Department of Information Technology
SOS (E & T)
Guru Ghasidas Vishwavidyalaya , Bilaspur (C.G.)

COURSE OBJECTIVES AND OUTCOMES

B.Tech. (IT) First Year [First and Second Semester]

Objectives: The main objectives of first year syllabus are as follows:

- To teach basic subjects of engineering.
- To enable students to performs basic engineering experiments.
- To teach the fundamentals of engineering.

SCHEME OF EXAMINATION									
B.TECH (FOUR YEAR) DEGREE COURSE									
FIRST YEAR , INFORMATION TECHNOLOGY									
SEMESTER I (COURSE-A)									
EFFECTIVE FROM SESSION 2018-19									
SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT01TBS01	PHYSICS	3	1	0	30	70	100	4
2	IT01TES01	BASIC ELECTRICAL ENGINEERING	3	1	0	30	70	100	4
3	IT01TBS02	MATHEMATICS-I	3	1	0	30	70	100	4
4	IT01THS01	ENGLISH	3	0	0	30	70	100	3
5	IT01TMC01	ENVIRONMENTAL SCIENCES	3	0	0	...	...	..	0
PRACTICAL									
1	IT01PBS01	PHYSICS LAB	0	0	3	30	20	50	1.5
2	IT01PES01	BASIC ELECTRICAL ENGINEERING LAB	0	0	2	30	20	50	1
3	IT01PES02	ENGINEERING GRAPHICS & DESIGN	1	0	3	30	20	50	2.5
4	IT01PMC01	INDUCTION TRAINING PROGRAMME	0	0	2	-	-	-	-
								TOTAL	20

IA – INTERNAL ASSESSMENT ESE – END SEMESTER EXAM. L- LECTURE T- TUTORIAL P-PRACTICAL

SCHEME ~~FOR~~ OF EXAMINATION

B.TECH (FOUR YEAR) DEGREE COURSE

FIRST YEAR , INFORMATION TECHNOLOGY

SEMESTER II (COURSE-B)

EFFECTIVE FROM SESSION 2018-19

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT 02TBS03	MATHEMATICS-II	3	1	0	30	70	100	4
2	IT 02TBS04	CHEMISTRY	3	1	0	30	70	100	4
3	IT 02TES02	PROGRAMMING FOR PROBLEM SOLVING	3	0	0	30	70	100	3
4	IT 02THS03	HUMANITIES-I	3	1	0	30	70	100	4
PRACTICAL									
1	IT 02PBS02	CHEMISTRY LAB	0	0	3	30	20	50	1.5
2	IT 02PES03	PROGRAMMING FOR PROBLEM SOLVING LAB	0	0	3	30	20	50	1.5
3	IT02PES04	WORKSHOP & MANUFACTURING PRACTICES	1	0	3	30	20	50	2.5
								TOTAL	20.5

IA – INTERNAL ASSESSMENT ESE – END SEMESTER EXAM. L- LECTURE T-TUTORIAL P-PRACTICAL

COURSE OUTCOME

ITO1TBSO1 COURSE OUTCOME OF PHYSICS

- Gain basic understanding of the combined effect of electric and magnetic fields their application for designing various electromagnetic and semiconductor devices.
- Acquire fundamentals of Optics, especially wave nature of light (e.g., interference etc.) and its applications towards telescopes, microscopes, astronomy and fibre optics.
- Develop basic knowledge on the historical development and time-to-time applications of quantum mechanics in electronic devices (e.g., Photovoltaic cell, Hall sensor etc.).
- Obtain basic understanding of the particle nature of light (e.g., Photoelectric effect, Compton scattering etc.) and their applications.
- Gain basic knowledge on the properties, production and applications of X-rays. f Understand the fundamentals of atomic structure and related theory & experiments.
- Attain basic knowledge on different types of LASERs and their applications.
- Develop an ability to conduct experiments, as well as to analyse and interpret data related to the Electromagnetism, Optics, Modern and Laser Physics.

IT01TES01 COURSE OUTCOME OF BASIC ELECTRICAL ENGINEERING

- To understand and analyze basic electric and magnetic circuits
- To study the working principles of electrical machines and power converters.
- To introduce the components of low voltage electrical installations

ITO1TBSO2 COURSE OUTCOME OF MATHEMATICS-I

- Develops skill of higher derivative, expansion of functions in ascending power of variable & value of the function in neighboured of some points.
- Able to determine limits of indeterminate function. Applicable to already word problems & Engineering Problems.
- Gain the knowledge to solve differential equation arising in different Engineering branch and able to form mathematical & physical interpretation of its solution which place important role in all branches of Engineering.
- Learn the evaluation policy of some special function like gamma & Beta function. & their relation which is helpful to evaluate some definite integral arising in various branch of Engineering.
- Able to calculate rank of matrix, characteristic equation & characteristic roots & use the applicability of Caylay Hamilton Theorem to find inverse of matrix which is very important in many engineering application.
- Develops the ability to trace the curve for a given equation of a curve & its nature.
- Gain knowledge to find radius of curvature & torsion of given curve which is helpful in civil Engineering , Mechanical Engineering & Rods and Building Construction & it is also useful in Research & development.

IT01THS01 COURSE OUTCOME OF ENGLISH

- Ability to prepare and make small presentations
- Ability to write effective business letters, emails, CV and reports
- Comprehend answering strategies in group discussions and interviews
- Ability to voice opinion in discussions and convey ideas
- Comprehend different types of communication and importance of effective communication in a work place

ITO1TMCO1 COURSE OUTCOME OF ENVIRONMENTAL SCIENCES

- A clear appreciation and understanding of the scope of environmental engineering and the types of problems and issues that are involved
- An understanding of the interdisciplinary nature of problems associated with environmental engineering and the environment, and the broad range of skills and expertise that are required
- The global climate system and human interactions of major biogeochemical cycles sufficiently to critically evaluate forecasts for global change
- To describe and apply the fundamentals of air and water pollution to solve basic environmental engineering problems
- The objectives of water and wastewater treatment and to the most important regulations for sustainable development.

