Program : **Diploma in Engineering and Technology**	
Course Code : **1008**	Course Title: **Introduction to IT Systems Lab**
Semester : **1**	Credits: **2**
Course Category: **Engineering Science**	
Periods per week: **3 (L:1 T:0 P:2)**	Periods per semester: **45**

Course Objectives:

- Familiarize the students with basic functions and features of Computer, Operating system and Internet applications.
- Enable the students in preparing documents, spreadsheets and presentations.
- Provide the basic programming skills in Python.

Course Prerequisites:

Topic	Program/Course name
Basic knowledge in Computer systems	IT Lab taught in secondary level School
Basic Knowledge in Mathematics	Mathematics taught in secondary level from 8th to 10th standard

Course Outcomes:

On completion of the course, the student will be able to:

COn	Description	Duration (Hours)	Cognitive Level
CO1	Utilize the basic functions and features of computer, Operating System and Internet applications.	9	Applying
CO2	Make use of Stand-alone and Cloud-based office tools to prepare documents, spreadsheets and presentations.	11	Applying
CO3	Develop algorithms and flowcharts for solving simple problems.	5	Applying
CO4	Develop Python programs to solve simple problems.	18	Applying
	Series Test	2	

CO – PO Mapping

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3						
CO2	3			3			
CO3	3						
CO4	3		3			3	

3-Strongly mapped, 2-Moderately mapped, 1-Weakly mapped

Course Outline

Module Outcomes	Name of the Experiment	Duration (Hours)	Cognitive Level
CO1	**Utilize the basic functions and features of Computer, Operating System and Internet applications.**		
M1.01	Demonstrate basic functions of Computer, various Computer Hardware Components, ports/interfaces and related cables.	2L + 2P	Understanding
M1.02	Identify operating system functions, file & directory management Commands.	1L+ 2 P	Applying
M1.03	Utilize web browsers, search engines, email and other web portals for familiarizing internet	2P	Applying
CO2	**Make use of Stand-alone and Cloud-based office tools to prepare documents, spreadsheets and presentations**		
M2.01	Outline the features of Open Office software	1L	Understanding
M2.02	Make use of Open Office writer to prepare documents	3P	Applying
M2.03	Make use of Open Office Calc to prepare spreadsheets	2P	Applying
M2.04	Make use of Open Office Impress to prepare presentations	2P	Applying
M2.05	Make use of cloud-based office tools to prepare documents, spreadsheets and presentations	3P	Applying
	Series Test– I	1	

CO3	**Develop algorithms and flowcharts for solving simple problems**		
M3.01	Develop algorithms and flowcharts – sequence, selection and iteration	5L	Applying
CO4	**Develop Python programs to solve simple problems**		
M4.01	Develop Python programs with interactive input & output and simple arithmetic expressions	1L+2P	Applying
M4.02	Develop Python programs using simple if, if-else, nested if statements with relational and logical operators	2L+4P	Applying
M4.03	Use iterative programming constructs in Python to solve problems	1L+2P	Applying
M4.04	Open Ended Projects**	6P	
	Series Test-2	1	

Sample Open Ended Projects

(Not for End Semester Examination but compulsory to be included in Continuous Internal Evaluation. Students can do open ended experiments as a group of 2-3. There is no duplication in experiments between groups.)

1. Prepare a project report consisting of 10 pages. The report must include Cover Page, certificate, and table of contents, images, tables etc and email to faculty in charge as attachment.
2. Prepare a presentation of the topics covered in Introduction to IT Systems Syllabus. Use images, tables and embed video and audio in the presentation.
3. Prepare a rank List of all the students in your class.
4. Prepare Electricity Bill, Payroll etc.

Text / Reference

T/R	Book Title / Author
T1	Rajaraman V. - Fundamentals of Computers – PHI
T2	Mrs. Chetna Shah & Mr. Kalpesh Patel - Open Office
T3	Balaguruswamy E - Introduction to Computing and Problem Solving Using Python - McGraw Hill

Online Resources

Sl.No	Website Link
1	https://www.tutorialspoint.com/computer_fundamentals/
2	https://www.w3schools.com/python/
3	http://www.gofree.com/Tutorials/
4	https://www.python.org/