A.T.V.V. Mandal's

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Academic Year 2021 – 2022

Subject: CA – 501 Cyber Security   **Class : T.Y.B.B.A(CA)**

Semester V

Unit	Topics
1	**Introduction to Cyber Crime and Cyber Security**
2	**Cyber offenses and Cyberstalking**
3	**Tools and Methods Used in Cybercrime**
4	**Cybercrimes and Cyber security: The Legal Perspectives**
5	**Cyber Forensics**
6	**Cybersecurity: Organizational Implication**
7	**Cybercrime: Illustrations, Examples and Mini-Cases**

Objectives:

1. To understand the fundamentals of cyber security.
2. To understand various categories of Cybercrime, Cyber-attacks on mobile, tools andtechniques used in Cybercrime and case studies.
3. To have an overview of the Cyber laws and concepts of Cyber forensics.

Outcome:-

1. Have a good understanding of Cyber Security and the Tools.
2. Identify the different types of Cyber Crimes.
3. Have a good understanding of Cyber laws
4. To develop Cyber forensics awareness.
5. Identify attacks, security policies and credit card frauds in mobile and Wireless ComputingEra.

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Academic Year 2021 – 2022

Subject: CA – 502 Object Oriented Software Engineering   Class : T.Y.B.B.A(CA)

Semester V

Unit	Topics
1	**Introduction and basics of Software Modelling**
2	**SRS Documentation**
3	**Introduction to UML**
4	**Object Oriented Concepts and Principles**
5	**Structural Modeling**
6	**Basic Behavioural Modeling**
7	**Architectural Modelling**
8	**Object Oriented Analysis**
9	**Object Oriented Design**

Objectives:

1. To understand the fundamentals of object modeling
2. To understand and differentiate Unified Process from other approaches.
3. To design with static UML diagrams.
4. To design with the UML dynamic and implementation diagrams.
5. To improve the software design with design patterns.
6. To test the software against its requirements specification.

Outcomes:

1. Students will be able to give Design Specifications for Project.
2. Students will acquire Knowledge in Basic Modeling.
3. Students will acquire Project Management Skills.

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Academic Year 2021 – 2022

Subject: CA – 503 Core Java   **Class : T.Y.B.B.A(CA)**

Semester V

Unit	Topics
1	**Java Fundamentals**
2	**Classes, Objects and Methods**
3	**Inheritance, Package and Collection**
4	**File and Exception Handling**
5	**Applet, AWT, Event and Swing Programming**

Objectives:

1. To introduce the object-oriented programming concepts.
2. To understand object-oriented programming concepts, and apply them in solving problems.
3. To introduce the principles of inheritance and polymorphism; and demonstrate how they relate to the design ofabstract classes
4. To introduce the implementation of packages and interfaces
5. To introduce the concepts of exception handling and multithreading.
6. To introduce the design of Graphical User Interface using applets and swing controls.

Outcomes:

1. Able to solve real world problems using OOP techniques.
2. Able to understand the use of abstract classes.
3. Able to solve problems using java collection framework and I/o classes.
4. Able to develop multithreaded applications with synchronization.
5. Able to develop applets for web applications.
6. Able to design GUI based applications

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Academic Year 2021 – 2022

Subject: CA – 504 Mongo DB   **Class : T.Y.B.B.A(CA)**

Semester V

Unit	Topics
1	**Introduction to NoSQL Databases**
2	**MongoDB Basics**
3	**MongoDB CRUD Operations**
4	**MongoDB Index and Aggregation**
5	**MongoDB Administration**

Objectives:

1. Understand importance of NoSQL Databases.

2. Learn various MongoDB commands and MongoDB design goals.

3. Design basic and general-purpose database using MongoDB.

Outcomes:

1. Learned to work with MongoDB shell and MongoDB tools.
2. Able to do Schema design, Data modelling and all sorts of CRUD Operations.
3. Learned to optimize query performance.
4. Become capable to analyze the data stored in MongoDB

Subject: CA – 507 Internet of things   **Class : T.Y.B.B.A(CA)**

Semester V

Unit	Topics
1	Fundamentals of IoT
2	Communication Technologies
3	Microcontroller Fundamental and Arduino uno

Objectives:

