

## **VISION OF THE INSTITUTION**

To ignite the minds of the students through academic excellence so as to bring about social transformation and prosperity.

## **MISSION OF THE INSTITUTION**

1. To expand the frontiers of knowledge through Quality Education.
2. To provide valued added Research and Development.
3. To embody a spirit of excellence in Teaching, Creativity, Scholarship and Outreach.
4. To provide a platform for synergy of Academy, Industry and Community.
5. To inculcate high standards of Ethical and Professional Behavior.

## **VISION OF CSE DEPARTMENT**

To build a strong teaching-learning base with a flair for innovation and research that responds to the dynamic needs of the software industry and the society.

## **MISSION OF CSE DEPARTMENT**

1. To provide strong foundation both in theory and applications of Computer Science & Engineering, so as to solve real-world problems
2. To empower students with state-of-art knowledge and up to date technological skills, making them globally competent
3. To promote research, innovation and entrepreneurship with focus on industry and social outreach
4. To foster civic minded leadership with ethics and values among students

## **PROGRAM EDUCATIONAL OBJECTIVES OF CSE DEPARTMENT**

1. Graduates will have knowledge of mathematics, science, engineering fundamentals, and in-depth studies in Computer Science Engineering, and will be able to apply them for formulating, analysing and solving real world problems.
2. Graduates will succeed in earning coveted entry level positions in leading Computer Software and Hardware Firms in India and abroad.
3. Graduates will succeed in the pursuit of advanced degrees and research in engineering or other fields and will have skills for continued, independent, lifelong learning and professional development throughout life.
4. Graduates will have good communication skills, leadership qualities, ethical values and will be able to work in teams with due attention to their social responsibilities.

## **PROGRAM OUTCOMES OF CSE DEPARTMENT**

### **Engineering Graduates will be able to:**

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **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.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## **PROGRAM SPECIFIC OUTCOMES OF CSE DEPARTMENT**

1. An ability to demonstrate basic knowledge in databases, programming languages and algorithm analysis in the development of software applications.
2. An ability to design and develop projects using open source tools and efficient data structures.

<b>II YEAR I SEMESTER</b>							
<b>S.No</b>	<b>Subjects</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>I</b>	<b>E</b>
1	Discrete Mathematical Structures	2	1	-	3	40	60
2	Internet of Things (IoT)	3	-	-	3	40	60
3	Data Structures and Algorithms	3	-	-	3	40	60
4	Computer Organization & Architecture	3	-	-	3	40	60
5	Object Oriented Programming through Java	3	-	-	3	40	60
6	Quantitative Aptitude – I	3	-	-	0	0	0
7	Internet of Things Lab	-	-	3	1.5	40	60
8	Data Structures and Algorithms Lab	-	-	3	1.5	40	60
9	Object Oriented Programming through Java Lab	-	-	3	1.5	40	60
<b>Total</b>		<b>17</b>	<b>1</b>	<b>9</b>	<b>19.5</b>	<b>320</b>	<b>480</b>
						<b>800</b>	

<b>II YEAR II SEMESTER</b>							
<b>S.No</b>	<b>Subjects</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>I</b>	<b>E</b>
1	Software Engineering	3	-	-	3	40	60
2	E-Commerce	3	-	-	3	40	60
3	Database Management Systems	3	-	-	3	40	60
4	Web Technologies	3	-	-	3	40	60
5	Digital Logic Design	3	-	-	3	40	60
6	Logical Reasoning	3	-	-	0	0	0
7	Socially Relevant Project (15 Hrs/Sem)	-	-	1	0.5	20	30
8	Business English Communication Lab	-	-	3	1.5	40	60
9	Design Thinking & Product Innovation Lab	-	-	3	1.5	40	60
10	Database Management Systems Lab	-	-	3	1.5	40	60
11	Web Technologies Lab	-	-	3	1.5	40	60
<b>Total</b>		<b>18</b>	<b>0</b>	<b>13</b>	<b>21.5</b>	<b>380</b>	<b>570</b>
						<b>950</b>	



**VISHNU INSTITUTE OF TECHNOLOGY (AUTONOMOUS) :: BHIMAVARAM**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**Course Structure for B. Tech. (With effect from 2019-2020)**

**II YEAR II SEMESTER  
COMPUTER SCIENCE AND ENGINEERING  
R19 SYLLABUS**

Year/Semester	II B. Tech/II Sem	L	T	P	C
Regulation Year	2020-21	3	0	0	3
Subject	Software Engineering				

### COURSE OBJECTIVES:

1. To help students to develop skills that will enable them to construct software of high quality – software that is reliable, and that is reasonably easy to understand, modify and maintain.
2. This course introduces the concepts and methods required for the construction of large software intensive systems. It aims to develop a broad understanding of the discipline of software engineering.
3. Capable of team and organizational leadership in computing project settings, and have a broad understanding of ethical application of computing-based solutions to societal and organizational problems.
4. Apply their foundations in software engineering to adapt to readily changing environments using the appropriate theory, principles and processes

### UNIT-I:

**Software and Software Engineering:** The Nature of Software, The Unique Nature of WebApps ,Software Engineering, Software Process, Software Engineering Practice, Software Myths.

