

Kerala Technological university KTU First year B.tech Syllabus
for **CS110Computer Science Workshop**

Course No. : CS110

Course Name: Computer Science Workshop

L-T-P-Credits: 0-0-2-1

Year of Introduction: 2015

Course Objectives,Syllabus:

To familiarize students with basic hardware and software tools

To implement algorithms studied in the course Introduction to Computing & Problem Solving.

To learn the implementation of control structures, Iterations and recursive functions, Lists, Tuples and Dictionaries.

To implement operations of files.

To implement a small micro project using Python

List Of Exercises / Experiments (Minimum Of 8 Mandatory)

Decision making, branching and looping

Variables , Expressions &Conditional statements

Iteration statements (While , For etc)

Function & Function calls

Function calls, Math functions

Parameters and arguments

Adding new functions, Recursion.

Strings

String traversal

String searching, Comparison

Other important String methods.

Lists, Tuples and Dictionaries

Traversing List, List Operations

Creation of Dictionary and Operations

Lists and Tuples

Files and Operations

Files - defining, opening/closing, operations.

Pickling.

Micro Project: Students are expected to do a micro project by using Python, preferably related to the Web

Expected outcome

Students are able to identify common hardware components and their purpose

Students gain sufficient awareness about latest software tools.

Students are able to develop programs in Python for common problems of reasonable complexity.