1. To understand technical aspects of Internet of things.

2. To describe smart objects and IoT Architecture.

3. To study and compare different Application protocols ofIoT.

4. To understand IoT platform using Arduino Uno.

Outcomes:

1. To explain key technologies, smart objects, IoT Architecture, and security in Internet of Things.

2. To illustrate the role of IoT protocols for efficient network communication.

3. To understand IoT platform such as Arduino Uno.

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Academic Year 2021 – 2022

Subject: CA – 601 Recent Trends in IT   **Class : T.Y.B.B.A(CA)**

Semester VI

Unit	Topics
1	**Introduction to recent trends**
2	**Artificial Intelligence**
3	**AI Search Techniques**
4	**Data Warehousing**
5	**Data Mining**
6	**Spark**

Objectives

1. To introduce upcoming trends in Information technology.
2. To study Eco friendly software development concepts.
3. To provide a strong foundation of fundamental concepts in Artificial Intelligence.
4. To evaluate the performance of various data mining task.
5. To understand Data analytics using Spark Programming.

Outcomes:

1. On completion of the course, student will be able
2. To discuss the basic concepts AI.
3. To apply basic, intermediate, and advanced techniques to mine the data.
4. To provide an overview of the concept of Spark programming

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Academic Year 2021 – 2022

Subject: CA – 602 Software Testing   **Class : T.Y.B.B.A(CA)**

Semester VI

Unit	Topics
1	**Introduction**
2	A**pproaches to Testing –Testing Methods**
3	**Software Testing Strategies &Software metrics**
4	**Software metrics**
5	**Testing for Specialized Environments**
6	**Testing Tools& Software Quality Assurance**

Objectives:

1. To provide learner with knowledge in Software Testing techniques.
2. To understand how testing methods can be used as an effective tool in providing quality assurance for software.
3. To provide skills to design test case plan for testing software.

Outcomes:

1. Students will be introduced to testing tools.
2. Students will acquire Knowledge of Basic SQA.
3. Students will be able to design basic Test Cases

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Academic Year 2021 – 2022

Subject: CA – 603 Advance Java   **Class : T.Y.B.B.A(CA)**

Semester VI

Unit	Topics
1	**JDBC**
2	**Multithreading**
3	**Networking**
4	**Servlet and JSP**
5	**Spring &hibernate**

Objectives -:

1. To know the concept of Java Programming.
2. To understand how to use programming in day-to-day applications.
3. To develop programming logic.

Outcomes:

1. Students will know the concepts of JDBC Programming.
2. Students will know the concepts of Multithreading and Socket Programming.
3. Students will know the concepts of Spring and Hibernate.
4. Students will develop the project by using JSP and JDBC.
5. Students will develop applications in Spring and hibernate

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Academic Year 2021 – 2022

Subject: CA – 604 Dot Net Framework   **Class : T.Y.B.B.A(CA)**

Semester VI

Unit	Topics
1	**Introduction to DOT NET FRAMEWORK**
2	**Introduction to VB.Net**
3	**Introduction to C#**
4	**Introduction to ASP.NET**
5	**Architecture of Ado.Net**

Objective:

1. To learn Microsoft framework architecture.
2. Understand development of windows application.
3. To learn data access mechanism.
4. Create and consume libraries.
5. Create a web application.
6. To develop the website and application

Outcome:

1. Use the features of Dot Net Framework along with the features of VB, C# and ASP
2. Design and develop window based and web based .NET applications.
3. Design and develop a Website.
4. Design and Implement database connectivity using ADO.NET for VB, C# and ASP

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Academic Year 2021 – 2022

Subject: CA – 605 Soft Skills   **Class : T.Y.B.B.A(CA)**

Semester VI

Unit	Topics
1	Introduction to Soft Skills
2	Communication Skills
3	Skills Development
4	Skill Implementation

Objectives:

1. It helps participants to communicate effectively and to carry themselves confidently.
2. They also learn how to identify and overcome the barriers in interpersonal relationships.

Outcomes:

1. Understand the significance and essence of a wide range of soft skills
2. Learn how to apply soft skills in a wide range of routine social and professional settings.
3. Learn how to employ soft skills to improve interpersonal relationships.
4. Learn how to employ soft skills to enhance employability and ensure workplace and career success

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