**Process Models:** A Generic Process Model, Process Assessment and Improvement, Prescriptive Process Models, Specialized Process Models, The Unified Process, Personal and Team Process Models, Process Terminology, Product and Process.

### UNIT-II:

**Requirements Analysis And Specification:** Requirements Gathering and Analysis, Software Requirement Specification (SRS), Formal System Specification.

**Software Design:** Overview of the Design Process, How to Characterize of a Design? Cohesion and Coupling, Layered Arrangement of Modules, Approaches to Software Design

### UNIT-III:

**Function-Oriented Software Design:** Overview of SA/SD Methodology, Structured Analysis, Developing the DFD Model of a System, Structured Design, Detailed Design, Design Review, over view of Object Oriented design.

**User Interface Design:** Characteristics of Good User Interface, Basic Concepts, Types of User

**Course Structure for B. Tech. (With effect from 2019-2020)**

Interfaces, Fundamentals of Component-based GUI Development, A User Interface Design Methodology.

**UNIT-IV:**

**Coding And Testing:** Coding, Code Review, Software Documentation, Testing, Unit Testing, Black-Box Testing, White-Box Testing, Debugging, Program Analysis Tool, Integration Testing, Testing Object-Oriented Programs, System Testing, Some General Issues Associated with Testing.

**UNIT-V:**

**Software Reliability And Quality Management:** Software Reliability, Statistical Testing, Software Quality, Software Quality Management System, ISO 9000, SEI Capability Maturity Model.

**Planning a software project:** Effort estimation, project schedule and staffing, quality planning, risk management planning, project monitoring plan, detailed scheduling.

**UNIT-VI**

**Software Maintenance:** Software maintenance, Maintenance Process Models, Maintenance Cost, Software Configuration Management.

**Software Reuse:** what can be Reused? Why almost No Reuse So Far? Basic Issues in Reuse Approach, Reuse at Organization Level.

**COURSE OUTCOMES:**

1. Define and develop a software project from requirement gathering to implementation.
2. Obtain knowledge about principles and practices of software engineering.
3. Focus on the fundamentals of modeling a software project.
4. Obtain knowledge about estimation and maintenance of software systems.

**TEXT BOOKS:**

1. Software Engineering A practitioner's Approach, Roger S. Pressman, Seventh Edition McGraw-Hill International Edition.
2. Fundamentals of Software Engineering, Rajib Mall, Third Edition, PHI.
3. Software Engineering, Ian Sommerville, Ninth edition, Pearson education



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**REFERENCE BOOKS:**

1. Software Engineering : A Primer, Waman S Jawadekar, Tata McGraw-Hill, 2008
2. Software Engineering, A Precise Approach, PankajJalote, Wiley India,2010.
3. Software Engineering, Principles and Practices, Deepak Jain, Oxford University Press.
4. Software Engineering1: Abstraction and modeling, Diner Bjorner, Springer International edition, 2006.



Year/Semester	II B. Tech/II Sem	L	T	P	C
Regulation Year	2020-21	3	0	0	3
Subject	E-COMMERCE				

**COURSE OBJECTIVES:**

1. Identify the major categories and trends of e-commerce applications.
2. Identify the essential processes of an e-commerce system.
3. Identify several factors and web store requirements needed to succeed in e-commerce.
4. Discuss the benefits and trade-offs of various e-commerce clicks and bricks alternatives.
5. Understand the main technologies behind e-commerce systems and how these technologies interact.
6. Discuss the various marketing strategies for an online business.
7. Define various electronic payment types and associated security risks and the ways to protect against them.

**UNIT-I**

Electronic Commerce-Frame work, anatomy of E-Commerce applications, E-Commerce Consumer applications, E-Commerce organization applications. Consumer Oriented Electronic commerce - Mercantile Process models.

**UNIT-II**

Electronic Payment Systems – Types of Electronic Payment Systems, Risks in Electronic Payment systems. Inter Organizational Commerce - EDI, EDI Software Implementation.

**UNIT- III**

Intra Organizational Commerce - Work Flow Automation and Co-ordination, Customization and Internal Commerce, Supply chain Management.

