

**Course Name: Theory of Computation (Grading System)**  
**Semester V**

Students will be able to

IT 503.1	<b>Describe</b> deterministic and non deterministic machines.
IT503.2	<b>Explain</b> grammar and normal forms
IT503.3	<b>Illustrate</b> pushdown automata
IT 503.4	<b>Explain</b> Turing machine model
IT 503.5	<b>Analyze</b> tractable and untraceable problems

**Course Name: Artificial Intelligence (Grading System)  
Semester V**

Students will be able to

IT 504.1	<b>Understand</b> Artificial Intelligence and its application
IT504.2	<b>Compare</b> Predicate Logic and Propositional Logic
IT504.3	<b>Use</b> of Baye's Theorem ,Frames and Conceptual dependency
IT 504.4	<b>Apply</b> Game theory and its application on various daily life
IT 504.5	<b>Describe</b> expert Systems

**Course Name: Advance JAVA Lab (Grading System)  
Semester V**

Students will be able to

IT 506.1	<b>Explain</b> fundamentals of Java, Java Virtual Machine.
IT 505.2	<b>Describe</b> Java collection framework, Data Structures, Collections and its algorithms.
IT 505.3	<b>Demonstrate</b> Multithreading, networking and JDBC.
IT 505.4	<b>Distinguish</b> Servlets, Java Server Pages and Multimedia.
IT505.5	<b>Apply</b> advance web and internet programming.

**Course Name: Soft Skills (Grading System)  
Semester V**

Students will be able to

IT 506.1	<b>Participate</b> in an online learning environment successfully by developing the implication-based understanding of Paraphrasing, deciphering instructions, interpreting guidelines, discussion boards & Referencing Styles.
IT 506.2	<b>Demonstrate</b> his/her ability to write error free while making an optimum use of correct Business Vocabulary & Grammar.
IT 506.3	<b>Distinguish</b> among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.
IT 506.4	<b>Draft</b> effective business correspondence with brevity and clarity.
IT506.5	<b>Stimulate</b> their Critical thinking by designing and developing clean and lucid writing skills.

**Course Name: Soft Computing(Grading System)  
Semester VII**

**Students will be able to**

<b>IT 701.1</b>	<b>Define</b> and Explain Neural Network and its application
<b>IT701.2</b>	<b>Use</b> Data Compression and Image Compression
<b>IT701.3</b>	<b>Execute</b> Neural Network in Pattern Recognition and Face Recognition
<b>IT 701.4</b>	<b>Apply</b> fuzzy logic in Engineering Problems
<b>IT 701.5</b>	<b>Implement</b> Genetic algorithm

**Course Name: Cloud Computing(Grading System)  
Semester VII**

**Students will be able to**

<b>IT 702.1</b>	<b>Understand</b> Cloud computing and its development
<b>IT702.2</b>	<b>Describe</b> Cloud reference model and its application
<b>IT702.3</b>	<b>Use</b> Virtualization Technique for better system performance
<b>IT 702.4</b>	<b>Design</b> Principles of secured cloud requirement
<b>IT 702.5</b>	<b>Use</b> of Hadoop and Microsoft Azure

**Course Name: Internet of Things Lab(Grading System)  
Semester VII**

**Students will be able to**

<b>IT 706.1</b>	<b>Demonstrate</b> a sound technical knowledge of their selected project topic
<b>IT706.2</b>	<b>Undertake</b> problem identification, formulation and solution
<b>IT706.3</b>	<b>Design</b> engineering solutions to complex problems utilising a systems approach
<b>IT 706.4</b>	<b>Conduct</b> an engineering project.
<b>IT 706.5</b>	<b>Communicate</b> with engineers and the community at large in written an oral forms

**Course Name: Cloud Computing Lab(Grading System)  
Semester VII**

**Students will be able to**

<b>IT 704.1</b>	<b>Understand</b> Cloud computing and its development
<b>IT704.2</b>	<b>Describe</b> Cloud reference model and its application
<b>IT704.3</b>	<b>Use</b> Virtualization Technique for better system performance
<b>IT 704.4</b>	<b>Design</b> Principles of secured cloud requirement
<b>IT 704.5</b>	<b>Use</b> of Hadoop and Microsoft Azure

**Course Name: Cloud Computing(Grading System)  
Semester VII**

**Students will be able to**

<b>IT 702.1</b>	<b>Understand</b> Cloud computing and its development
<b>IT702.2</b>	<b>Describe</b> Cloud reference model and its application
<b>IT702.3</b>	<b>Use</b> Virtualization Technique for better system performance
<b>IT 702.4</b>	<b>Design</b> Principles of secured cloud requirement
<b>IT 702.5</b>	<b>Use</b> of Hadoop and Microsoft Azure

**Course Name: Internet of Things(Grading System)  
Semester VII**

**Students will be able to**

<b>IT 703.1</b>	<b>Understand</b> the definition and significance of the Internet of Things
<b>IT703.2</b>	<b>Discuss</b> the architecture, operation, and business benefits of an IoT solution
<b>IT703.3</b>	<b>Examine</b> the potential business opportunities that IoT can uncover
<b>IT 703.4</b>	<b>Explore</b> the relationship between IoT, cloud computing, and big data
<b>IT 703.5</b>	<b>Identify</b> how IoT differs from traditional data collection systems

**Course Name: Internet of Things Lab(Grading System)  
Semester VII**

**Students will be able to**

<b>IT 705.1</b>	<b>Understand</b> the application areas of IOT ·
<b>IT705.2</b>	<b>Realize</b> the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
<b>IT705.3</b>	<b>Understand</b> building blocks of Internet of Things and characteristics.
<b>IT 705.4</b>	<b>Implement</b> Internet of things as Engineering Project
<b>IT 705.5</b>	<b>Create</b> an application of Internet of things