MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

(UGC - AUTONOMOUS INSTITUTION)

(Affiliated to JNTUA, Anathapuramu & Approved by AICTE, New Delhi)

Department of Computer Applications

S.No	Name of the Laboratory	Name of theImportant Equipment
1	**Python Programming Laboratory** 	**LAB:07 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (44 Nos) **Processor**: HP 280 G2 MT(HPO4), I3, 6100 2.4 GHz **RAM:** 8GB DDR4 RAM **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (11 Nos)
2	**Programming with C++ Laboratory** 	**LAB:07 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (44 Nos) **Processor**: HP 280 G2 MT(HPO4), I3, 6100 2.4 GHz **RAM:** 8GB DDR4 RAM **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (11 Nos)
3	**Java Programming Laboratory** 	**LAB:08 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

(UGC - AUTONOMOUS INSTITUTION)

(Affiliated to JNTUA, Anathapuramu & Approved by AICTE, New Delhi)

Department of Computer Applications

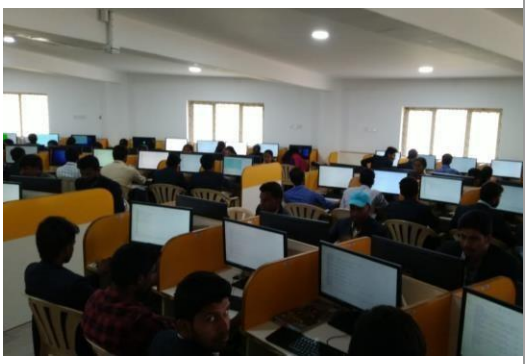
S.No	Name of the Laboratory	Name of theImportant Equipment
4	**Database Management Systems Lab** 	**LAB:07 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (44 Nos) **Processor**: HP 280 G2 MT(HPO4), I3, 6100 2.4 GHz **RAM:** 8GB DDR4 RAM **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (11 Nos)
5	**Data Structures and Algorithms Lab** 	**LAB:08 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse
6	**Full Stack Web Development Laboratory** 	**LAB:07 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (44 Nos) **Processor**: HP 280 G2 MT(HPO4), I3, 6100 2.4 GHz **RAM:** 8GB DDR4 RAM **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (11 Nos)

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

(UGC - AUTONOMOUS INSTITUTION)

(Affiliated to JNTUA, Anathapuramu & Approved by AICTE, New Delhi)

Department of Computer Applications

S.No	Name of the Laboratory	Name of theImportant Equipment
7	**Data Science using Python Laboratory** 	**LAB:08 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse
8	**Mobile Application Development laboratory** 	**LAB:08 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse
9	**Software Engineering Laboratory** 	**LAB:07 (66 Units)** **Processor**: HP PRO 3330(HP03) intel core I3 @ 3.90GHz **RAM:** 8 GB DDR3 **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (44 Nos) **Processor**: HP 280 G2 MT(HPO4), I3, 6100 2.4 GHz **RAM:** 8GB DDR4 RAM **Hard Disk**: Samsung 870 Evo 500GB SSD HDD **Monitor**: LED HP 18.5 inch. Keyboard and Mouse (11 Nos)

Department of Computer Applications

Software Procurement:

Sl. No.	Name of the Department	Description	Software Name	No. of Users	Date of Purchase
1	Master of Computer Application/ Computer Science & Engineering/ Computer Science & Technology	IBM Rational Rose Software	Rational Rose Software	30	30-01-2008
		Adobe Web Premium CS5 / Acrobat Professional	Adobe / Acrobat Software	2	01-12-2010
		Microsofte CASA and GGS (Common to All)	Microsoft Campus Agreement	100 & 75	26-12-2016

PYTHON PROGRAMMING LABORATORY:

This course provides the students how to write programs in python language to perform different tasks in major concepts such as functions, collections, comprehensions, files, exception handling and OOPS.

Objectives:

1. To Write algorithms and draw flowcharts using raptor tool for different computational problems
2. Design Python programs using looping, decision making and user defined functions.
3. Develop Python programs using collections, comprehensions, files, exceptions and OOPS

Required Software:

1. IDLE 3.4.1 or Above
2. Raptor Portable
3. PyCharm

DATABASE MANAGEMENT SYSTEMS LABORATORY:

This Lab course is designed to provide basic understanding on database systems and its design. The course material further used for developing any web-based applications in which database is back end. Course covers from all basic and advanced queries of SQL, PL/SQL programs.