ITO1PBSO1 COURSE OUTCOME OF PHYSICS LAB

- Engineering Physics graduates must have demonstrated a working knowledge of fundamental physics and basic electrical and/or mechanical engineering principles to include advanced knowledge in one or more engineering disciplines;
- the ability to formulate, conduct, analyze and interpret experiments in engineering physics; and
- The ability to use modern engineering physics techniques and tools, including laboratory instrumentation.
- Communicate their ideas effectively, both orally and in writing; and function effectively in multidisciplinary teams.
-

ITO1PESO1 COURSE OUTCOME OF BASIC ELECTRICAL ENGINEERING LAB

- Get an exposure to common electrical components and their ratings.
- Make electrical connections by wires of appropriate ratings.
- Understand the usage of common electrical measuring instruments.
- Understand the basic characteristics of transformers and electrical machines.

- Get an exposure to the working of power electronic converters.

IT01PES02 COURSE OUTCOME OF ENGINEERING GRAPHICS & DESIGN

- Introduction to engineering design and its place in society
- Exposure to the visual aspects of engineering design
- Exposure to engineering graphics standards
- Exposure to solid modeling
- Exposure to computer-aided geometric design
- Exposure to creating working drawings
- Exposure to engineering communication

IT01PMC01 COURSE OUTCOME OF INDUCTION TRAINING PROGRAMME

- We always organize induction training programme in the beginning of the first semester.

IT02TBS03 COURSE OUTCOME OF MATHEMATICS-II

- Learning Basic Probability
- Learning continuous Probability Distributions
- Learning Bivariate Distributions
- Learning Basic Statistics, Applied Statistics

IT02TBS04 COURSE OUTCOME OF CHEMISTRY

- Gain knowledge about types of boiler problems, various physical and chemical techniques for water treatment and its analysis, desalination process used to produce potable water from brackish water.
- Differentiate between air and water pollution. Posses the knowledge about their adverse effect on the environment and their preventive measures.
- Gain chemical knowledge on concepts of polymers, their structural properties and moulding techniques required for solving interdisciplinary problems in polymer industries.
- Gain basic knowledge about biomolecules, nanomaterials, fullerenes, super conductors, and brass alloy, and also able to apply them in multi- disciplinary engineering branches.
- Acquire knowledge on dyes and drugs, methods of dyeing, color theory, synthesis of antimalarial and antibiotic drugs.
- Perform the experiments on pH-metry, Potentiometry, Conductometry, Colorimetry and chromatography as well as to analyze and interpret the data to address issues related to engineering problems.
- Acquire the knowledge of various types of Corrosion, their significance and preventive measures.
- Acquire the basics of non conventional sources of energy and green chemistry.

ITO2TESO2 COURSE OUTCOME OF PROGRAMMING FOR PROBLEM SOLVING

- Demonstrate a basic understanding of computer hardware and software
- Develop proficiency in writing small to medium sized programs in a procedural programming language.
- Apply problem-solving skills and knowledge of computing fundamentals to a wide variety of engineering, science and technology problems
- Expose, diagnose, and fix errors in a program, using systematic testing and debugging techniques
- Have developed interest in the field of computers to be able to adjust to the demands of current trends and technology

ITO2THSO3 COURSE OUTCOME OF HUMANITIES-I

- The student will acquire basic proficiency in English including reading and listening comprehension, writing and speaking skills.

IT02PBS02 COURSE OUTCOME OF CHEMISTRY LAB

- The chemistry laboratory course will consist of experiments illustrating the principles of chemistry relevant to the study of science and engineering. The students will learn to:
- Estimate rate constants of reactions from concentration of reactants/products as a function of time
- Measure molecular/system properties such as surface tension, viscosity, conductance of solutions, redox potentials, chloride content of water, etc
- Synthesize a small drug molecule and analyse a salt sample

IT02PES03 COURSE OUTCOME OF PROGRAMMING FOR PROBLEM SOLVING LAB

- Familiarization with programming environment
- Learning c programming

IT02PES04 COURSE OUTCOME OF WORKSHOP & MANUFACTURING PRACTICES

- Acquire knowledge of the safety measures which are followed in workshop while using hand tools and general purpose machine tools.
- Develop creativity, craftsmanship, approach to work and planning capabilities within students.
- Given a drawing of a product/part such as carpentry job, fitting job, sheet metal job, assembly of system and pipe fitting, apply the various hand tools and general purpose machine tool to make or assemble the product/part.
- Select and use various measuring and gauging instrument which are required for different types of jobs.

B.Tech. (IT) Second Year [Third and Fourth Semester]

Objectives: The main objectives of second year syllabus are as follows:

- To start teach the basic subjects of information technology and other required disciplines.
- Detail Experiments of various subject.
- To understand the theme of information technology

SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
SECOND YEAR, INFORMATION TECHNOLOGY
SEMESTER III
EFFECTIVE FROM SESSION 2019-20

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT03TES01	ANALOG ELECTRONIC CIRCUITS	3	0	0	30	70	100	3
2	IT03TPC01	DATA STRUCTURE & ALGORITHMS	3	0	0	30	70	100	3
3	IT03TES02	DIGITAL ELECTRONICS	3	0	0	30	70	100	3

4	IT03TBS01	MATHEMATICS-III	2	1	0	30	70	100	3
PRACTICAL									
1	IT03PES01	ANALOG ELECTRONIC CIRCUITS LAB	0	0	4	30	20	50	2
2	IT03PPC01	DATA STRUCTURE LAB	0	0	4	30	20	50	2
3	IT03PPC02	DIGITAL ELECTRONICS LAB	0	0	4	30	20	50	2
4	IT03PPC01	IT WORKSHOP	1	0	4	30	20	50	3
TOTAL CREDITS									**21**
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

COURSE OUTCOME

IT03TES01 - ANALOG ELECTRONIC CIRCUITS

Upon successful completion of this and competences in the subject of course module students possess advanced knowledge, skills Analog Electronics that enable them to:

- Analyze simple electronic circuits based on diodes and transistors with special focus on designing amplifiers with discrete components.
- Design simple linear power supplies according to the required specifications, Design and analyze bias circuits for BJTs and Amplifiers for the basic categories (CE, CC, CB and those for FETs).
- Perform Analysis at AC of Amplifiers based on BJTs and FETs using weak signal models.