**UNIT-IV**

Corporate Digital Library - Document Library, Digital Document types, Corporate Data Warehouses. Advertising and Marketing - Information based marketing, Advertising on Internet, On-line marketing process, Market research.

**UNIT-V**

Consumer Search and Resource Discovery - Information search and Retrieval, Commerce Catalogues, Information Filtering.

**UNIT – VI**

Multimedia - key multimedia concepts, Digital Video and Electronic Commerce, Desktop video processing, Desktop Video Conferencing.

**COURSE OUTCOMES:**

1. Understand the basic concepts and technologies used in the field of E-Commerce
2. Compare and Contrast various Electronic Payment systems and understand the working of EDI
3. Understand the basic concepts of Intra Organizational commerce.
4. Apply theories and principles of corporate digital library and identify the strategies of advertising
5. To effectively understand the process of information search and retrieval.
6. Understand the basic concepts and technologies of multimedia concepts.

**TEXT BOOK:**

1. Frontiers of electronic commerce – Kalakata, Whinston, Pearson.

**REFERENCE BOOKS:**

1. E-Commerce fundamentals and applications Hendry Chan, Raymond Lee, Tharam Dillon, Elizabeth Chang, John Wiley.
2. E-Commerce, S.Jaiswal – Galgotia.
3. E-Commerce, Efrain Turbon, Jae Lee, David King, H.Michael Chang.
4. Electronic Commerce – Gary P.Schneider – Thomson.
5. E-Commerce – Business, Technology, Society, Kenneth C.Taudon, Carol Guyerico Traver.

Year/Semester	II B. Tech/II Sem	L	T	P	C
Regulation Year	2020-21	3	0	0	3
Subject	Database Management System				

### COURSE OBJECTIVES:

1. Understand the basic concepts and the applications of database systems.
2. Master the basics of SQL and construct queries using SQL.
3. Understand the relational database design principles.
4. Familiar with the basic issues of transaction processing and concurrency control.
5. Familiar with database storage structures and access techniques.

### UNIT- I

**An Overview of Database Management :**Data base System Applications, data base System VS file System – View of Data – Data Abstraction –Instances and Schemas –data base Users and Administrator -- Data Independence -- data Models – Database Languages

**Database system architecture, Introduction-** The Three Levels of Architecture-The External Level- the Conceptual Level- the Internal Level- Mapping-The Database Management Systems- Client/Server Architecture.

### UNIT-II

**The E/R Models, The Relational Model, Relational Calculus,** Introduction to Database Design, Database Design and Er Diagrams-Entities Attributes, and Entity Sets-Relationship and Relationship Sets-Conceptual Design With the Er Models, The Relational Model Integrity Constraints Over Relations- Key Constraints –Foreign Key Constraints-General Constraints, Relational Algebra and Calculus, Relational Algebra- Selection and Projection- Set Operation, Renaming – Joins- Division- More Examples of Queries, Relational Calculus, Tuple Relational Calculus- Domain Relational Calculus.

### UNIT-III

**Queries, Constraints, Triggers:** The Form of Basic SQL Query, Union, Intersect, and Except, Nested Queries, Aggregate Operators, Null Values, Complex Integrity Constraints in SQL, Triggers and Active Database.

#### UNIT-IV

**Schema Refinement (Normalization) :** Purpose of Normalization or schema refinement, concept of functional dependency, normal forms based on functional dependency(1NF, 2NF and 3 NF), concept of surrogate key, Boyce-codd normal form(BCNF), Lossless join and dependency preserving decomposition, Fourth normal form(4NF).

#### UNIT-V

**Transaction Management and Concurrency Control:** Transaction, properties of transactions, transaction log, and transaction management with SQL using commit rollback and savepoint. Concurrency control for lost updates, uncommitted data, inconsistent retrievals and the Scheduler. Concurrency control with locking methods : lock granularity, lock types, two phase locking for ensuring serializability, deadlocks, Concurrency control with time stamp ordering : Wait/Die and Wound/Wait Schemes, Database Recovery management : Transaction recovery.

#### UNIT-VI

**Overview of Storages and Indexing,** Data on External Storage- File Organization and Indexing – Clustered Indexing – Primary and Secondary Indexes, Index Data Structures, Hash-Based Indexing – Tree-Based Indexing, Comparison of File Organization.

#### COURSE OUTCOMES:

1. Design and implement a database schema for a given problem-domain
2. Normalize a database
3. Populate and query a database using SQL DML/DDDL commands.
4. Declare and enforce integrity constraints on a database using a state-of-the-art RDBMS
5. Programming PL/SQL including stored procedures, stored functions, cursors, packages.

