FR. Conceicao Rodrigues College Of Engineering

Father Agnel Ashram, Bandstand, Bandra-west, Mumbai-50

Department of Computer Engineering

S.E. (Computer) (semester IV) (2017-2020)
Course Outcomes & Assessment Plan

Subject: Open Source Technology Lab(OSTL-CSL405) **Credits-2**

Syllabus:

Lab Code	Lab Name	Credit
CSL405	**Open Source Technology Lab**	**2**

Course Outcomes:

1. To understand basic concepts in python and perl.
2. To explore contents of files, directories and text processing with python
3. To develop program for data structure using built in functions in python.
4. To explore django web framework for developing python based web application.
5. To understand file handling and database handling using perl.
6. To explore basics of two way communication between client and server using python and perl

Prerequisites: Knowledge of some programming language like C, Java

Content:

Sr. No	Module Name	Detailed Content
1	Python basics	Data types in python ,Operators in python, Input and Output, Control statement, Arrays in python, String and Character in python, Functions, List and Tuples, Dictionaries Exception, Introduction to OOP, Classes , Objects , Interfaces, Inheritance
2	Advanced Python	Files in Python, Directories, Building Modules, Packages, Text Processing, Regular expression in python.
3	Data Structure in Python	Link List, Stack, Queues, Dequeues
4	Python Integration Primer	Graphical User interface ,Networking in Python , Python database connectivity, Introduction to Django
5	Basics of Perl	Perl Overview, Variables, Control Statements, Subroutines, Objects, Packages and Modules
6	Perl advanced	Working with Files, Data manipulation, Database Systems, Networking

Text Books

1. Core Python Programming, Dr. R. Nageswara Rao, Dreamtech Press
2. Beginning Python: Using Python 2.6 and Python 3.1. James Payne, Wrox publication
3. Perl: The Complete Reference. Second Edition. Martin C. Brown, McGraw-Hill
4. Introduction to computing and problem solving using python , E Balagurusamy,McGraw Hill Education

Reference Book

1. Perl Black Book, 2nd Edition: Steven Holzner,Dreamtech Press
2. Learn Python the Hard Way: (3rd Edition) (Zed Shaw's Hard Way Series)
3. Python Projects , Laura Cassell,Alan Gauld,wrox publication

Digital Material:

1. "The Python Tutorial", http://docs.python.org/release/3.0.1/tutorial/
2. Beginning Perl, https://www.perl.org/books/beginning-perl/
3. http://spoken-tutorial.org
4. www.staredusolutions.org

Term Work:

Students will submit term work in the form of journal that will include:

1. At least 12-14 programs.
2. One mini-project in a group 2-3 student.
3. Two assignments covering whole syllabus.

Term Work (25) = 15 marks (Experiments & Assignments)
+ 10 marks (Mini Project)
+ 05 marks (Attendance)

Practical and oral examination will be based on suggested practical list and entire syllabus.

Teaching Scheme

Course Code	Course	Teaching Scheme			Credits			Total
		Theory	Practical	Tut	Theory	TW/Practical	Tut	
CSL 405	OSTL Lab	-	2+2	-	-	2	-	2

Examination Scheme

Course Code	Course	Theory		TW	Oral	Oral and Practical	Total
CSL 405	OSTL Lab	-	-	25	-	25	50

Course Outcomes:

Upon completion of this course students will be able to:

CSL405.1: Demonstrate basic concepts such as control statements, basic data structures, functions and oops in python. (B2:Application)

CSL405.2: Explore the exceptions, file handling and data structures with python. (B2:Comprehension)

CSL405.3: Demonstrate basics of two way communication between client and server using python. (B2:Application)

CSL405.4: Demonstrate the programs for GUI with Tkinter and database connection in python. (B2:Application)

CSL405.5: Develop real world application using frameworks/libraries in python. (B3: Applying)

CSL405.6: Demonstrate basic programming in perl. (B2:Application)

Mapping of CO and PO/PSO

Relationship of course outcomes with program outcomes: Indicate 1 (low importance), 2 (Moderate Importance) or 3 (High Importance) in respective mapping cell.

