**LESSON PLAN(2022-23-Odd)**

**Name of Professor: Dr. Ashish Jolly Class: BCA SEM 3**

**Subject: Software Engineering BCA-234**

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| **Month** | **Topic Covered** |
| 01-09-22 to 30-09-22 | Introduction: Program vs. Software, Software Engineering, Programming paradigms, Software Crisis – problem and causes, Phases in Software development: Requirement Analysis, Software Design, Coding, Testing, Maintenance, Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics. |
| 01-10-22 to 21-10-22 | Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS, Characteristics of an SRS, Components of an SRS, Problem Analysis, Information gathering tools, Organizing and structuring information, Requirement specification, validation and Verification. . SCM |
| 27-10-22 to 30-11-22 | Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision tress, Structured English, Entity-Relationship diagrams, Cohesion and Coupling. Gantt chart, PERT Chart, Software Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics. |
| 01-12-22 to 24-12-22 | Software Project Planning: Cost estimation: COCOMO model, Project scheduling, Staffing and personnel planning, team structure, Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management. Software testing strategies: unit testing, integration testing, Validation testing, System testing, Alpha and Beta testing. |

**LESSON PLAN(2022-23-Odd)**

**Name of Professor: Dr. Ashish Jolly Class: BCA SEM 1**

**Subject: Computer Fundamental BCA-111**

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| **Month** | **Topic Covered** |
| 01-09-22 to 30-09-22 | Computer Fundamentals: Definition, Block Diagram along with its components, characteristics & classification of computers, Applications of computers in various fields. Memory: Concept of primary & secondary memory, RAM, ROM, types of ROM, flash memory, Secondary storage devices: Sequential & direct access devices viz. magnetic tape, magnetic disk, CD, DVD. |
| 01-10-22 to 21-10-22 | Computer hardware & software: I/O devices, relationship between hardware and software, types of software, Operating system: Definition, functions of operating system, concept of multiprogramming, multitasking, multithreading, multiprocessing, time-sharing, real time, single-user & multi-user operating system. |
| 27-10-22 to 30-11-22 | Planning the Computer Program: Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation, Techniques of Problem Solving: Flowcharting, algorithms, pseudo code, decision table, Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming. Computer Virus, WORMS, Trojan, |
| 01-12-22 to 24-12-22 | Searching, Sorting, and Merging: Linear & Binary Searching, Bubble, Selection, and Insertion Sorting, Merging, Design of algorithms for searching, sorting and merging. Computer Languages: Analogy with natural language, machine language, assembly language, high-level language, language translators, characteristics of a good programming language. |

**LESSON PLAN(2022-23-Even)**

**Name of Professor: Dr. Ashish Jolly Class: BCA SEM 2**

**Subject: Structured System Analysis and Design BCA-125**

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| **Month** | **Topic Covered** |
| January 2023 to 31 Jan 2023 | System Concept: Definition, Characteristics, Elements of system, Physical and abstract system, open and closed system, man-made information systems. System Development Life Cycle: Various phases of system development, Considerations for system planning and control for system success. Role of system analyst. |
| 1 Feb 2023 to 28 Feb 2023 | System Planning: Bases for planning in system analysis: Dimensions of Planning. Initial Investigation: Determining user’s requirements and analysis, fact finding process and techniques. Tools of structured Analysis: Data Flow diagram, data dictionary, IPO and HIPO charts, Gantt charts, pseudo codes, Flow charts, decision tree, decision tables. Feasibility study: Technical, Operational & Economic Feasibilities. |
| 1 March 2023 to 31 March 2023 | Cost/Benefit Analysis: Data analysis cost and benefit analysis of a system. Input/ Output and Form Design, File Organization and database design: Introduction to files and database, File structures and organization, objectives of database design, logical and physical view of data |
| 1 April 2023 to 30 April 2023 | System testing: Introduction, objectives of testing, test planning, testing techniques. Quality assurance: Goal of quality assurance, levels of quality assurance System implementation and software maintenance: primary activities in maintenance, reducing maintenance costs. |

**LESSON PLAN(2023-24-Odd)**

**Name of Professor: Dr. Ashish Jolly Class: BCA SEM 3**

**Subject: Software Engineering BCA-234**

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| **Month** | **Topic Covered** |
| 8 Aug 2023 to 31 Aug 2023 | Introduction: Program vs. Software, Software Engineering, Programming paradigms, Software Crisis – problem and causes, Phases in Software development: Requirement Analysis, Software Design, Coding, Testing, Maintenance, Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics. |
| 1 Sep 2023 to 30 Sep 2023 | Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS, Characteristics of an SRS, Components of an SRS, Problem Analysis, Information gathering tools, Organizing and structuring information, Requirement specification, validation and Verification. . SCM |
| 1 October 2023 to 31 October 2023 | Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision tress, Structured English, Entity-Relationship diagrams, Cohesion and Coupling. Gantt chart, PERT Chart, Software Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics. |
| 1 November 2023 to 30 November 2023 | Software Project Planning: Cost estimation: COCOMO model, Project scheduling, Staffing and personnel planning, team structure, Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management. Software testing strategies: unit testing, integration testing, Validation testing, System testing, Alpha and Beta testing. |

**LESSON PLAN(2023-24-Even)**

**Name of Professor: Dr. Ashish Jolly Class: BCA SEM 4**

**Subject: E-Commerce**

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| **Month** | **Topic Covered** |
| 3 Jan 2024 to 31 Jan 2024 | Introduction to E-Commerce:-Business operations; E-commerce practices vs. traditional business practices; concepts of b2b, b2c,c2c,b2g,g2h,g2c; Features of E-Commerce, Types of Ecommerce Systems, Elements of E-Commerce, principles of E-Commerce, Benefits and Limitations of E-Commerce. Management Issues relating to e-commerce. Operations of E-commerce: Credit card transaction; Secure Hypertext Transfer Protocol (SHTP); Electronic payment systems; Secure electronic transaction (SET) ; SET`s encryption; Process; Cybercash; Smart cards; Indian payment models |
| 1 Feb 2024 to 29 Feb 2024 | Applications in governance: EDI in governance; E-government; E-Governance applications of Internet; concept of government –to- business, business-to-government and citizen-to-government; E-governance models; Private sector interface in Egovernance. Applications in B2C: Consumers shopping procedure on the Internet; Impact on disinter mediation and re-intermediation; Global market; Strategy of traditional department stores. |
| 1 March 2024 to 31 March 2024 | Products in b2c model; success factors of e-brokers; Broker-based services on-line; Online travel tourism services; Benefits and impact of e-commerce on travel industry; Deal estate market; online stock trading and its benefits; Online banking and its benefits; Online financial services and their future; E-auctions – benefits, implementation and impact. |
| 1 April 2024 to 15 April 2024 | Applications in B2B: Key technologies for b2b; architectural models of b2b, characteristics of the supplier –oriented marketplace, buyer-oriented marketplace and intermediary-oriented marketplace; Just In Time delivery in b2b; Internet-based EDI from traditional EDI; Marketing Issues in b2b. Emerging Business models: Retail model; Media model; advisory model, made-to-order manufacturing model; Do-it- yourself model; Information service model; Emerging hybrid models; Emerging models in India, Internet & E-Commerce scenario in India; Internet security Issues; Legal aspects of E-commerce |