spoken-tutorial
partner with us...help bridge the digital divide

Mapping of Spoken Tutorials on various FOSS for different courses

-Vineeta Parmar

(Project Associate),

(B.E-Electronics-telecommunication)

July, 2013

Table of Contents

Free and Open Source Software(FOSS)

FOSS to be Incorporated in Curricula when Taught as is

Basic IT Skills – Theory and Practical Sessions outline

The scheme given below has incorporated Linux and Firefox into the LibreOffice learning so that in the alloted time, students learn and become equipped with a complete Basic IT Skills suite. This training will empower and enable students to handle all Office Suite needs.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
   2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

1) In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.
2) For testing purposes we offer the online assessment test only on Linux where it is required (Unit 4). For LibreOffice and Firefox, a simple test can be deviced by the course in charge

Theory Part (Basic IT Skills)	Duration	Practical sessions	Duration
Unit 1		Unit 1	
Libre Office Writer	7hrs (Total)	List of exercises	8 hrs
Sub unit 1	4 hrs	Libre Office Writer	
Introduction & Installation (Linux & Windows)		Sub unit 1	
Formatting		Introduction & Installation (Linux & Windows)	
Typing		Formatting	
		Typing	
Sub Unit 2	3 hrs		
Inserting objects & Inserting pictures		Sub Unit 2	
Viewing, Saving		Inserting objects & Inserting pictures	
Printing		Viewing, saving	
		Printing	
Unit 2	7hrs (Total)		

LO components		Unit 2	
Sub Unit 1		List of exercises	8 hrs
Calc	4 hrs	LO components	
Introduction		Sub Unit 1	
How to works with cells, sheets		Calc	
Formatting		Introduction	
Basic data manipulation		How to works with cells, sheets	
Working with data		Formatting	
		Basic data manipulation	
Sub unit 2	3 hrs	Working with data	
Impress			
Introduction		Sub unit 2	
Creating a presentation		Impress	
Viewing a presentation (one lecture on presentation skills to enhance learning)		Introduction	
Inserting pictures in document		Creating a presentation	
Printing		Viewing a presentation (one lecture on presentation skills to enhance learning)	
		Inserting pictures in document	
Unit 3	7hrs (Total)	Printing	
Firefox			
Sub Unit 1	4 hrs	Unit 3	
Introduction		List of exercises	8 hrs
Interference & tool bars		Firefox	
Tab browsing		Sub Unit 1	
Setting preference		Introduction	
		Interference & tool bars	
Sub unit 2	3 hrs	Tab browsing	
K TUX Typing		Setting preference	
Introduction			
Customizing K touch		Sub unit 2	
Configure settings		K TUX Typing	
Tux typing		Introduction	
Introduction type		Customizing K touch	
Advanced typing		Configure settings	
		Tux typing	
Unit 4	7hrs (Total)	Introduction type	
Linux OS		Advanced typing	
Sub Unit 1	4 hrs		
Linux basics		Unit 4	
Installation -10		List of exercises	
Ubuntu desktop		Linux OS	8 hrs
Synaptic packet manager		Sub Unit 1	
Basic commands		Linux basics	
GPU		Installation -10	

File system		Ububtu desktop	
		Synaptic packet manager	
Sub Unit 2	3 hrs	Basic commands	
Linux advanced topics		GPU	
Working with regular files		File system	
File attributes			
Redirection & pipes		**Sub Unit 2**	
Linux processes		**Linux advanced**	
Linux environment		Working with regular files	
Basic system administration		File attributes	
Simple filters		Redirection & pipes	
		Linux processes	
		Linux environment	
		Basic system administration	
		Simple filters	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link for Linux:

http://www.tldp.org/LDP/intro-linux/html/

Text Books link for Libre Office:

http://www.taming-libreoffice.com/category/books/

LaTeX – Theory and Practical Sessions outline

The scheme given below has incorporated LaTeX learning so that in the allotted time, students learn and become equipped with the basics of LaTeX. This training will empower and enable students to handle all the basics of LaTeX needs list which is in the curriculum and much more.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
   2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