#### TEXT BOOKS:

1. Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition
2. Database Systems - The Complete Book, H G Molina, J D Ullman, J Widom Pearson



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**REFERENCES BOOKS:**

1. Data base Systems design, Implementation, and Management, Peter Rob & Carlos Coronel 7th Edition.

Course Structure for B. Tech. (With effect from 2019-2020)

Year/Semester	II B. Tech/II Sem	L	T	P	C
Regulation Year	2020-21	3	0	0	3
Subject	Web Technologies				

**Course Objectives:**

From the course the student will learn

1. Translate user requirements into the overall architecture and implementation of new systems and Manage Project and coordinate with the Client.
2. Writing optimized front end code HTML and JavaScript.
3. Monitor the performance of web applications & infrastructure and Troubleshooting web application with a fast and accurate a resolution
4. Design and implementation of Robust and Scalable Front End Applications.

**UNIT-I:**

**HTML:** Basic Syntax, Standard HTML Document Structure, Basic Text Markup, Images, Hypertext Links, Lists, Tables, Forms, HTML5

**CSS:** Levels of Style Sheets, Style Specification Formats, Selector Forms, The Box Model, Conflict Resolution

**UNIT-II:**

**The Basic of Javascript:** Objects, Primitives Operations and Expressions, Screen Output and Keyboard Input, Control Statements, Object Creation and Modification, Arrays, Functions, Constructors, Pattern Matching using Regular Expressions

**DHTML:** Positioning Moving and Changing Elements

**UNIT- III:**

**XML:** Document type Definition, XML schemas, Document object model, XSLT, DOM and SAX Approaches.

**AJAX:** A New Approach: Introduction to AJAX, Integrating PHP and AJAX.

**UNIT-IV:**

**PHP Programming:** Introducing PHP: Creating PHP script, Running PHP script. Working with variables and constants: Using variables, Using constants, Data types, Operators. Controlling program flow: Conditional statements, Control statements, Arrays, functions. Working with forms and Databases such as MySql.

**UNIT-V:**

**Angular JS:** Introduction, Expressions, Modules, Directives, Controllers, Filters, Forms, Single Page Application development using AngularJS



**UNIT-VI:**

**React Js:** Welcome to React, Pure React, Page Setup, The Virtual DOM, React Elements, ReactDOM, Children, Constructing Elements with Data, React Components, DOM Rendering, Factories, Props, State.

**Text Books:**

1. Programming the World Wide Web, Robert W Sebesta, 7ed, Pearson.
2. AngularJS: Up and Running, Shyam Seshadri and Brad Green, O'Reilly
3. Learning React: Functional Web Development with React and Redux, Book by Alex Banks and Eve Porcello, O'Reilly

**Reference Books:**

1. An Introduction to Web Design, Programming, Paul S Wang, Sanda S Katila, Cengage Learning
2. Pro Mean Stack Development, ELadElrom, Apress
3. Express.JS Guide, The Comprehensive Book on Express.js, Azat Mardan, Lean Publishing.
4. Web Technologies, HTML, JavaScript, PHP, Java, JSP, XML and AJAX, Black book, Dream Tech
5. JavaScript & jQuery the missing manual, David sawyer mcfarland, O'Reilly
6. Web Hosting for Dummies, Peter Pollock, John Wiley Brand

Course Structure for B. Tech. (With effect from 2019-2020)

Year/Semester	II B. Tech/II Sem	L	T	P	C
Regulation Year	2020-21	3	0	0	3
Subject	Digital Logical Design				

**UNIT- I:**

**Digital Systems and Binary Numbers:** Digital Systems, Binary Numbers, Octal and Hexadecimal Numbers, Complements of Numbers, Signed Binary Numbers, Arithmetic addition and subtraction

**UNIT -II:**

**Concept of Boolean algebra:** Basic Theorems and Properties of Boolean algebra, Boolean Functions, Canonical and Standard Forms, Minterms and Maxterms,

**UNIT- III:**

**Gate level Minimization:** Map Method, Two-Variable K-Map, Three-Variable K-Map, Four Variable K-Maps. Products of Sum Simplification, Sum of Products Simplification, Don't – Care Conditions, NAND and NOR Implementation, Exclusive-OR Function

**UNIT- IV:**

**Combinational Logic:** Introduction, Analysis Procedure, Design Procedure, Binary Adder–Subtractor, Decimal Adder, Binary Multiplier, Decoders, Encoders, Multiplexers.

