



## DEPARTMENT OF COMPUTER SCIENCE

### INDAS MAHAVIDYALAYA

#### PROGRAMME COURSE

#### PROGRAMME OUTCOME

**PO1.** Upon completion of the course the students will be able to demonstrate the various components of a computer and describe the inherent basic operations of the major components of a computer.

**PO2.** Upon completion of the course the students will be able to operate computers under some operating system (s) environment (s) and arithmetically/logically design some basic functional units of a computer.

**PO3.** Upon completion of the course the students will be able to use some office automation tools smoothly

**PO4.** Upon completion of the course the students will be able to express some basic mathematical as well as real-life problems as logical/mathematical models for solving with some particular programming languages or tools.

**PO5.** Upon completion of the course the students will be able to perform ordinary functional programming (using Python), object-oriented programming (using Java) as well as database programming (front end using VB and back end using SQL) and web page design (using HTML).

**PO6.** Upon completion of the course the students will be able to smoothly carry out small/medium size projects independently.

**COURSE OUTCOME  
SEMESTER-1**

**Course ID 11518**

**Title: Problem Solving using Computers**

**CO1.** On completion of the course the students will be able to describe the Computer Fundamentals.

**CO2.** On completion of the course the students will be able to demonstrate, analyze and correlate different components of a computer.

**CO3.** On completion of the course the students will be able to develop algorithmic solutions of mathematical problems.

**CO4.** On completion of the course the students will be able to describe the different parameters and statements of Python programming.

**CO5.** On completion of the course the students will be able to write and execute programs in Python language.

**SEMESTER-2**

**Course ID 21518**

**Title: Database Management System**

**CO1.** Upon completion of the course the students will be able to describe the merits of database systems over the traditional file processing system.

**CO2.** Upon completion of the course the students will be able to illustrate ordinary information systems as ERDs.

**CO3.** Upon completion of the course the students will be able to transform ERDs into relation schema.

**CO4.** Upon completion of the course the students will be able to normalize the relations into 3NF.

**CO5.** Upon completion of the course the students will be able to write queries in terms of relational algebraic operations.

**SEMESTER-3**  
**Course ID 31518**  
**Title: Operating Systems**

**CO1.** On completion of the course the students will be able to describe the basic organization fan O/S.

**CO2.** On completion of the course the students will be able to describe the common services provided by an O/S.

**CO3.** On completion of the course the students will be able to analyze the performance of various algorithms used for process scheduling and synchronization, CPU scheduling and memory management.

**CO4.** On completion of the course the students will be able to describe the different parameters and statements used in Shell Script.

**CO5.** On completion of the course the students will be able to write and execute programs in Shell Script.

**SEMESTER-4**  
**Course ID 41518**  
**Title: Computer System Architecture**

**CO1.** Upon completion of the course the students will be able to design and describe the ordinary combination circuits in terms of the basic logic gates.

**CO2.** Upon completion of the course the students will be able to design and describe the ordinary sequential circuits in terms of the basic logic gates.

**CO3.** Upon completion of the course the students will be able to perform 1's – complement and 2's – complement addition / subtraction.

**CO4.** Upon completion of the course the students will be able to write programs in assembly language.

**CO5.** Upon completion of the course the students will be able to describe the basic I/O organization.

**SEMESTER-5**  
**Course ID 51518**  
**Title: Programming in Java**

**CO1.** On completion of the course the students will be able to describe various features of object oriented programming paradigm.

**CO2.** On completion of the course the students will be able to distinguish between C++ and JAVA.

**CO3.** On completion of the course the students will be able to describe various parameters and statements used in JAVA.

**CO4.** On completion of the course the students will be able to write and execute ordinary programs in JAVA, covering features of object oriented programming paradigm.

**CO5.** On completion of the course the students will be able to perform exception handling, file handling and applet programming using JAVA.

**SEMESTER-6**  
**Course ID 61518**  
**Title: Project**

**CO1.** Upon completion of the course the students will be able to plan database projects.

**CO2.** Upon completion of the course the students will be able to formally express the system requirements.

**CO3.** Upon completion of the course the students will be able to synthesize the relation schema.

**CO4.** Upon completion of the course the students will be able to collect and validate the data.

**CO5.** Upon completion of the course the students will be able to execute the customer requests in terms of SQL queries.