Theory Part (LaTeX)	Duration	Practical sessions	Duration
Unit 1		Unit 1	
LaTeX	7hrs (Total)	List of exercises	8 hrs
Sub unit 1	4 hrs	LaTeX	
Introduction to LaTeX		Sub unit 1	
Installation of Miktex in Windows OS		Introduction to LaTeX	
Installation of Texlive in Linux OS		Installation of Miktex in Windows OS	
		Installation of Texlive in Linux OS	
Sub Unit 2	3 hrs		
What is Compilation in LaTeX		Sub Unit 2	
How to Create a .tex file		Assignment on Compilation in LaTeX	
How to compile .tex file by setting the path		Practice sessions on Creating a .tex file	
		Assignments on compiling .tex file	
Unit 2	7hrs (Total)		
Letter Writing in LaTeX		Unit 2	
Sub Unit 1		List of exercises	8 hrs
Procedure of Letter Writing in LaTeX	4 hrs	Letter Writing in LaTeX	
How to compile a letter in LaTeX		Sub Unit 1	
Writing different types of letter in LaTeX		Procedure of Letter Writing in LaTeX	
		Practice sessions on How to compile a letter in LaTeX	
Sub unit 2	3 hrs	Practice sessions on Writing different types of letter in LaTeX	
How to write a Report in LaTeX		Assignment on Letter Writing in LaTeX	
How to compile reports in LaTeX		Sub unit 2	
Writing different types of report in LaTeX		Procedure of Report Writing in LaTeX	
		Practice sessions on How to compile a report in	

		LaTeX	
Unit 3	**7hrs (Total)**	Practice sessions on Writing different types of report in LaTeX	
Maths using LaTeX		Assignment on report Writing in LaTeX	
Sub Unit 1	4 hrs	**Unit 3**	
Mathematical Typesetting in LaTeX		**List of exercises**	**8 hrs**
How to write mathematical symbol in LaTeX		**Maths using LaTeX**	
How to create Mathematical expression and Operations		**Sub Unit 1**	
How to compile the expressions and see the output		Mathematical Typesetting in LaTeX	
		Practice sessions on How to write mathematical symbol in LaTeX	
Sub unit 2	3 hrs	Practice sessions on How to create Mathematical expression and Operations	
How to write Equations in LaTeX		Practice sessions on How to compile the expressions and see the output	
How to Create and edit the Equations in LaTeX			
How to change the numbering of the Equations		**Sub unit 2**	
		Practice sessions on How to write Equations in LaTeX	
Unit 4	**7hrs (Total)**	Practice sessions on How to Create and edit the Equations in LaTeX	
Tables and Figures in LaTeX		Practice sessions on How to change the numbering of the Equations	
Sub Unit 1	4 hrs		
How to create table in LaTeX using Tabular environment		**Unit 4**	
How to incorporate tables in LaTeX document using Tabular environment		**List of exercises**	
How to create Figure in LaTeX document		**Tables and Figures in LaTeX**	**8 hrs**
How to incorporate Figures in a LaTeX document		**Sub Unit 1**	
How to change the numbering of Table and Figure in a LaTeX document		How to create table in LaTeX using Tabular environment	
		How to incorporate tables in LaTeX document using Tabular environment	
		How to create Figure in LaTeX document	
Sub Unit 2	3 hrs	How to incorporate Figures in a LaTeX document	
References and Beamer in LaTeX		How to change the numbering of Table and Figure in a LaTeX document	
How to create references in LaTeX document		Practice sessions of all the above topics should be done in Lab	

How to create a database of references in LaTeX			
Presentation using LaTeX and Beamer			
How to define title, author etc. in a page using LaTeX		**References and Beamer in LaTeX**	
How to embellish a document using Beamer		Practice sessions on How to create references in LaTeX document	
		Practice sessions on How to create a database of refrences in LaTeX	
		Practice sessions on Presentation using LaTeX and Beamer	
		Practice sessions on How to define title, author etc. In a page using LaTeX	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