**UNIT- V:**

**Synchronous Sequential Logic:** Introduction to Sequential Circuits, Storage Elements: Latches, Storage Elements: Flip-Flops, Analysis of Clocked Sequential Circuits, Mealy and Moore Models of Finite State Machines

**UNIT -VI:**

**Registers and Counters:** Registers, Shift Registers, Ripple Counters, Synchronous Counters, Ring Counter, Johnson Counter, Ripple Counter

**TEXT BOOKS:**

1. Digital Design, 5/e, M.Morris Mano, Michael D Ciletti, PEA.
2. Fundamentals of Logic Design, 5/e, Roth, Cengage.





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**REFERENCE BOOKS:**

1. Digital Logic and Computer Design, M.Morris Mano, PEA.
2. Digital Logic Design, Leach, Malvino, Saha, TMH. 3. Modern Digital Electronics, R.P. Jain, TMH.

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<b>Regulation Year</b>	<b>2020-21</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Subject</b>	<b>Logical Reasoning</b>				

**COURSE OBJECTIVES:**

1. Be familiar with different relations in a family, concepts of clocks and calendars.
2. Find position and order of a person /object , routes between points.
3. Understand the techniques of coding and decoding.
4. Understand the validity of statements and inferences from them.
5. Draw valid conclusions from given statements.
6. Understand the concept of analogy and properties of dice.

**UNIT-I:**

**Blood Relations, Directions, Clocks & Calendars.:** Blood relations -family tree, types of problems on blood relations- first person narrating type-coded relation-puzzle relation, direction-distance-direction and distance problems, angle between hands -correct or incorrect time, day of a date-repeated calendars.

**UNIT-II:**

**Ranks & Position, Puzzles:** Ranks-based on positions ,counting ,comparisons , puzzles-table based, selection based, seating based, graph and network Based .

**UNIT-III:**

**Coding & Decoding, Series.:** Coding and decoding-letter coding, number coding, symbol coding, substitution and mixed type, Symbols and notations, series-number, letter and word type , missing term.

**UNIT-IV:**

**Critical Reasoning-I:**Syllogisms, logical consistency, inference & degree of truth, assertion & reason.

**UNIT-V:**

**Critical Reasoning-II:** Statement & assumption, statement &conclusion, cause& effect, decision making.

**UNIT-VI:**

**Non Verbal Reasoning:** Series, odd-man out, analogies, mirror & water images, paper cutting & folding, figure formation, cubes & dice .

**COURSE OUTCOMES:**

After completing this course, the students will be able to

1. Identify the relation between given persons, find the direction and distance from starting point, find angle between hands at given time and vice-versa, find day of given date and vice-versa.
2. Find the position and rank of a person/object in an arrangement, arranging in order using given data.
3. Decode the given code pattern and code given word in terms of alphabet, numbers, symbols and mixed, identify missing term in the pattern/series.
4. Draw a valid conclusion from the statements, consistency of inference drawn, valid reason from given assertions.
5. Identify the cause for the assumed effect, take decision logically from the given data.
6. Identify the odd one in the given series/group, number opposite any face of dice, figure completion from a folded figure.

**TEXT BOOKS:**

1. Dr. R.S. Aggarwal ,A Modern Approach to Verbal & Non-Verbal Reasoning Sultan Chand Publications, 2018.

**REFERENCES:**

1. B.S.Sijwali and Indu Sijwali, A New Approach to Reasoning Verbal & Non-Verbal, Arihant Publishers, 2016.
2. M.K. Pandey, Analytical Reasoning , Bsc Publishing Co. Pvt. Ltd 2009.1

Course Structure for B. Tech. (With effect from 2019-2020)

Year/Semester	II B. Tech/II Sem	L	T	P	C
Regulation Year	2020-21	0	0	3	1.5
Subject	Business Communication Lab				

**COURSE OBJECTIVES:**

1. To expose student to different situations for better communication
2. To inculcate the habit of learning vocabulary for effective communication
3. To enable students to acquire Business English communication

**COURSE OUTCOMES:**

Upon the completion of the course, the student will be able to:

1. Understand and interpret conversations in informal and formal contexts.
2. Exhibit one's vocabulary, body language, pronunciation and intonation with proper etiquette.
3. Critique various written texts.
4. Construct appropriate Business English writing skills.
5. Develop skit exhibiting all LSRW skills.
6. Develop the skill of note making.

**UNIT- I:**

Listening: Listening to short conversations or monologues

Speaking: Giving information about oneself and their opinions and Giving a short talk on business related topics

Reading: Reading short and simple texts to understand the central idea/theme.

Writing: Writing a piece of internal business communication of 30-40 words ( Email)

**UNIT-II:**

Listening : Listening to a conversation/ monologue and taking notes

Speaking : Giving short talk on business related topics.