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
	(Engg know)	(Ana)	(Design)	(investigation)	(tools)	(engsoci)	(Env)	(Eth)	(ind/Team)	(comm.)	(PM)	(life long)		
CSL405.1	3	3	2										3	3
CSL405.2	3	3	3										3	3
CSL405.3	3	3	1										3	3
CSL405.4	3	3	3		2								3	3
CSL405.5	3	3	3		3				3	2	2		3	3
CSL405.6	3												3	
TOTAL	18	15	7		5				3	2	2		18	12
Course TO PO	**3**	**3**	**2.4**		**2.5**				**3**	**2**	**2**		**3**	**3**

Course Outcomes Target:

Upon completion of this course students will be able to:

CSL405.1: Demonstrate basic concepts such as control statements, basic data structures, functions and oops in python. **Target level: 2.5**

CSL405.2: Explore the exceptions and file handling with python. **Target level: 2.5**

CSL405.3: Demonstrate basics of two way communication between client and server using python. **Target level: 2.5**

CSL405.4: Demonstrate the programs for GUI with Tkinter in python. **Target level: 2.5**

CSL405.5: Develop web based application using Django web framework with database access in python. **Target level: 2.5**

CSL405.6: Demonstrate basic programming in perl. **Target level: 2.5**

CO Assessment Tools:

	Direct Methods (80%)						**Indirect Methods (20%)**
CSL405.1	Quiz 2-3-4 (20%)	Lab 1-2-3-4 (40%)	UE –P (20%)	UE-O (20%)			(100%)
CSL405.2	Quiz 5-6-7-9 (20%)	Lab 5-6-7-9 (40%)	UE –P (20%)	UE-O (20%)			(100%)
CSL405.3	Quiz 11 (30%)	Lab 11 (30%)	UE –P (20%)	UE-O (20%)			(100%)
CSL405.4	Quiz 8-10 (30%)	Lab 8-10 (30%)	UE –P (20%)	UE-O (20%)			(100%)
CSL405.5	Quiz 12 (20%)	Lab 12 (10%)	UE –P (10%)	UE-O (10%)	MP (50%)		(100%)
CSL405.6	Quiz 13 (40%)	Lab 13 (20%)	UE –P (20%)	UE-O (20%)			(100%)

UE – University Exam P- Practical Exam O-Oral Exam

MP- Mini Project

Lab Experiment Rubrics: (OST Lab)

CODE	Poor	Average	Good (proficient)	Excellent
On Time Completion and Readability **(02 Marks)**	Completed less than 50% of the requirements. Not delivered on time or not in correct format No name /date /assignment title included. Poor use of white space (indentation, blank lines) Disorganized and Messy **(0 Marks)**	Completed between 60-80% of the requirements. Delivered on time, and in correct format Includes name, date, and assignment title. Average use of White space. Organized work. **(01 Marks)**	Completed between 80-90% of the requirements. Delivered on time, and in correct format. Includes name, date, and assignment title. Good use of white space. Organized work. **(1.5 Marks)**	Completed between 90-100% of the requirements. Delivered on time, and in correct format Includes name, date, and assignment title. Excellent use of white space. Creatively organized work. **(02 Marks)**
Coding Standards **(02 marks)**	No documentation included. Poor use of variables (many global variables, ambiguous naming). **(0 Marks)**	Complete documentation without descriptions of all variables. Purpose is noted for each function and control structure. Good use of Variables **(01 Marks)**	Clearly documented Including descriptions of all variables. Specific purpose is noted for each function and control structure. Good use of variables **(1.5 Marks)**	Clearly and effectively documented including descriptions of all variables. Specific purpose is noted for each function, control structure, input requirements, and output results. Excellent use of variables **(02 Marks)**
Efforts **(02 Marks)**	No/Little or inconsistent effort, diligence, or Efficiency **(0 Marks)**	Student showed reasonable effort, diligence, and efficiency **(01 Marks)**		Student worked very diligently and efficiently in the lab. **(02 Marks)**
Knowledge **(04 marks)**	Showed little or no knowledge of the topic. **(0 Marks)**	Showed basic knowledge of the topic. **(01 or 02 Marks)**	Showed a working knowledge of the topic. **(03 Marks)**	Showed a thorough knowledge of the topic. **(04 Marks)**

