**Bapuji Educational Association (Regd.)**

**Bapuji Institute of Engineering and Technology, Davangere**

**Department of Information Science and Engineering**

Innovation methods [2021-22]

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| Sl.No | Name of the Faculty | Subject with code | Topic  | Innovation Method |
| 1 | Anitha G&Divya M S | Artificial Intelligence and Machine Learning(18CS71) | Cryptarithmetic problem, Q Learning, Reinforcement Learning,State Space Search in Artificial Intelligence with example, | https://youtu.be/Pnxu0vsKBT0https://youtu.be/FeijiYzN1B4 |
| 2 | Rekha B.H & Puneeth S P | Unix Programmming(18CS56) | Unix Commands | Demonstration of Unix Commands |
| All 5 Modules | Quiz |
| Daemon Processes | Flipped Class |
| 3 | Patil N S&Rekha B.H | Discrete Mathematical Structures18CS36 | All 5 Modules | Quiz |
| 4 | Jyothi G C | Software Architecture and Design Patterns (18CS731) | 5. Case study of UML diagrams | https://youtu.be/WnMQ8HlmeXc |
| 5 | Patil N S &Nagashri J A | 18CS54 | All 5 Modules | Quiz |
| 6 | Bhuvaneshwari K V | Application Development UsingPython(18CS55) | Lists,Tuples,Dictionary,Strings, Regular expression, Files, Classes and objects | 1. Conducted Hands-On session to demonstrate working examples of python concepts along with Installation of Anaconda Navigator.2. Conducted Quiz in online mode. |
| 7 | Sushma C | Application Development using Python (18CS55)  | All 5 Modules | Quiz |
| 8 | Manjushree K R | Analog and Digital Electronics18CS33 | All 5 Modules | Quiz |
| 9 | Sheik Imran | Management and Entrepreneurship for IT industry(18CS51) | Case studies of Entrepreneurs | Asiigned students to prepare and Present the case studies of various entrepreneurs. |
| 10 | Sheik Imran | Python Programming | Lists,Tuples,Dictionary,Strings, Towers of Hanoi, sorting and searching techniques | Promoted students to present, trace and execute programs in python.  |
| 11 | Mrs. Ranjana B Jadekar | Database Management Systems 18CS53 | Database Application development  | Conducted workshop to develoep a databse application using front end as visual studio and backend as Xamp with SQL connection.  |
| 12 | Mrs. Ranjana B jadekar &Mrs. Kamala R | Computer Organization  | Chip Organization and Secondary storage devices.  | NPTEL video presented in the tutorial class. |
| 13 | Dr Sreenivas B R | Data Structure and its Applications | Tower of Hanoi | 1.Activity based learning 2.Collaborative Learning 3.Udemy Course 4. Basics of C Programming |
| 14  | Varsha M | Design and Analysis of Algorithms | Approaches of Algorithms | Peer based learning through mini projects. |
| 15 | Santhosh T | Web Technology and its Application  | HTML5, CSS, PHP, JavaScript | Webmaster android application is used to demostrate the code execution. |

Innovation methods [2020-21]

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| Sl.No | Name of the Faculty | Subject with code | Topic  | Innovation Method |
| 1 | Anitha G | File Structures (18IS561) | All concepts of Syllabus | Quiz and NPTEL videos demonstration |
| 2 | Bhuvaneshwari K V | Advanced Java and J2EE(17CS553) | Tomcat installation and worked examples on servlet and JSP. | Conducted Hands-on session to demonstrate the installation of Tomcat and execution of working examples of servlet and JSP programs. |
| Application Development using Python(18CS664) | Lists,Tuples,Dictionary in python | Demonstrated the examples of python snippet codes in Jupyter Notebook. |
| 3 | Rekha B H | Internet of Things Technology (17CS81) | Module 1& Module 2 | Crossword Puzzle |
| 4 | Jyothi G C | Automata Theory and Computability - AT & C (18CS54) | 1.Designing of DFSM.2. Conversion from NDFSM to DFSM.3. Conversion from RE to DFSM | Practical demonstration using JFLAP tool  |
| Software Testing - ST (18IS62) | 1Design and develop a program in JAVA to implement Currency Converter Problem and test cases.2.Design and develop a program in JAVA to implement SATM and test cases | Implemented, executed and tested the code of different testing methods using JAVA programming language. |
| 5 | Varsha M | Design and Analysis of Algorithms | Dynamic Programming and Backtracking | Java and C implementations of Algorithms based on Dynamic Programming and Backtracking |
| 6 | Puneeth S P | Database Management System18CS53 | Introduction to Databases, Conceptual Data Modelling using Entities and Relationships, Relational Model and SQL | Quiz |
| Internet of Things Technology(17CS81) | Module 1 and Module 2Internet of Things | QuizCrossword  puzzles |
| 7 | Dr. Vinutha H P | Big Data Analytics17CS82 | Basic concepts | Conducted online quiz  using Kahoot  |
| 8 | Ranjana B Jadekar | MC&ES -18CS44 | Applications and different characteristics of ARM microcontroller | Created a student groups to give presentation on different concepts. |
|   DBMS -18CS53 | Database Application Programming  | Conducted workshop to develop DBMS mini project |
| 9 | Sheik Imran | Mobile Application Development Lab 18CSMP68) | Introduction to Android Studio | Hands On |
| 10 | Sushma C | Application Development using Python(18CS664) | Functions, Class  | Anaconda python |
| Design and Analysis of algorithms(18CS42) | Algorithms | Animated videos, Netbeans |
| 11 | Divya M S | Object Oriented Concepts(18CS45) | Task:Object Oriented Programming with Real Life Example | Assigned a students to give presentation on different concepts. |
| 12 | Manjushree K R | User Interface Design(17CS832) | GUI | Given the task to design the user interface by using the modern tools. |
| 13 | Nagashri J A | Web Technology and Its Applications (18CS63) | HTML and CSS | Explained the programs through online and given the assignments to do similar type of programs and conducted the online quiz. |

Innovation methods [2019-20]

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| Sl.No | Name of the Faculty | Subject with code | Topic  | Innovation Method |
| 1 | Anitha G | Analog and Digital Electronics (18CS33) | Photo devices, OPAMPS | PowerPoint presentation |
| 2 | Bhuvaneshwari K V | Machine Learning (15CS73) | Neural Network and Back propagation | 1.<https://www.youtube.com/watch?v=aircAruvnKk>2.<https://www.youtube.com/watch?v=aircAruvnKk&list=PLZHQObOWTQDNU6R1_67000Dx_ZCJB-3pi> |
| 3 | Rekha B H | Operating Systems (18CS43) | Scheduling Algorithms, Disk Scheduling and Deadlock | NPTEL Videos and PPT presentation |
| Cryptography, Network Security and Cyber Law (17CS61) | Public Key Cryptography and RSA – RSA Operations,Key Management | PowerPoint presentation |
| 4 | Jyothi G C | Automata Theory and Computability (17CS54)  | 1. Conversion of NFA to DFA | https://youtu.be/--CSVsFIDng |
| 5 | Varsha M |  Design andAnalysis ofAlgorithms(18CS42) | Optimal Binary Search Tree,Single Source ShortestPath | <https://drive.google.com/file/d/12hTGiEMyCUUhkMJuUFirVwx1-3bVkKKF/view><https://drive.google.com/file/d/1r5KfvRfyxtMLBXZ4oXr-f8R1a0_SNG6p/view> |
| 6 | Puneeth S P | Software Testing(17IS63) | Fault based testing, Structural Testing, Test execution, Process Framework and Documenting Analysis and Test. | PowerPoint presentation |