

COMPUTER APPLICATIONS (B.C.A)

| Semester | Course Code | Course Category | Hours | Credits | Marks for Evaluation | | |
|---|-------------|------------------------|-------|---------|----------------------|-----|-------|
| | | | | | CIA | ESE | Total |
| III | 25UCAVAC1 | Value Added Course - I | 30 | - | - | 100 | 100 |
| Course Title Data Analysis using MS-EXCEL | | | | | | | |

| SYLLABUS | | |
|----------|---|-------|
| Unit | Contents | Hours |
| I | Introduction to Excel: About Excel - Uses of Excel - Spreadsheet Window Pane - Title Bar - Menu Bar - Standard Toolbar - Formatting Toolbar - Status Bar - Task Pane - Fitting Columns & Rows - Inserting & Deleting Columns & Rows Cell - Address of a Cell - Components of a Cell – Format – Value – Formula - Use of Paste and Paste Special. | 6 |
| II | Functionality Using Ranges: Using Ranges - Selecting Ranges - Entering Information into a Range - Using Auto-Fill Creating Formulas. Using Formulas - Formula Functions – Sum - Average, if, Count, max, min, Proper, Upper, Lower, Using AutoSum. | 8 |
| III | Table Data Analysis : Sorting, Filter - Text to Column - Data Validation PivotTables – Creating PivotTables - Manipulating a PivotTable - Using the PivotTable Toolbar - Changing Data Field – Properties - Displaying a PivotChart - Setting PivotTable Options - Adding Subtotals to PivotTables | 6 |
| IV | Spreadsheet Tools : Moving between Spreadsheets, Selecting Multiple Spreadsheets – Inserting and Deleting Spreadsheets Renaming Spreadsheets - Splitting the Screen - Freezing Panes - Copying and Pasting Data between Spreadsheets. | 5 |
| V | Making Macros: Recording Macros - Running Macros - Deleting Macros. Case Study 1: Sales Data Analysis. Case Study 2: Employee Performance Report. Case Study 3: Monthly Revenue Report for an E-commerce Store. | 5 |

Text Book(s):

Wayen L. Winston, Microsoft Excel 2019, Data Analysis and Business Modeling, 6th Edition, 2019

Reference Book(s):

Torben Lage Frandsen, Microsoft Office Excel, published by BookBoon, 2010

Web Resource(s):

- <https://bookboon.com/>
- https://www.tutorialspoint.com/excel/excel_pdf_version.htm

| Course Outcomes | |
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| Upon successful completion of this course, the student will be able to: | |
| CO No. | CO Statement |
| CO1 | Explain the underlying concepts of Excel |
| CO2 | Make use of the Formulas |
| CO3 | Influence the knowledge on the Data Analysis using Pivot Table |
| CO4 | Analyze the classification of Spreadsheet Tools |
| CO5 | Develop a case study with real world scenarios |

Course Coordinator: Dr. M. KAMAL

| Semester | Course Code | Course Category | Hours/ Week | Credits | Marks for Evaluation | | |
|---------------------|-------------|----------------------------|----------------|---------|----------------------|-----|-------|
| | | | | | CIA | ESE | Total |
| V | 25UCAVAC2 | Value Added Course - II | 30 | - | - | 100 | 100 |
| Course Title | | Servlet Programming | | | | | |

| SYLLABUS | | |
|----------|--|-------|
| Unit | Contents | Hours |
| I | Introduction to Web Programming: Overview of Web Applications - Types of web applications: Static vs. Dynamic - Client-Server Architecture - HTTP Protocol: Request-Response Cycle - Web Servers and Web Browsers. | 6 |
| II | Basic Web Development Concepts: HTML, CSS, and JavaScript Basics - JavaScript DOM Manipulation - HTTP Methods (GET, POST, PUT, DELETE) - Client-Side vs. Server-Side Programming. | 6 |
| III | Introduction to Servlets: What is a Servlet - Lifecycle of a Servlet - Servlet vs. Applets - Servlet API Overview. Basic Servlet Programming - Creating a Simple Servlet - Handling GET and POST Requests - Response Methods: <code>doGet()</code> , <code>doPost()</code> . | 6 |
| IV | Session Management: HTTP Session Basics - <code>HttpSession</code> API. Session Tracking Techniques: Cookies, URL Rewriting. | 6 |
| V | Working with Databases: Introduction to JDBC - Establishing a Connection to the Database - Writing SQL Queries from Java - Handling ResultSets. | 6 |

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| Text Book(s): |
| Budi Kurniawan, JSP & Servlet: A Tutorial, 2 nd Edition, 2015 |
| Reference Book(s): |
| Marty Hall, Larry Brown, Core Servlets and JavaServer Pages, , 2018 |
| Web Resource(s): |
| 1. https://www.redbooks.ibm.com/redbooks/pdfs/sg245755.pdf |
| 2. https://www.javatpoint.com/servlet-tutorial |

| Course Outcomes | |
|---|--|
| Upon successful completion of this course, the student will be able to: | |
| CO No. | CO Statement |
| CO1 | Explain the underlying concepts of Web Programming |
| CO2 | Make use of the HTML, CSS and JavaScript |
| CO3 | Influence the knowledge on the Power BI |
| CO4 | Analyze the classification of Session Management and Tracking |
| CO5 | Develop a case study with real world scenarios using databases |

Course Coordinator: Dr. M. KAMAL

MASTER OF COMPUTER APPLICATIONS (M.C.A)

| Semester | Course Code | Course Category | Hours/ Week | Credits | Marks for Evaluation | | |
|---------------------|-------------|--------------------------------------|----------------|---------|----------------------|-----|-------|
| | | | | | CIA | ESE | Total |
| III | 25MCAVAC1 | Value Added Course - I | 30 | - | - | 100 | 100 |
| Course Title | | App Development using Flutter | | | | | |

| SYLLABUS | | |
|----------|--|-------|
| Unit | Contents | Hours |
| I | Introducing Flutter – Installing the Flutter SDK – Configuring the Android Studio Editor – Setting up the Project – Using Hot Reload – Using Themes to Style our App – Using External Packages | 6 |
| II | Uses of Dart – Declaring variables – Using operators – Using flow statements – Using functions – Using classes – Creating and organizing Folders and Files – Structuring Widgets | 6 |
| III | Introduction to Widgets – Building a Shallow Widget Tree – Using Basic Widgets – Using Images and Icons – Using Decorators – Checking Orientation – Using AnimatedContainer – Using AnimatedController | 6 |
| IV | Using the Navigator – Using Hero Animation – Using the BottomNavigationBar – Using the BottomAppBar – Using the TabBar and TabBarView – Using the Drawer and ListView | 6 |
| V | Using the Card – Using the ListView and ListTile – Using the GridView – Using the Stack – A high-level view of the Layout – Creating Layout | 6 |

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| Text Book(s): |
| “Beginning Flutter – A Hands On Guide To App Development”, Marco L. Napoli, John Wiley & Sons Inc, 2020 |
| Web Resource(s): |
| 1. https://flutter.dev/ |
| 2. https://www.geeksforgeeks.org/flutter-tutorial/ |

| Course Outcomes | |
|---|--|
| Upon successful completion of this course, the student will be able to: | |
| CO No. | CO Statement |
| CO1 | Apply the concept of Flutter |
| CO2 | Summarize the features of Dart |
| CO3 | Simplify the knowledge on Widgets |
| CO4 | Explain the concept of Navigation in Flutter |
| CO5 | Solve real world scenarios using Flutter |

Course Coordinator: Dr. S. Mohamed Iliyas