IT03TPC01 - DATA STRUCTURE & ALGORITHMS

Upon completion of this course, the students will be able to

- Student will be able to choose appropriate data structure as applied to specified problem definition.
- Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures.
- Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc.

- Students will be able to use linear and non-linear data structures like stacks, queues, linked list etc.

IT03TES02 - DIGITAL ELECTRONICS

Student will be able to recognize and use the following concepts, ideas and tools after taking this course:

- Have a thorough understanding of the fundamental concepts and techniques used in digital electronics.
- To understand and examine the structure of various number systems and its application in digital design.
- The ability to understand, analyze and design various combinational and sequential circuits.
- Ability to identify basic requirements for a design application and propose a cost effective solution.
- Develop the ability to apply design criteria, power consumption and testability.
- Develop the ability to use designing tools like optimization and test of logic circuits.
- To develop skill to build, and troubleshoot digital circuits

IT03TBS01 - MATHEMATICS-III

On completion of this course, students are able

- To know how root finding techniques can be used to solve practical engineering problems.
- To apply the concept of numerical analysis to find the relative strengths and weaknesses of each computation method and know which are most applicable for given problem.
- To apply the analytical technique to express periodic function as a Fourier sine and cosine series.
- To apply partial differential techniques to solve the physical engineering problems.
- To implement integration technique to determine the extreme values of a functional.

IT03PES01 - ANALOG ELECTRONIC CIRCUITS LAB

- Demonstrate basic skills on using electronic devices simulation programs and on applying them in homework and laboratory exercises.
- Cooperate with fellow students as a team for the successful implementation of the laboratory exercises with the appropriate preparation of the procedures that must be followed, as well as the study of the relevant material for homework

IT03PPC01 - DATA STRUCTURE LAB

At the end of this lab session, the student will

- Design programs using a variety of data structures such as Stacks, Queues, Array, Binary Trees, and Linked List.
- Analyze and implement various kinds of searching and sorting techniques.
- Have practical knowledge on the applications of data structures.

IT03PPC02 - DIGITAL ELECTRONICS LAB

- Describe and explain the operation of fundamental digital gates.
- Analyze the operation of medium complexity standard combinational circuits like the encoder, decoder, multiplexer, de-multiplexer and adder.
- Analyze the operation of a flip-flop and examine relevant timing diagrams.
- Analyze, design and implement sequential logic circuits.
- Analyze the operation of counters and shift registers.
- Design and operate practical digital logic circuits.
- Report findings and evaluate and analyze the results

IT03PPC01 - IT WORKSHOP

At the end of this lab session, the student will

- Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration.
- Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
SECOND YEAR, INFORMATION TECHNOLOGY
SEMESTER IV
EFFECTIVE FROM SESSION 2019-20

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT04TPC01	DISCRETE MATHEMATICS	3	1	0	30	70	100	4
2	IT04TPC02	COMPUTER ORGANIZATION & ARCHITECTURE	3	0	0	30	70	100	3
3	IT04TPC03	OPERATING SYSTEMS	3	0	0	30	70	100	3
4	IT04TPC04	DESIGN & ANALYSIS OF ALGORITHMS	3	0	0	30	70	100	3
5	IT04THS01	MANAGEMENT 1 – MANAGEMENT PROCESS AND ORGANIZATIONAL BEHAVIOUR	3	0	0	30	70	100	3
PRACTICAL									
1	IT04PPC01	COMPUTER ORGANIZATION & ARCHITECTURE LAB	0	0	4	30	20	50	2
2	IT04PPC02	OPERATING SYSTEMS LAB	0	0	4	30	20	50	2
TOTAL CREDITS									**20**
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

COURSE OUTCOME

IT04TPC01 - DISCRETE MATHEMATICS

Upon completion of this course, the students will be able to

- Analyze the problem and identify the structures required to generate the mathematical solution.
- Apply the mathematical logic, predicate rules to design an abstract system for theorem proof.
- Apply mathematical foundations, algorithmic principles in modeling and design in computer based system.
- Design and develop the logic based systems.

IT04TPC02 - COMPUTER ORGANIZATION & ARCHITECTURE

Upon completion of this course, the students will be able to

- Describe the fundamental organization of a computer system.
- Explain the functional units of a processor.
- Distinguish the organization of various parts of a system memory hierarchy.
- Explain addressing modes, instruction formats and program control statements.
- Describe fundamentals concepts of pipeline and vector processing.
- Describe basic concept of parallel computing.

IT04TPC03 - OPERATING SYSTEMS

Upon completion of this course, the students will be able to

- Master functions, structures and history of operating systems
- Master understanding of design issues associated with operating systems
- Master various process management concepts including scheduling, synchronization, deadlocks
- Be familiar with multithreading
- Master concepts of memory management including virtual memory
- Master issues related to file system interface and implementation, disk management

- Be familiar with protection and security mechanisms
- Be familiar with various types of operating systems

IT04TPC04 - DESIGN & ANALYSIS OF ALGORITHMS

Design and Analysis of algorithms is a core subject which enabled the students to understand various computing problems and their solutions, furthermore they were able to analyze various computing problems and to design the algorithm. And after analysis of any algorithm they were able to design an efficient and optimized algorithm for several computing problem.

IT04THS01 - MANAGEMENT 1 – MANAGEMENT PROCESS AND ORGANIZATIONAL BEHAVIOUR

The objective of this paper is to familiarize the student with basic management concepts and behavioral processes in the organization. Upon completion of this course, the students will be able to

- Apply knowledge of management theories and practices to solve business problems.
- Foster Analytical and critical thinking abilities for data-based decision making
- Ability to develop Value based Leadership ability.
- Ability to understand, analyze and communicate global, economic, legal, and ethical aspects of business.
- Ability to lead themselves and others in the achievement of organizational goals, contributing effectively to a team environment.

IT04PPC01 - COMPUTER ORGANIZATION & ARCHITECTURE LAB

Upon completion of this course, the students will be able to

- Understand the theory and architecture of central processing unit.
- Analyze some of the design issues in terms of speed, technology, cost, performance.
- Design a simple CPU with applying the theory concepts.
- Use appropriate tools to design verify and test the CPU architecture.
- Learn the concepts of parallel processing, pipelining and inter-processor communication.
- Understand the architecture and functionality of central processing unit.

