

**COMPUTER AIDED DESIGN CENTRE**  
**JADAVPUR UNIVERSITY**  
**Kolkata - 700 032**

**Course:** *Computation with Python*

**Duration:** *4-week (3 days per week)*

**Class duration:** *2 hrs/class, 10 number of classes*

**Course coverage**

	<b>MODULE</b>	<b>TOPICS</b>
<b>1</b>	<i>Starting with Python</i>	Installation, Environment set up, The Interactive Shell, Executing a Script, IDEs Language Basics - Data Types and Variables, Operators, and Binding.
<b>2</b>	<i>Working with Python</i>	Console Input/Output, Control statements- Conditionals, loops
<b>3</b>	<i>Working with sequence-type - I</i>	Working with List, tuple.
<b>4</b>	<i>String handling</i>	String operators, methods
<b>5</b>	<i>Working with sequence-type -II</i>	Set, Dictionaries, Deep copy & shallow copy
<b>6</b>	<i>Function in Python</i>	Function, arguments, function with different types of parameters
<b>7</b>	<i>Module &amp; Package</i>	Module, module attributes, built-in modules, Constructing Modules and Packages
<b>8</b>	<i>Higher order functions</i>	Lambda, Filter, Reduce and Map, List Comprehension
<b>9</b>	<i>Advanced features of python</i>	Iterators, Generators, Exceptional handling
<b>10</b>	<i>OOP with Python - I</i>	Class, objects, inheritance,
<b>11</b>	<i>OOP with Python - II</i>	Polymorphism. Abstract class, magic methods