Course Objectives:

1. To familiar DDL, DML,TCL and DCL Commands
2. To write programs using date functions Character functions, String functions and Aggregate functions
3. To implement PL/SQL functions, Procedure functions, Triggers and exceptions queries.

Required Software:

1. ORACLE

PROGRAMMING WITH C++ LABORATORY

This lab course contains the basics of object oriented programming fundamentals through C++. It contains expressions, control flow, functions, arrays, pointers, managing I/O and object oriented programming features.

Course Objectives:

1. Understand the basic concepts of object oriented programming.
2. Understand the basic concepts of Functions.
3. Explain Class, Object, Constructor &Destructor and pointers.
4. Demonstrate inheritance, operator overloading and dynamic memory allocation concepts and Describe polymorphism and generic constructs
5. Explain streams, File I/O and exception handling in C++.

Required Software:

1. Geany Application Environment
2. Turbo C++

FULL STACK WEB DEVELOPMENT LABORATORY

Full Stack Web Development course will make students to become master in front-end technology. It provides basic information and experiments to grow to be a Full-Stack web developer. With fast growing technologies, the students can update their knowledge on technologies. This will help the students to learn the complete set of process like designing, development and deployment.

Course Objectives:

Students will be able to:

1. Acquire knowledge on web designing using front end tools
2. Develop coding using scripting languages
3. Develop applications using AJAX

Required Software:

1. Wamp Server-Apache, Sql, PhP servers
2. Web Browser
3. Notepad ++

DATA STRUCTURES AND ALGORITHMS LABORATORY

This course introduces on the practical part of Data Structures and Algorithms using Python language. This course allows students to implement linear and nonlinear data structures. It gives practical exposure for solving sorting and searching problems. It enables to develop programs using various problem solving methods.

Course Objectives:

1. Design Linear and Non-Linear Data structures.
2. Compare different types of searching and sorting techniques.
3. Demonstrate various problem-solving methods.

Required Software:

1. Geany Application Environment
2. Turbo C++

SOFTWARE ENGINEERING LABORATORY

This course focuses on providing hands-on experience in designing and developing software systems. Specifically, the course studies software modelling tools, and testing tools.

Course Objectives:

1. To have hands on experience in developing a software project by using various software engineering principles and methods in each of the phases of software development.
2. To practice the various design diagrams through the appropriate tool.
3. To learn to implement various software testing strategies

Required Software:

1. STAR UML
2. Selenium web driver

PROGRAMMING WITH MATLAB

Course Description:

This course introduces students to MATLAB programming, and demonstrate its use for scientific computations. The basis of computational techniques is expounded through various coding examples and problems. The practical ways to use MATLAB will be discussed.

Course Objectives:

1. To Understand basic MATLAB commands and elementary functions
2. To Study and implement mathematical operations and matrices manipulation
3. To Understand MATLAB functions and expressions
4. To Apply flow control and files in MATLAB
5. To Understand Plotting and Simulink blocks in MATLAB

Required Software:

1. MATLAB-22a

MOBILE APPLICATION DEVELOPMENT LABORATORY

This course introduces the android application development. Emphasis is placed on the processes, tools and frameworks required to develop applications for current and emerging mobile computing devices. It covers the core components, android interface library, content providers, broadcast intents and various sensors.

Objectives:

1. Understand the installation of Android SDK.
2. Get idea on the User Interface Design and their testing methodologies.
3. Know the components of Android Building Blocks and how to use them for different application developments..

Software Required:

1. Android Studio

DATA SCIENCE USING PYTHON LABORATORY:

This course will introduce the students to learn concepts and techniques to deal with various facts of data science practice including data collection and integration, exploratory data analysis, predictive modeling, descriptive modeling, and forecasting concepts.

Course Objectives:

1. Understand exploratory data analysis concepts.
2. Understand Supervised and Unsupervised Learning concepts.
3.Explain Time Series Forecasting methods and MLP.

Software Required:

1. Jupiter Notebook

JAVA PROGRAMMING LABORATORY

In this course, students gain extensive hands-on experience on Java programming. Students learn to create robust console applications using code reusability with multi-threading, applications of exception handling, I/O streams, and GUI implementation.

Course Objectives:

1. Implement java programs using basic constructs.
2. Build robust applications using object-oriented features.
3. Read and write data using Java streams.
4. Develop platform-independent GUIs.

Software Required:

1. Notepad++
2. Geany