IT04PPC02 - OPERATING SYSTEMS LAB

- Demonstrate understanding of the concepts, structure and design of operating Systems.
- Demonstrate understanding of operating system design and its impact on application system design and performance.
- Demonstrate competence in recognizing and using operating system features.

B.Tech. (IT) Third Year [Fifth and Sixth Semester]

Objectives: The main objectives of third year syllabus are as follows:

- To start preparation of Gate exam subjects.
- To develop software code for real time issues.
- Basic understanding of Software Industry needs
- SDLC concepts

SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
THIRD YEAR, INFORMATION TECHNOLOGY
SEMESTER V
EFFECTIVE FROM SESSION 2020-21

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT05TES01	SIGNALS & SYSTEMS	3	0	0	30	70	100	3
2	IT05TPC01	DATABASE MANAGEMENT SYSTEMS	3	0	0	30	70	100	3
3	IT05TPC02	FORMAL LANGUAGE & AUTOMATA THEORY	3	0	0	30	70	100	3
4	IT05TPC03	OBJECT ORIENTED PROGRAMMING	3	1	0	30	70	100	4
5	IT05TPE1X	ELECTIVE – I	3	0	0	30	70	100	3
PRACTICAL									
1	IT05PPC01	DATABASE MANAGEMENT SYSTEMS LAB	0	0	4	30	20	50	2
2	IT05PPC02	OBJECT ORIENTED PROGRAMMING LAB	0	0	4	30	20	50	2
3	IT05PMC01	CONSTITUTION OF INDIA/ ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE	-	-	2	-	-	-	0
TOTAL CREDITS									**20**
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

LIST OF ELECTIVE-I

1	IT05TPE11	SOFTWARE ENGINEERING
2	IT05TPE12	REAL TIME SYSTEM
3.	IT05TPE13	CYBER LAW & ETHICS
4.	IT05TPE14	EMBEDDED SYSTEMS

COURSE OUTCOME

IT05TES01- SIGNALS AND SYSTEMS

- Understand mathematical description and representation of continuous and discrete time signals and systems.
- Develop input output relationship for linear shift invariant system and understand the convolution operator for continuous and discrete time system.
- Understand and resolve the signals in frequency domain using Fourier series and Fourier transforms.
- Understand the limitations of Fourier transform and need for Laplace transform and develop the ability to analyze the system in s- domain.
- Understand the basic concept of probability, random variables & random signals and develop the ability to find correlation, CDF, PDF and probability of a given event.

IT05TPC01- DATABASE MANAGEMENT SYSTEMS

- Understand database concepts and structures and query language.
- Understand the E R model and relational model.

- To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS.
- Understand Functional Dependency and Functional Decomposition.
- Apply various Normalization techniques

IT05TPC02- FORMAL LANGUAGE & AUTOMATA THEORY

- Students will have knowledge of basic mathematical models of computation and describe how they relate to formal languages.
- Students will understand that there are limitations on what computers can do, and learn examples of unsolvable problems.
- Students will learn that certain problems do not admit efficient algorithms, and identify such problems

IT05TPC03-OBJECT ORIENTED PROGRAMMING

- Understand the difference between the top-down and bottom-up approach
- Describe the object-oriented programming approach in connection with C++
- Apply the concepts of object-oriented programming
- Illustrate the process of data file manipulations using C++
- Apply virtual and pure virtual function & complex programming situations.

IT05TPE11- SOFTWARE ENGINEERING

- Plan a software engineering process life cycle, including the specification, design, implementation, and testing of software systems that meet specification, performance, maintenance and quality requirements.
- Able to elicit, analyze and specify software requirements through a productive working relationship with various stakeholders of the project

- Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology.
- Know how to develop the code from the design and effectively apply relevant standards and perform testing, and quality management and practice.
- Able to use modern engineering tools necessary for software engineering project, time management and software reuse.

IT05TPE12- REAL TIME SYSTEM

- To present the mathematical model of the system.
- To develop real-time algorithm for task scheduling.
- To understand the working of real-time operating systems and real-time database.
- To work on design and development of protocols related to real-time communication.

IT05TPE13- CYBER LAW & ETHICS

- Students identify and analyze statutory, regulatory, constitutional, and organizational laws that affect the information technology professional.
- Students locate and apply case law and common law to current legal dilemmas in the technology field.
- Students apply diverse viewpoints to ethical dilemmas in the information technology field and recommend appropriate actions.
- Students distinguish enforceable contracts from non-enforceable contracts. 5. Students demonstrate leadership and teamwork.

IT05TPE14- EMBEDDED SYSTEMS

- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

- Define and explain embedded systems and the different embedded system design technologies explain the various metrics or challenges in designing an embedded system.
- Design custom single – purpose processors using combinational as well as sequential logic.
- Discuss about optimizing single – purpose processors. Discuss about the basic architecture and operation of general purpose processors.
- Define and distinguish between a timer and a counter. Explain about various types of timers and Universal Asynchronous Receiver/ Transmitter. Explain about the various controllers for LCD, Keypad and Stepper Motor.

IT05PPC01 DATABASE MANAGEMENT SYSTEMS LAB

- Perform PL/SQL programming using concept of Cursor Management, Error Handling, Package and Triggers
- Execute various advance SQL queries related to Transaction Processing & Locking using concept of Concurrency control.
- Understand query processing and techniques involved in query optimization.
- Understand the principles of storage structure and recovery management.

IT05PPC02- OBJECT ORIENTED PROGRAMMING LAB

- Develop solutions for a range of problems using objects and classes.
- Programs to demonstrate the implementation of constructors, destructors and operator overloading.
- .Apply fundamental algorithmic problems including type casting, inheritance, and polymorphism.
- Understand generic programming, templates, file handling

IT05PMC01- CONSTITUTION OF INDIA/ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE

- Students can learn about CONSTITUTION OF INDIA.
- Students can utilize knowledge of CONSTITUTION OF INDIA in real life issues.