Reading: Matching descriptions of people to short texts. Matching statements to information given in a graph or graphs.

Writing : Writing a piece of internal business communication of 30-40 words (Message)

**Course Structure for B. Tech. (With effect from 2019-2020)**

**UNIT-III :**

Listening: Listening to longer conversations/interviews.

Speaking: Debates & Extempore

Reading : Reading a longer text and deciding whether the statements about the text are right or wrong or if the information is not given.

Writing : Write a business letter 60-80 words, based on an input text and some notes.

**UNIT-IV :**

Listening: Listening to TV news channels and taking notes.

Listening to songs and writing down the lyrics.

Speaking: Interview sessions

Reading: Read a longer text and answering questions. .

Writing: Writing a Business Report

**UNIT-V:**

Listening: Watching short documentaries and making notes.( General)

Speaking: Short plays, Presentations.

Reading : Read short texts and fill in a form using information from the texts.

Writing : Write a skit and enact.

**UNIT-VI:**

Listening: Watching documentaries and making notes.( Business specific)

Speaking: Nail your point.

Reading : Critical Reading to know author's perspective.

Writing : Write a skit and enact.

**REFERENCE BOOKS:**

1. Cambridge English – Business English Certificate Preliminary
2. Suresh Kumar. E. & Sreehari P.A (2007), Handbook for English Language Laboratories,
3. Cambridge University Press India Pvt. Ltd, New Delhi.
4. Mandal S. K (2006),Effective Communication & Public Speaking , Jaico



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Publishing House, New Delhi.

5. Grant Taylor (2004), English Conversation Practice, Tata McGraw Hill, New Delhi.
6. Balasubramanian .T (2000), A text book of English Phonetics for Indian Student, MacMillan Publishers, India.
7. Kamalesh Sadanand, Susheela Punitha (2008), Spoken English: A foundation Course: Parts 1 & 2, New Delhi, Orient Longman Pvt. Ltd

<b>Year/Semester</b>	<b>II B. Tech/II Sem</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Regulation Year</b>	<b>2020-21</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1.5</b>
<b>Subject</b>	<b>Design Thinking &amp; Product Innovation Lab</b>				

**COURSE OBJECTIVES:**

1. To provide the basic concepts and techniques of engineering and reverse engineering, process of design, analytical thinking and ideas, basics and development of engineering drawing, application of engineering drawing with computer aide.
2. To get exposure of exhibiting their creativity in terms of an innovative product development in a structured process through this course.

**COURSE OUTCOMES:**

Upon the successful completion of the course, students will be able to:

1. Gather deep insights of design thinking and appreciate various design process procedure.
2. Develop design ideas through different technique and Analyse innovative product design.
3. Identify the significance of reverse Engineering to understand products.
4. Draw technical drawing for design ideas.

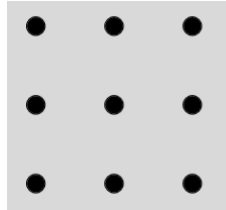
**List of Experiments**

1. List specific inventions that were (or might have been) suggested to creative thinkers by the following natural phenomena:
  - i. human arms
  - ii. cats
  - iii. seagulls
  - iv. a frozen salmon
  - v. spiders
  - vi. earthworms
  - vii. a flower
  - viii. the eye of a fly
  - ix. conical shells
  - x. animal bone structures
  - xi. dew drops on leaves
  - xii. human skulls
  - xiii. bamboo

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- xiv. human foot
- xv. human lungs
- xvi. larynx

2. On a spare piece of paper draw a square of nine dots like this:



Now see if you can connect up the dots with four consecutive straight lines, that is, without taking your pencil off the paper. You have one minute to complete the task.

- 3. Diagram a process for planning and cooking a family dinner. Does your process resemble the generic product development process? Is cooking dinner is analogous into a market-pull, technology push, platform process-intensive, customization, high-risk, quick-build, or complex system process?
- 4. Sketch the organization (in some appropriate graphical representation) of a consulting firm that develops new products for clients on a project by project basis. Assume that the individuals in the firm represent all of the different functions required to develop a new product. Would this organization most likely to be aligned with functions, be aligned by projects, or be a hybrid?
- 5. Create a product technology road-map illustrating the availability of technologies for a class of products you understand well, such as personal computers?
- 6. How can the concept selection methods be used to benchmark or evaluate existing products? Perform such an evaluation for five automobiles you might consider purchasing.
- 7. Perform concept screening for the four pencil holder concepts shown below. Assume the pencil holders are for a member of a product development team who is continually moving from site to site.
- 8. Draw the polygon using Auto CAD
- 9. Create a 2D view of the given diagram using Auto CAD
- 10. Create a 2D view of the given diagram using Auto CAD
- 11. Create a 2D view of the given diagram using Auto CAD
- 12. Create a 3D view of the given diagram using Auto CAD