LaTeX: A Document Preparation System by Leslie Lamport

The LaTeX Companion by Mittelbach and Goossens

Scilab – Theory and Practical Sessions outline

The scheme given below has incorporated Scilab learning so that in the alloted time, students learn and become equipped with a basics of Scilab . This training will empower and enable students to handle all basic Scilab needs list which is in the curriculum and much more.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
    2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

Theory Part (Scilab)	Duration	Practical sessions	Duration
Unit 1		Unit 1	
Scilab	7hrs (Total)	List of exercises	8 hrs
Sub unit 1	4 hrs	Scilab	
What is Scilab		Sub unit 1	
Why we should use Scilab		What is Scilab	
Installing Scilab		Installing Scilab	
		How to use Scilab (look and feel same as Matlab)	
Sub Unit 2	3 hrs		
Getting started with Scilab		Sub Unit 2	
Vector Operations in Scilab		Getting started with Scilab	
Questions on Vector Operations in Scilab		Vector Operations in Scilab	
		Questions on Vector Operations in Scilab	
Unit 2	7hrs (Total)		
Matrix, Scripts and Functions		Unit 2	
Sub Unit 1		List of exercises	8 hrs
Matrix in Scilab	4 hrs	Matrix, Scripts and Functions	
Introduction		Sub Unit 1	
Matrix Operations in Scilab		Matrix in Scilab	
Scripts and Functions		Introduction	
		Assignments on Matrix Operations in Scilab	
Sub unit 2	3 hrs	Assignments on Scripts and Functions	
Iterations and Branching			
Introduction		Sub unit 2	
Conditional Branching		Iterations and Branching	
Iterations in Scilab		Introduction	

Examples using above topics		Assignments in Conditional Branching	
		Assignments in Iterations in Scilab	
Unit 3	**7hrs (Total)**	Examples using above topics	
Plotting 2D Graphs and Ordinary Differential Equations			
Sub Unit 1	4 hrs	**Unit 3**	
Introduction		**List of exercises**	**8 hrs**
Plotting 2D Graphs		**Plotting 2D Graphs and Ordinary Differential Equations**	
Ordinary Differential Equations		**Sub Unit 1**	
		Introduction	
Sub unit 2	3 hrs	Assignments in Plotting 2D Graphs	
Polynomials and Single board heater		Assignments in Ordinary Differential Equations	
Introduction			
Polynomials		**Sub unit 2**	
Single board heater(SBHS) overview		**Polynomials and Single board heater**	
		Introduction	
Unit 4	**7hrs (Total)**	Polynomials	
Interface and Xcos		Single board heater(SBHS) overview	
Sub Unit 1	4 hrs		
		Unit 4	
SBHS Interface		**List of exercises**	
Xcos Introduction		**Interface and Xcos**	**8 hrs**
Assignments for the above topics		**Sub Unit 1**	
Sub Unit 2	3 hrs	SBHS Interface	
Search Scilab Tool boxes on Web		Xcos Introduction	
Using Scilab Commands to solve Integration		Assignments for the above topics	
Get Different Toolboxes for different application			
		Sub Unit 2	
		Practice Using Scilab Commands to solve Integration	
		Get Different Toolboxes for different application	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link for Scilab: **http://www.scilab.org/resources/documentation/books**

Python – Theory and Practical Sessions outline

The scheme given below has incorporated Python learning so that in the alloted time, students learn and become equipped with a basics of Python . This training will empower and enable students to handle all basic Python needs list which is in the curriculum and much more.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