- Indian traditional knowledge can provides better understanding of our past.
- Students can connect deeply to our country with this kind of course.
- All the society can get benefit of this subject.

SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
THIRD YEAR, INFORMATION TECHNOLOGY
SEMESTER VI
EFFECTIVE FROM SESSION 2020-21

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT06TPC01	COMPILER DESIGN	3	0	0	30	70	100	3
2	IT06TPC02	COMPUTER NETWORKS	3	0	0	30	70	100	3
3	IT06TPE2X	ELECTIVE – II	3	0	0	30	70	100	3
4	IT06TPE3X	ELECTIVE – III	3	0	0	30	70	100	3
5	IT06TOE11	OPEN ELECTIVE - I	3	0	0	30	70	100	3
PRACTICAL									
1	IT06PPC01	COMPUTER NETWORKS	0	0	4	30	20	50	2
2		ELECTIVE – II LAB	0	0	4	30	20	50	2
3	IT06PPR11	PROJECT - I	0	0	6	30	20	50	3
TOTAL CREDITS									**22**
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

LIST OF ELECTIVE – II

1.	IT06TPE21	MICROPROCESSOR & INTERFACING
2.	IT06TPE22	WEB TECHNOLOGY & E-COMMERCE
3.	IT06TPE23	QUEUING THEORY & MODELING
4.	IT06TPE24	IMAGE PROCESSING

LIST OF ELECTIVE – II (LAB)

1.	IT06PPE21	MICROPROCESSOR & INTERFACING
2.	IT06PPE22	WEB TECHNOLOGY & E-COMMERCE
3.	IT06PPE23	QUEUING THEORY & MODELING
4.	IT06PPE24	IMAGE PROCESSING

LIST OF ELECTIVE-III

1.	IT06TPE31	GRID & CLOUD COMPUTING
2.	IT06TPE32	MULTIMEDIA SYSTEM DESIGN
3.	IT06TPE33	SPEECH & NATURAL LANGUAGE PROCESSING
4.	IT06TPE34	GRAPH THEORY

LIST OF OPEN ELECTIVE-I

1.	IT06TOE11	COMPUTER GRAPHICS
2.	IT06TOE12	WIRELESS & MOBILE COMMUNICATION
3.	IT06TOE13	DISTRIBUTED SYSTEM
4.	IT06TOE14	BIOMETRICS

COURSE OUTCOME

Subject Name: Compiler Design **Subject code: IT06TPC01**

The course outcome of compiler design is as follows:

1. To learn the process of translating a modern high-level language to executable code Implement a lexical analyzer from a specification of a language's lexical rules.
2. Design symbol table ,construct parser
3. Implement code generator
4. Apply code optimizations

Subject Name: Computer Networks **Subject code: IT06TPC02**

The course outcome of computer Networks is as follows:

1. describe the basis and structure of an abstract layered protocol model
2. describe, analyze and compare a number of data link, network, and transport layer protocols
3. design and implement data link or network layer protocols within a simulated networking environment
4. describe and analyze various related technical, administrative and social aspects of specific computer network protocols from standards documents and other primary materials found through research
5. identify and apply basic theorems and formulae for the information-theoretic basis of communication and the performance of physical, data link and network protocols

Subject Name: Elective –II (Microprocessor & Interfacing) **Subject code: IT06TPE21**

The course outcome of Microprocessor & Interfacing is as follows:

1. To introduce 8085 architecture and programming in assembly language.
2. To introduce basic concepts of interfacing memory and peripheral devices to a Microprocessor.
3. To introduce serial and parallel bus standards.
4. To introduce 8051 microcontroller.
5. To introduce various advanced processor architectures such as 80X86, Pentium and Multicore Processors.

Subject Name: Elective –II (Web Technology & E- Commerce) **Subject code: IT06TPE22**

The course outcome of Web Technology & E- Commerce is as follows:

1. Demonstrate advanced knowledge of technical and business issues related to E-Business and E-Commerce
2. Describe the key features of web server architecture
3. Evaluate Mobile Business and related technologies
4. Write programs in VB.NET and Jscript.NET, within the ASP.NET framework
5. Discuss contemporary technologies for globally distributed teams

Subject Name: Elective –II (Queuing Theory &modeling)Subject code: IT06TPE23

The course outcome of Queuing Theory & modelling is as follows:

1. Single Server Markov Queues.

2. Rigorous understanding of the theoretical background of queuing systems.
3. Introduction to Queuing Systems and Notation.
4. Understand and compute quantitative metrics of performance for queuing systems.
5. Apply and extend queuing models to analyze real world systems.

Subject Name: Elective –II (Image Processing) Subject code: IT06PPE24

The course outcome of Image Processing is as follows:

1. Review the fundamental concepts of a digital image processing system.
2. Analyze images in the frequency domain using various transforms.
3. Evaluate the techniques for image enhancement and image restoration.
4. Interpret image segmentation and representation techniques
5. Interpret Image compression standards.

Practical

Subject Name: Practical(Computer network) Subject code: IT06PPC01

The course outcome of Practical (Computer network)is as follows:

1. Execute and evaluate network administration commands and demonstrate their use in different network scenarios
2. Demonstrate the installation and configuration of network simulator.
3. Demonstrate and measure different network scenarios and their performance behavior.
4. Analyze the contents the packet contents of different protocols.
5. Implement the socket programming for client server architecture.

List of Elective –II (Lab)

Subject Name: Elective –II Lab(Microprocessor & Interfacing) Subject code: IT06PPE21

The course outcome of Elective –II Lab (Microprocessor & Interfacing)is as follows:

1. Apply the fundamentals of assembly level programming of microprocessors.
2. Build a program on a microprocessor using arithmetic & logical instruction set of 8086.
3. Develop the assembly level programming using 8086 loop instruction set.
4. Write programs based on string and procedure for 8086 microprocessor.
5. Analyze abstract problems and apply a combination of hardware and software to address the problem

Subject Name: Elective –II Lab (Web Technology & E- Commerce) Subject code: IT06PPE22

The course outcome of Elective –II Lab (Web Technology & E- Commerce) is as follows:

1. Implement the appropriate data mining methods like classification, clustering or association mining on large data sets using open source tools like WEKA.
2. Describe Hardware and Software Technologies for Ecommerce.
3. Identify sources of Data for mining and perform data exploration
4. Implement various data mining algorithms from scratch using languages like Python/ Java etc.
5. To learn how to gather and analyze large sets of data to gain useful business understanding.