<b>Year/Semester</b>	<b>II B. Tech/II Sem</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Regulation Year</b>	<b>2020-21</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1.5</b>
<b>Subject</b>	<b>Data Base Management System Lab</b>				

**COURSE OBJECTIVES:**

1. To explain basic database concepts, applications, data models, schemas and instances.
2. To demonstrate the use of constraints and relational algebra operations. IV. Describe the basics of SQL and construct queries using SQL.
3. To emphasize the importance of normalization in databases.
4. To facilitate students in Database design
5. To familiarize issues of concurrency control and transaction management.

**COURSE OUTCOMES:**

At the end of the course the students are able to:

1. Apply the basic concepts of Database Systems and Applications.
2. Use the basics of SQL and construct queries using SQL in database creation and Interaction.
3. Design a commercial relational database system (Oracle, MySQL) by writing SQL using the system.
4. Analyze and Select storage and recovery techniques of database system.

**SQL-Experiments:**

1. Queries to Retrieve and Change Data: Select, Insert, Delete, and Update
2. Creation, altering and dropping of tables and inserting rows into a table (use constraints while creating tables) examples using SELECT command.
3. Queries using Group By, Order By, and Having Clauses.
4. Queries using operators in SQL
5. Queries on Controlling Data: Commit, Rollback, and Save point
6. Queries (along with sub Queries) using ANY, ALL, IN, EXISTS, NOTEXISTS, UNION, INTERSET, EXCEPT, CONSTRAINTS etc.
7. Queries using Aggregate functions (COUNT, SUM, AVG, MAX and MIN), and Creation and dropping of Views.
8. Queries on Joins and Correlated Sub-Queries.

**Course Structure for B. Tech. (With effect from 2019-2020)**

9. Practicing on Triggers - creation of trigger, Insertion using trigger, Deletion using trigger, Updating using trigger

**PL/SQL**

10. Write a PL/SQL Code using Basic Variable, Anchored Declarations, and Usage of Assignment Operation
11. Write a PL/SQL Code Bind and Substitution Variables. Printing in PL/SQL
12. Write a PL/SQL block using SQL and Control Structures in PL/SQL
13. Write a PL/SQL Code using Cursors, Exceptions and Composite Data Types
14. Write a PL/SQL Code using Procedures, Functions, and Packages FORMS

Course Structure for B. Tech. (With effect from 2019-2020)

Year/Semester	II B. Tech/II Sem	L	T	P	C
Regulation Year	2020-21	0	0	3	1.5
Subject	Web Technologies Lab				

List of Experiments

1. Design the following static web pages required for an online bookstore website.

HOME PAGE:

The static home page must contain three parts.

**Header:** Logo and the college name and links to Home page, Login page, Registration page, Catalogue page and Cart page (the description of these pages will be given below).

**Footer:** At least four links for navigation, which will display the catalogue of respective links.

For e.g.: When you click the link “MCA” the catalogue for MCA Books should be displayed in the Right frame.

**Side Menu:** The pages to the links in the left frame must be loaded here. Initially this page contains description of the website.

Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
mca mba BCA	Description of the Web Site			

2) Login page













Course Structure for B. Tech. (With effect from 2019-2020)

Logo	Web Site Name			
Home	Login	Registration	Catalogue	Cart
MCA MBA BCA	<p style="text-align: center;">Login : <input type="text" value="11a51f0003"/>            Password: <input type="password" value="*****"/>  <input type="button" value="Submit"/>    <input type="button" value="Reset"/></p>			

3) CATOLOGUE PAGE:

The catalogue page should contain the details of all the books available in the website in a table. The details should contain the following:

- Snap shot of Cover Page.
- Author Name.
- Publisher.
- Price.
- Add to cart button.