Mini Project Rubrics: (OST Lab)

Indicator	Very Poor	Poor	Average	Good	Excellent
Timeline: Maintains project deadline (02 Marks)	Project not done (0)	More than two session late (0.5)	Two sessions late (1)	One session late (1.5)	Early or on time (2)
Features: (04 Marks)	N/A	Partial (01)	One Feature (02)	Two Features but simple(03)	Two advanced features and Analysis(4)
Design : (02 Marks)	N/A	N/A	N/A	Working project (01)	Working project with good design (02)
Report and Presentation (02 Marks)	Not submitted report (0)	Poorly written and poorly kept report(0.5)	Report with major mistakes(1)	Report with less than 3-4 mistakes (1.5)	Well written accurate report(2)

Content Beyond Syllabus: (2018-19)

Sr.No.	Content Beyond Syllabus	Action Plan	Percent of Students	CO/PO
1	ML algorithms with NumPy, Pandas	ML workshop	30%	CO3,CO4
2	Tools	Self learning online resource is provided. Exposure to Spyder, Anaconda	100%	CO5, PO12

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SEM IV- OST: List of Experiments (2018-2019)

Practical Plan

ExpNo.	Date Planned				Concept
	Batch: A	**Batch B:**	**Batch C:**	**Batch D:**	
01	17/01/2019	15/01/2019	16/01/2019	14/01/2019	Basics of python [CO1]
02	24/01/2019	17/01/2019	21/01/2019	15/01/2019	Control statements. [CO1]
03	25/01/2019	22/01/2019	23/01/2019	21/01/2019	Creating functions. [CO1]
04	08/02/2019	24/01/2019	30/01/2019	28/01/2019	Object Orientation and Inheritance [CO1]
05	21/02/2019	29/01/2019	11/02/2019	01/02/2019	Exception Handling [CO2]
06	22/02/2019	07/02/2019	13/02/2019	18/02/2019	File analysis [CO2]
07	28/02/2019	21/02/2019	20/02/2019	26/02/2019	Directory handling [CO2]
08	01/03/2019	26/02/2019	25/02/2019	05/03/2019	GUI [CO4]
09	07/03/2019	28/02/2019	27/02/2019	11/03/2019	Data Structures Linked List, Stack, Queue [CO2]
10	14/03/2019	05/03/2019	11/03/2019	18/03/2019	Database Programming [CO5]
11	22/03/2019	07/03/2019	18/03/2019	19/03/2019	Socket Programming [CO3]
12	28/03/2019	12/03/2019	25/03/2019	25/03/2019	Web Application using Django [CO5]
13	05/04/2019	14/03/2019	01/04/2019	01/04/2019	Functions/Packages/Modules in Perl [CO6]
14	11/04/2019	13/03/2019	03/04/2019	02/04/2019	Objects in Perl [CO6]

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Department Of Computer Engineering
OST-LAB (CSL304)
(2017-2019)

Mini-Project Plan

Date	Activity
21/01/2019	Project Group, Topic Submission
04/02/2019	Analysis and Design
05/03/2019	Project Progress Monitoring (Phase I)
25/03/2019	Project Demonstration
01/04/2019	Correction/Improvements
11/04/2019	Project Report and Presentation (Phase II)