

CSE11138	Application Development with Python	L	T	P	C
Version 1.0	Contact Hours 45	3	0	0	3
Pre-requisite/Exposure	Python				
Co-requisite					

Course Objectives:

- To allow students to develop desktop applications using python
- To allow students to develop web applications using python
- To allow students to develop data science applications using python

Course Outcomes:

CO1: Recall concepts of python

CO2: Compare popular packages in python

CO3: Understand the concepts of GUI Design with Tkinter

CO4: Apply Django Framework for web development

CO5: Implement machine learning systems with sklearn

Course Description:

Python app development can be used for multiple purposes including web development, logical and numeric computing, software development, creating desktop GUIs, and building eCommerce mobile apps or ERP systems. With such a wide-ranging application domain, it turns out to be the most compatible and featured-rich technology. This course will explore various principles for development of desktop, web and data science applications.

Course Content:

Units	Lecture Hours
Unit-I: Python Refresher :Datatypes, expressions, statements, conditions, loops, classes, objects, functions, data structures,I/O, packages.	9
Unit-II: Popular Python Packages : Numpy, Scipy, Pandas, Matplotlib	9
Unit-III: GUI Design with Tkinter : mainloop, windows, widgets, pack, grid, place, buttons, canvas, check, entry, frame, label, listbox, menu, messages, scale, radiobutton, scrollbars, Toplevel, Spinbox	9
Unit-IV: Django Framework for web development: Django URL Patterns and Views, Django Forms, Django & REST APIs, Unit Testing with Django.	9

Units	Lecture Hours
Unit-V: Machine Learning Applications with scikit-learn : Dimensionality Reduction, Classification, Clustering, Visualization	9

Examination Scheme:

Components	Mid Term	Class Assessment	End Term
Weightage (%)	20	30	50

Relationship between Course Outcomes (COs) and Program Outcomes (POs):

1 = Weakly Mapped, 2 = Moderately Mapped, 3= Strongly Mapped

Course Code	Course Name	COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O1	PS O2	PS O3
CSE11	Applicati	CO1113	1	3	3	3	2	2	2	-	3	-	-	3	2	3	1
138	on	8.1															
	Develop	CO1113	3	3	3	3	3	2	3	-	1	-	-	2	1	3	2
	ment	8.2															
	with	CO1113	3	2	3	3	2	2	3	-	2	-	-	2	3	1	3
	Python	8.3															
		CO1113	1	3	2	2	3	2	1	-	1	-	-	3	2	1	2
		8.4															
		CO1113	1	2	2	2	2	3	2	-	3	-	-	2	3	1	1
		8.5															
		CO1113	1.	2.	2.	2.	2.	2.	2.	-	2.	-	-	2.4	2.2	1.8	1.8
		8	8	6	6	6	4	2	2		0						