Logo	Web Site Name																			
Home	Login	Registration	Catalogue	Cart																
MCA MBA BCA	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: center; vertical-align: top;">        </td> <td style="width: 35%; padding: 5px;">           Book : XML Bible            Author : Winston            Publication : Wiely         </td> <td style="width: 15%; text-align: center; vertical-align: top;">\$ 40.5</td> <td style="width: 35%; text-align: center; vertical-align: middle;"> <input type="button" value="Add to cart"/> </td> </tr> <tr> <td></td> <td style="padding: 5px;">           Book : AI            Author : S.Russel            Publication : Princeton hall         </td> <td style="text-align: center; vertical-align: top;">\$ 63</td> <td style="text-align: center; vertical-align: middle;"> <input type="button" value="Add to cart"/> </td> </tr> <tr> <td></td> <td style="padding: 5px;">           Book : Java 2            Author : Watson            Publication : BPB publications         </td> <td style="text-align: center; vertical-align: top;">\$ 35.5</td> <td style="text-align: center; vertical-align: middle;"> <input type="button" value="Add to cart"/> </td> </tr> <tr> <td></td> <td style="padding: 5px;">           Book : HTML in 24 hours            Author : Sam Peter            Publication : Sam         </td> <td style="text-align: center; vertical-align: top;">\$ 50</td> <td style="text-align: center; vertical-align: middle;"> <input type="button" value="Add to cart"/> </td> </tr> </table>				   	Book : XML Bible Author : Winston Publication : Wiely	\$ 40.5	<input type="button" value="Add to cart"/>		Book : AI Author : S.Russel Publication : Princeton hall	\$ 63	<input type="button" value="Add to cart"/>		Book : Java 2 Author : Watson Publication : BPB publications	\$ 35.5	<input type="button" value="Add to cart"/>		Book : HTML in 24 hours Author : Sam Peter Publication : Sam	\$ 50	<input type="button" value="Add to cart"/>
   	Book : XML Bible Author : Winston Publication : Wiely	\$ 40.5	<input type="button" value="Add to cart"/>																	
	Book : AI Author : S.Russel Publication : Princeton hall	\$ 63	<input type="button" value="Add to cart"/>																	
	Book : Java 2 Author : Watson Publication : BPB publications	\$ 35.5	<input type="button" value="Add to cart"/>																	
	Book : HTML in 24 hours Author : Sam Peter Publication : Sam	\$ 50	<input type="button" value="Add to cart"/>																	

#### 4. REGISTRATION PAGE:

Create a “*registration form*” with the following fields

- Name (Text field)
- Password (password field)
- E-mail id (text field)
- Phone number (text field)
- Sex (radio button)
- Date of birth (3 select boxes)
- Languages known (checkboxes – English, Telugu, Hindi, Tamil)
- Address (text area)

#### 5. Design a web page using CSS (Cascading Style Sheets) which includes the following:

- Use different font, styles:
- In the style definition you define how each selector should work (font, color etc.).
- Then, in the body of your pages, you refer to these selectors to activate the styles

#### 6. Write an XML file which will display the Book information which includes the following:

- Title of the book
- Author Name
- ISBN number
- Publisher name
- Edition
- Price

Write a Document Type Definition (DTD) to validate the above XML file.

7. Write a PHP program for contact us page.

#### 8. User Authentication:

Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a PHP for doing the following.

- Create a Cookie and add these four user id’s and passwords to this Cookie.
- Read the user id and passwords entered in the Login form (Program 2) and authenticate with the values (user id and passwords) available in the cookies.
- If he is a valid user (i.e., user-name and password match) you should welcome him by name (user-name) else you should display “You are not an authenticated user”.
- Use init-parameters to do this.

9. Example PHP program for registering users of a website and login.

**Course Structure for B. Tech. (With effect from 2019-2020)**

**10. Install a database (Mysql or Oracle).**

Create a table which should contain at least the following fields: name, password, email-id, phone number (these should hold the data from the registration form).

Write a PHP program to connect to that database and extract data from the tables and display them. Experiment with various SQL queries.

Insert the details of the users who register with the web site, whenever a new user clicks the submit button in the registration page..

**11. Write a PHP which does the following job:**

Insert the details of the 3 or 4 users who register with the web site by using registration form. Authenticate the user when he submits the login form using the user name and password from the database.

12. Create tables in the database which contain the details of items (books in our case like Book name, Price, Quantity, Amount ) of each category. Modify your catalogue page (Program 3) in such a way that you should connect to the database and extract data from the tables and display them in the catalogue page using PHP.

13. HTTP is a stateless protocol. Session is required to maintain the state.

The user may add some items to cart from the catalog page. He can check the cart page for the selected items. He may visit the catalogue again and select some more items. Here our interest is the selected items should be added to the old cart rather than a new cart. Multiple users can do the same thing at a time(i.e., from different systems in the LAN using the ip-address instead of local host). This can be achieved through the use of sessions. Every user will have his own session which will be created after his successful login to the website. When the user logs out his session should get invalidated (by using the method session. Invalidate ()). Modify your catalogue and cart PHP pages to achieve the above mentioned functionality using sessions.

14. Implement the following in React JS

- Using React Js creating constructs data elements.
- Using React Js implementations DoM.

15. Implement the following in AngularJS

- AngularJS data binding.
- AngularJS directives and Events.
- Using angular Js fetching data from MySQL.