Theory Part (Python)	Duration	Practical sessions	Duration
Unit 1		Unit 1	
Python	7hrs (Total)	List of exercises	8 hrs
Sub unit 1	4 hrs	Python	
Introduction and Installation of Python		Sub unit 1	
Getting started with iPython		Introduction and Installation to Python	
Using plot interactively		Assignments on Getting started with iPython	
Embellishing a plot		Assignments on Using plot interactively	
Saving a plot		Practice sessions on Embellishing a plot	
Multiple plot		Practice sessions on Saving a plot	
		Practice sessions on Multiple plot	
Sub Unit 2	3 hrs		
Additional features of iPython		Sub Unit 2	
Loading data from files		Assignments on Additional features of iPython	
Plotting data		Practice sessions on Loading data from files	
Other types of Plots		Practice sessions on Plotting data	
		Practice sessions on Other types of Plots	
Unit 2	7hrs (Total)		
Getting started		Unit 2	
Sub Unit 1		List of exercises	8 hrs
Getting started with lists	4 hrs	Getting started	
Getting started with for		Sub Unit 1	
Getting started with stings		Practice sessions on Getting started with lists	
Getting started with files		Practice sessions on Getting started with for	
		Practice sessions on Getting started with stings	
Sub unit 2	3 hrs	Practice sessions on Getting started with files	
Parsing data			

Statistics		**Sub unit 2**	
Getting started with Arrays		Practice sessions on Parsing data	
Accessing parts of Arrays		Practice sessions on Statistics	
Matrices		Practice sessions on Getting started with Arrays	
		Practice sessions on Accessing parts of Arrays	
Unit 3	**7hrs (Total)**	Practice sessions on Matrices	
Operators and Loops			
Sub Unit 1	4 hrs	**Unit 3**	
Basic Datatypes and Operators		**List of exercises**	**8 hrs**
Input/Output		**Operators and Loops**	
Conditional		**Sub Unit 1**	
Loops		Assignment on Basic Datatypes and Operators	
		Assignments on Input/Output	
Sub unit 2	3 hrs	Practice sessions on Conditional	
Manipulating lists		Practice sessions on Loops	
Manipulating strings			
Tuples		**Sub unit 2**	
Dictionaries		Assignment on Manipulating lists	
		Assignment on Manipulating strings	
Unit 4	**7hrs (Total)**	Assignment on Tuples	
Functions, Modules and Scripts		Assignment on Dictionaries	
Sub Unit 1	4 hrs		
Sets		**Unit 4**	
Getting started with functions		**List of exercises**	
Advanced features of functions		**Functions, Modules and Scripts**	**8 hrs**
Using python modules		**Sub Unit 1**	
		Sets	
Sub Unit 2	3 hrs	Getting started with functions	
Writing Python Scripts		Advanced features of functions	
Programs on Python		Using python modules	
Testing & Debugging			
		Sub Unit 2	
		Assignment on Writing Python Scripts	
		Practice sessions on Programs on Python	
		Assignment on Testing & Debugging	

Text Books : It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Book link For Python click on: **http://learnpythonthehardway.org/book/**

PHP&MySQL – Theory and Practical Sessions outline

The scheme given below has incorporated PHP&MySQL learning so that in the alloted time, students learn and become equipped with a basics of PHP&MySQL . This training will empower and enable students to handle all basic PHP&MySQL needs list which is in the curriculum and much more.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
   2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

Theory Part (PHP&MySQL)	Duration	Practical sessions	Duration
Unit 1		Unit 1	
PHP	7hrs (Total)	List of exercises	8 hrs
Sub unit 1	4 hrs	PHP	
Introduction and Installation of PHP in Linux and Windows OS		Sub unit 1	
Echo Functions		Introduction and Installation of PHP in Linux and Windows OS	
Variables		Practice sessions on Echo Functions	
If Statement		Assignment on Variables	
Switch statement		Practice sessions on If Statement	
		Practice sessions on Switch statement	
Sub Unit 2	3 hrs		
Arithmetic Operators		Sub Unit 2	
Comparision Operators		Practice sessions on Arithmetic Operators	
Logical Operator		Practice sessions on Comparision Operators	
Arrays		Practice sessions on Logical Operator	
Multi-dimensional Array		Practice sessions on Arrays	
		Practice sessions on Multi-dimensional Array	
Unit 2	7hrs (Total)		
Statements and Functions,Variables		Unit 2	
Sub Unit 1		List of exercises	8 hrs
While statement	4 hrs	Statements and Functions,Variables	
Do-while statement		Sub Unit 1	
For statement		Practice sessions on While statement	
Foreach statement		Practice sessions on Do-while statement	
Functions(basic)		Practice sessions on For statement	
Functions(Advanced)		Practice sessions on Functions (basic)	