Subject Name: Elective –II Lab (Queuing Theory & Modeling) Subject code: IT06PPE23

The course outcome of Elective –II Lab (Queuing Theory & Modeling) is as follows:

1. To understand and visualize the concepts of queues and equip them with the necessary insight so as to apply queuing systems to real world problems.
2. To assist the learning process of queues for the undergraduate students with diverse backgrounds.
3. Problem solving and familiarize them with different types of queues and the method of their analysis.
4. To provide basic theory concept
5. Results are obtained analytically and simulative.

Subject Name: Elective –II Lab (Image processing) Subject code: IT06PPE24

The course outcome of Elective –II Lab (Image processing) is as follows:

1. Various Image Transforms.
2. Compression techniques and Morphological concepts
3. Various segmentation techniques, and object descriptors.
4. Color models and various applications of image processing.
5. Fundamental concepts of image transformation.

Project

Subject Name: Project - 1 Subject code: IT06PPR11

The course outcome of Project -1 is as follows:

1. To offer students a glimpse into real world problems and challenges that need IT based solutions.
2. To enable students to create very precise specifications of the IT solution to be designed.
3. To introduce students to the vast array of literature available of the various research challenges in the field of IT.
4. To improve the team building, communication and management skills of the students.

5. To enable students to use all concepts of IT in creating a solution for a problem.

Subject Name: Elective –III (Grid and cloud Computing) Subject code: IT06TPE31

The course outcome of Grid and cloud Computing is as follows:

1. Understand the fundamental principles of distributed computing.
2. Understand the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing.

3. Analyze the performance of Cloud Computing.
4. Understand the concept of Cloud Security.
5. Learn the Concept of Cloud Infrastructure Model.

Subject Name: Elective –III (Multimedia System Design) Subject code: IT06TPE32

The course outcome of Multimedia System Design is as follows:

1. Developed understanding of technical aspect of Multimedia Systems.
2. Understand various file formats for audio, video and text media.
3. Develop various Multimedia Systems applicable in real time.
4. To evaluate multimedia application for its optimum performance.
5. Apply various networking protocols for multimedia applications.

Subject Name: Elective –III (Speech & Natural Language Processing) Subject code: IT06TPE33

The course outcome of Speech & Natural Language Processingis as follows:

1. Understanding of the fundamental mathematical models and algorithms in the field of NLP.
2. Apply these mathematical models and algorithms in applications in software design and implementation for NLP.
3. Understand the principles of language resource annotation and its use in machine learning applications and apply the above principles in analysis of data and acquire intended information through the use of available tools.
4. Understand the complexity of speech and the challenges facing speech engineers.
5. Understand the principles of automatic speech recognition and synthesis.

Subject Name: Elective –III (Game Theory) Subject code: IT06TPE34

The course outcome of Game Theory is as follows:

1. To understand the basics of a “game”.
2. Translate the basic of a “game” into a wide range of conflicts.
3. Evaluate Game Theory principles in workplace settings.
4. Integrate increasing analytical skills into increasingly complex conflicts
5. Analyze conflict dynamics from the standpoint of rationality.

Subject Name: Open Elective –I (Computer Graphics) Subject code: IT06TOE11

The course outcome of Computer Graphics isas follows:

1. To implement various algorithms to scan, convert the basic geometrical primitives, transformations, Area filling, clipping.
2. To describe the importance of viewing and projections.
3. To define the fundamentals of animation, virtual reality and its related technologies.
4. To understand a typical graphics pipeline.
5. To design an application with the principles of virtual reality.

Subject Name: Open Elective –I (Wireless & Mobile Communication)Subject code: IT06TOE12

The course outcome ofWireless & Mobile Communicationisas follows:

1. To provide an overview of Wireless Communication networks area and its applications in communication engineering.
2. To appreciate the contribution of Wireless Communication networks to overall technological growth.
3. To understand the various terminology, principles, devices, schemes, concepts, algorithms and different methodologies used in Wireless Communication Networks.
4. Ability to analyze improved data services in cellular communication.
5. Analyze the radio channel characteristics and the cellular principle.

Subject Name: Open Elective –I (Distributed System) Subject code: IT06TOE13

The course outcome of Distributed System isas follows:

1. To learn the principles, architectures, algorithms and programming models used in distributed systems.
2. To examine state-of-the-art distributed systems, such as Google File System.
3. To design and implement sample distributed systems.
4. Understanding the Core Concepts of Distributed Systems.
5. Fault-tolerance.

Subject Name: Open Elective –I (Biometrics) Subject code: IT06TOE14

The course outcome of Biometrics isas follows:

1. Design of biometric systems.
2. Biological characteristics: Fingerprint, vein, face, iris.
3. Biometric sample quality.
4. Presentation attacks: artefacts and possibilities for mimicking.

5. Multimodal biometrics.

B.Tech. (IT) Fourth Year [Seventh and Eight Semester]

Objectives: The main objectives of fourth year syllabus are as follows:

- Real time project development
- Gate exam preparation
- Advance subjects
- Complete understanding of software development
- Carrier related counselling

SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
THIRD YEAR, INFORMATION TECHNOLOGY
SEMESTER VII
EFFECTIVE FROM SESSION 2021-22

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT07TPC01	CYBER SECURITY	3	0	0	30	70	100	3
2	IT07TPE4X	ELECTIVE – IV	3	0	0	30	70	100	3
3	IT07TPE5X	ELECTIVE – V	3	0	0	30	70	100	3
4	IT07TOE2X	OPEN ELECTIVE – II	3	0	0	30	70	100	3
PRACTICAL									
1	IT07PPC21	PROJECT-II	0	0	12	60	40	100	6
TOTAL CREDITS									**18**
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

LIST OF ELECTIVE-IV

1	IT07TPE41	ADVANCE DATABASE DESIGN
2	IT07TPE42	DATA MINING
3.	IT07TPE43	GAME THEORY
4.	IT07TPE44	GLOBAL STRATEGY AND TECHNOLOGY