GET variable		Practice sessions on Functions (Advanced)	
Sub unit 2	3 hrs	Practice sessions on GET variable	
POST Variable			
Embedding PHP		**Sub unit 2**	
Common Way to display HTML		Practice sessions on POST Variable	
Comman Errors 1		Practice sessions on Embedding PHP	
Comman Errors 2		Practice sessions on Common Way to display	
Comman Errors 3		Practice sessions on Common Errors 1	
		Practice sessions on Common Errors 2	
Unit 3	**7hrs (Total)**	Practice sessions on Common Errors 3	
MySQL			
Sub Unit 1	4 hrs	**Unit 3**	
MySQL 1		**List of exercises**	**8 hrs**
MySQL 2		**MySQL**	
MySQL 3		**Sub Unit 1**	
MySQL 4		Practice sessions on MySQL 1	
MySQL 5		Practice sessions on MySQL 2	
MySQL 6		Practice sessions on MySQL 3	
		Practice sessions on MySQL 4	
Sub unit 2	3 hrs	Practice sessions on MySQL 5	
MySQL 7		Practice sessions on MySQL 6	
MySQL 8			
Simple visitor counter		**Sub unit 2**	
String function 1		Practice sessions on MySQL 7	
String function 2		Practice sessions on MySQL 8	
File upload 1		Practice sessions on Simple visitor counter	
File upload 2		Practice sessions on String function 1	
		Practice sessions on String function 2	
Unit 4	**7hrs (Total)**	Practice sessions on File upload 1	
Cookies,Images display		Practice sessions on File upload 2	
Sub Unit 1	4 hrs		
Cookies 1		**Unit 4**	
Cookies 2		**List of exercises**	
Sessions		**Cookies,Images display**	**8 hrs**
MD5 Encryption		**Sub Unit 1**	
Sending Email 1		Practice sessions on Cookies 1	
Sending Email 2		Practice sessions on Cookies 2	
Sending Email 3		Practice sessions on Sessions	
Displaying images from directory		Practice sessions on MD5 Encryption	
		Practice sessions on Sending Email 1	
Sub Unit 2	3 hrs	Practice sessions on Sending Email 2	
User login 1		Practice sessions on Sending Email 3	

User login 2		Practice sessions on Displaying images from directory	
User login 3			
User password change 1		**Sub Unit 2**	
User password change 2		Practice sessions on User login 1	
User password change 3		Practice sessions on User login 2	
User Registration 1		Practice sessions on User login 3	
User Registration 2		Practice sessions on User password change 1	
User Registration 3		Practice sessions on User password change 2	
User Registration 4		Practice sessions on User password change 3	
User Registration 5		Practice sessions on User Registration 1	
User Registration 6		Practice sessions on User Registration 2	
		Practice sessions on User Registration 3	
		Practice sessions on User Registration 4	
		Practice sessions on User Registration 5	
		Practice sessions on User Registration 6	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link for PHP:

http://www.flipkart.com/beginning-php-mysql-novice-professional-4th/p/itmdyggzm6ygzccg?pid=9788184897456&ref=73b694e2-81dc-4d9f-b929

C and C++ – Theory and Practical Sessions outline

The scheme given below has incorporated C and C++ learning so that in the alloted time, students learn and become equipped with a basic programming of C and C++ . This training will empower and enable students to handle all basics of C and C++ needs list which is in the curriculum and much more.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
   2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

1. In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

2. For C and C++ programming you first need to know about Linux as the compiler runs only on the Linux Operating systems.