L
I

LIST OF ELECTIVE-V

1	IT07TPE51	INTERNET OF THINGS
2	IT07TPE52	ADVANCE OPERATING SYSTEM
3.	IT07TPE53	COMPUTER VISION
4.	IT07TPE54	OPEN SOURCE SYSTEM & PROGRAMMING

LIST OF OPEN ELECTIVE-II

1	IT07TOE21	SOFT COMPUTING
2	IT07TOE22	INTRODUCTION TO DOT NET TECHNOLOGY
3.	IT07TOE23	GIS & Remote Sensing
4.	IT07TOE24	SUPPLY CHAIN MANAGEMENT

COURSE OUTCOME

Subject Code :- IT07TPC01

Subject Name: - CYBER SECURITY

Course Outcome:-

At the end of this course, students will demonstrate the ability to

- Understanding the Model for Network Security Services
- Comprehend different block ciphers and the data encryption standard algorithms e.g. DES,AES , blowfish,RC5.
- Apprehend the principles of public key cryptosystems.
- Understand different WEB & IP Security protocol.
- Showcase different Intrusion Techniques.

Subject Code :- IT07TPE41

Subject Name:- ELECTIVE-IV(ADVANCE DATABASE DESIGN)

Course Outcome:-

At the end of this course, students will demonstrate the ability to

- Understand Centralized and Client-Server Architectures and Parallel and Distributed Databesees.
- Able to understand Concepts of Object Databases and Object relational databases.

- Apprehend the concept of Active Databases and showcase Logic of Query Languages.
- Understand the Advanced Data Models and its data management e.g. Mobile databases.
- Apprehend the concept of XML Databases.

Subject Code :- IT07TPE42

Subject Name:- ELECTIVE-IV(DATA MINING)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Understand the functionality of the various data mining and data warehousing concepts.
- Apprehend different methods of discover association rules e.g. Apriori algorithm, partition algorithm, pincer-search algorithm, Dynamic Item set counting algorithm, FP-tree algorithm and Incremental algorithm.
- Showcase different Clustering Techniques.
- Understand and comprehend decision trees algorithm, CART,ID3, C4.5,CHAID.
- Understand the concept of Web Mining

Subject Code :- IT07TPE43

Subject Name:- ELECTIVE-IV(GAME THEORY)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Appreciate the concept of game theory and understand the different methods of Strategies.
- Explain the concepts of repeated games, Bayesian games, Selfish routing and Quantifying inefficiency of equilibria.

- Understand the concept of evolutionary game theory, price of stability.
- Apprehend the concept of Nash bargaining Mechanism design, distributed algorithmic mechanism design.

Subject Code :- IT07TPE44

Subject Name:- ELECTIVE-IV(GLOBAL STRATEGY AND TECHNOLOGY)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Understand the different concepts of Global Strategy.
- Apprehend the concept of Host country Choices and Home-Country Effects.
- Describe the concept of International Corporate Governance.
- Showcase the concept of Productivity and Diffusion with respect to technology.
- Understand the concept of Investing in R&D Capabilities.

Subject Code :- IT07TPE51

Subject Name:- ELECTIVE-V(Internet of Things)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Able to understand the application areas of IOT
- Able to realize the State of the Art IoT Architecture.
- Able to understand IoT Data Link Layer & Network Layer Protocols.
- Able to understand Transport & Session Layer Protocols.
- Understand the concept of Service Layer Protocols and Security Service Layer.

Subject Code :- IT07TPE52

Subject Name:- ELECTIVE-V(Advanced Operating System)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Analyze the basic architectural components involved in OS design.
- Analyze and design of operating system, Architecture of UNIX OS.
- Apprehend the concept of Files, System Calls and various operations on files.
- Understand the different components of Distributed Operating Systems.
- Showcase the structure of processes and process control.

Subject Code :- IT07TPE53

Subject Name: - ELECTIVE-V (Computer Vision)

Course Outcome: - At the end of this course, students will demonstrate the ability to

- Understand the different concepts of Recognition Methodology.
- Apprehend the concept of Image representation and Description and Binary Machine Vision.
- Understand the Area Extraction concepts and able to perform region analysis.
- Showcase the concept of Facet Model recognition.
- Describe the concept of Object models and matching techniques.

Subject Code :- IT07TPE54

Subject Name:- ELECTIVE-V(Open Source Systems and Programming)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Understand the Open Source System Fundamentals.
- Able to perform system programming e.g. system calls, error handling, file handling.
- Understand the concept of Process creation, Process termination.
- Apprehend the different concepts of security policies, firewalls.

Subject Code :- IT07TOE21

Subject Name:- OPEN ELECTIVE-II(SOFT COMPUTING)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Comprehend the fuzzy logic and the concept of fuzziness involved in various systems and fuzzy set theory.
- Understand the concepts of fuzzy sets, knowledge representation using fuzzy rules, approximate reasoning, fuzzy inference systems.
- To understand the fundamental theory and concepts of Genetic algorithm.
- Understand appropriate learning rules for each of the architectures and learn several neural network paradigms and its applications
- Different applications of supervised and unsupervised learning algorithm.

Subject Code :- IT07TOE22

Subject Name:- OPEN ELECTIVE-II(Introduction to .Net Technology)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Learning of .net framework
- Implementation of ADO.NET
- Web Services
- AJAX
- ASP.NET

Subject Code :- IT07TOE23

Subject Name:- OPEN ELECTIVE-II(GIS and Remote Sensing)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Apprehend the Information System concepts and understand the Database models.
- Describe the different aspects of GIS types and apply available GIS Software.
- Comprehend Digital Image Processing techniques.
- Understanding and Able to work with oracle spatial.
- Showcase Network Analysis, visualization and spatial in applications.

Subject Code :- IT07TOE24

Subject Name:- OPEN ELECTIVE-II(Supply Chain Management)

Course Outcome:- At the end of this course, students will demonstrate the ability to

- Understand the fundamentals of Supply Chain Management.
- Apprehend SCM Strategies and understand the planning of demand and supply.
- Comprehend Planning and managing inventories.
- Understand the different concepts of Distribution management.
- Describe the strategic cost management in supply chain.

Subject Code :- IT07PPC21

Subject Name:- PROJECT-II

Course Outcome: Develop and implement real time project as per the real time needs and utility of industry and society.

SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
THIRD YEAR, INFORMATION TECHNOLOGY
SEMESTER VIII
EFFECTIVE FROM SESSION 2020-21

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT08TPC6X	ELECTIVE – VI	3	0	0	30	70	100	3
2	IT08TOE3X	OPEN ELECTIVE - III	3	0	0	30	70	100	3
3	IT08TOE4X	OPEN ELECTIVE - IV	3	0	0	30	70	100	3
PRACTICAL									
1	IT06PPC31	PROJECT-III	0	0	18	60	40	100	9
TOTAL CREDITS									**18**
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

LIST OF ELECTIVE – VI

1.	IT08TPE61	MACHINE LEARING
2.	IT08TPE62	OBJECT ORIENTED ANALYSIS & DESIGN
3.	IT08TPE63	SOFTWARE TESTING & QUALITY MANAGEMENT

4.	IT08TPE64	HUMAN COMPUTER INTERFACE

LIST OF OPEN ELECTIVE –III

1.	IT08TOE31	WIRELESS SENSOR NETWORK
2.	IT06TOE32	DIGITAL SIGNAL PROCESSING
3.	IT06TOE33	INFORMATION TECHNOLOGY FOR AUTOMATION
4.	IT06TOE34	REAL TIME SYSTEM

LIST OF OPEN ELECTIVE-IV

1.	IT08TOE41	ARTIFICIAL INTELIGENCE
2.	IT08TOE42	ECONOMIC POLICIESIN INDIA
3.	IT08TOE43	COMPUTER APPLICATION IN SOCIAL SCIENCE
4.	IT08TOE44	MANAGING INNOVATION & ENTERPRENEURSHIP

COURSE OUTCOME

IT08TPE61 MACHINE LEARNING

Outcome of machine learning course

1. Develop an appreciation for what is involved in learning models from data.
2. Understand a wide variety of learning algorithms.
3. Understand how to evaluate models generated from data.

4 .Apply the algorithms to a real-world problem, optimize the models learned and report on

5. The expected accuracy that can be achieved by applying the models.

IT08TPE62 OBJECT ORIENTED ANALYSIS & DESIGN

Outcome of object oriented analysis & design course

1. Acquire knowledge of OOAD.
2. Demonstrate the design concepts using UML diagrams.
3. Practice through object oriented life cycle.
4. Draw UML diagrams
5. Able to design application using OOAD tools.

IT08TPE63 SOFTWARE TESTING & QUALITY MANAGEMENT

Outcome of software testing & quality management course

1. Understand quality management processes
2. Distinguish between the various activities of quality assurance,

3. Quality planning and quality control
4. Software Testing Life Cycle. Design Manual Test cases for Software Project
5 .Identify the realistic problem for different category of software

IT08TPE64 HUMAN COMPUTER INTERFACE

Outcome of human computer interface course

1. Design effective dialog for HCI.
2. Design effective HCI for individuals and persons with disabilities.
3. Assess the importance of user feedback.
4. Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Web sites.
5. Develop meaningful user interface.

IT08TOE31 WIRELESS SENSOR NETWORK

Outcome of wireless sensor network course

1. Exposure to WSN
2. Sensor hardware and software
3. Sensing technique, Sensing protocol
4. Real world application
5. Deployment of WSN

IT08TOE32 Digital signal processing

Outcome of Digital signal processing course

1. Formulate engineering problems in terms of DSP tasks

2. Analyze digital and analog signals and systems
3. Analyze discrete time signals in frequency domain
4. Design digital filters and Change sampling rate of the signal
5. Conceptualize the need of adaptive filters in communication applications.

IT08TOE33 INFORMATION TECHNOLOGY FOR AUTOMATION
Outcome of information technology for automation **course**

1. Information science technology and automation principles
2. Computerization and networking
3. Industrial automation
4. Office automation
5. E-commerce automation.

IT08TOE34 Real time system
Outcome of Real time systemcourse

1. Characterise real-time systems and describe their functions.
2. Analyse, design and implement a real-time system.
3. Apply formal methods to the analysis and design of real-time systems.
4. Apply formal methods for scheduling real-time systems.
5. Characterise and debug a real-time system.

IT08TOE41 ARTIFICIAL INTELLIGENCE
Outcome of Artificial intelligence course

1. The students should be able to Develop a basic understanding of the building blocks of AI
2. Understand the main approaches to artificial intelligence such as heuristic search, game and search.
3. Understand machine learning, neural networks and natural language processing.

4. Recognize problems that may be solved using artificial intelligence and implement artificial
5. Intelligence algorithms for hands-on experience. Develop expert systems for an application.

IT08TOE42 ECONOMIC POLICIES IN INDIA
Outcomes of Economic policies in India course
1. Basic principles of economic
2. Scope and method of economics
3. Markets and competition
4. Consumption and income/price changes
5. Labour and land markets

IT08TOE43 COMPUTER APPLICATION IN SOCIAL SCIENCE
Outcomes of computer application in social science course

1. Architecture of Computers Input output Devices,
2. Central Processing Unit, hardware and software,
3. Applications of computers, E-governance, E-commerce
4. Computer Operating System
5. Classification of computer languages

IT08TOE44 MANAGING INNOVATION & ENTERPRENEURSHIP
Outcomes of managing innovation & entrepreneurship course

1. Understand the Entrepreneurship
2. Creativity and Innovation
3. International Entrepreneurship
4. Problem Identification and Problem Solving

5. Entrepreneurial growth and development

IT06PPC31 Project III

Outcomes of Project III

The objective of Project is to provide opportunity for the student to apply the knowledge acquired during the academic programme to real-life problems which he/she may have to face in future as an engineer periods allotted in the time table for the activity and this time shall be utilized by the students to receive guidance from the members of faculty on solving real-life problems, practice solving these problems, seminar presentation as assigned by the faculty member in-charge The continuous assessment and semester evaluation may be carried out as specified in the guidelines to be issued from time to time and finally he/she should submit the report.