3. For testing purposes we offer the online assessment test on C and C++ separately where it is required (Unit4).

Theory Part (C and C++)	Duration	Practical sessions	Duration
Unit 1		Unit 1	
Basics Of C and C++	7hrs (Total)	List of exercises	8 hrs
Sub unit 1	4 hrs	Basics of C and C++	
Introduction of C and C++ languages		Sub unit 1	
Installation of gcc and g++ compiler in Linux OS		Introduction of C and C++ languages	
1st C program		Installation of gcc and g++ compiler in Linux OS	
1st C++ program		Practice sessions for 1st C program(including basic programming, compiling the program, solving errors which occur while running the program)	
		Practice sessions for 1st C program(including basic programming, compiling the program, solving errors which occur while running the program)	
Function, Variables in C and C++			
Sub Unit 2	3 hrs	Function, Variables and statement in C and C++	
Tokens in C and C++		Sub Unit 2	
Functions in C and C++		Practice sessions of the programs using Tokens in C and C++	
Write a Program using functions in C and C++		Practice sessions of the programs using Functions in C and C++	
Scope of Variables, how to define variables in the program		Practice sessions of the programs using Scope of Variables, how to define variables in the program	
Write a Program using variables in C and C++			
Unit 2	7hrs (Total)		
Types of Statements in C and C++		Unit 2	
Sub Unit 1		List of exercises	8 hrs
Introduction of Statements in C and C++. Why to use it in a program	4 hrs	Types of Statements in C and C++	
If Statement, Else if Statement		Sub Unit 1	
Nested if statement		Programs having If & Else if Statement	
Switch Statements		Programs having Nested If statement	
Write programs using the above statements		Programs having Switch Statement	
Sub unit 2	3 hrs		
Operators and Loops in C and C++			
What is the Operator? Why to use it in the program			
Types of Operators and how to use it in a program		Sub unit 2	
Increment and decrement Operators		Operators and Loops in C and C++	
Arithmetic Operators		Types of Operators and how to use it in a program	
Relational Operators		Practice programs using Increment and decrement Operators	

Logical Operators		Practice programs using Arithmetic Operators	
Loops		Practice programs using Relational Operators	
		Practice programs using Logical Operators	
Unit 3	**7hrs (Total)**	Practice programs using Loops	
Arrays and Strings in C and C++			
Sub Unit 1	4 hrs	**Unit 3**	
Introduction of Arrays		**List of exercises**	**8 hrs**
How to write a Program using Arrays. Significance of Arrays			
		Arrays and Strings in C and C++	
Working with 2D Arrays		**Sub Unit 1**	
		How to write a Program using Arrays. Significance of Arrays	
What is a String in C and C++			
String Library functions		Working with 2D Arrays	
		What is a String in C and C++	
Sub unit 2	3 hrs	String Library functions	
		Writing a program using Strings and library functions	
Structures and Pointers			
Introduction to Structures			
Working with Structures		**Sub unit 2**	
Introduction to Pointers		**Structures and Pointers**	
Understanding Pointers		Introduction to Structures	
Function Call		Working with Structures	
File handling In C		Introduction to Pointers	
		Understanding Pointers	
Unit 4	**7hrs (Total)**	Function Call	
Advanced C++		File handling In C	
Sub Unit 1	4 hrs		
		Unit 4	
Objects and Classes,Constructor and Destructor,Inheritance		**List of exercises**	
Objects and Classes,		**Advanced C++**	**8 hrs**
Constructor and Destructor		**Sub Unit 1**	
Static membrane		**Objects and Classes,Constructor and Destructor,Inheritance**	
Inheritance		Objects and Classes,	
More on Inheritance		Constructor and Destructor	
		Static membrane	
Sub Unit 2	3 hrs	Inheritance	
Polymorphism,Abstract Class		More on Inheritance	
Polymorphism			
Abstract Class			
Friend Function		**Sub Unit 2**	

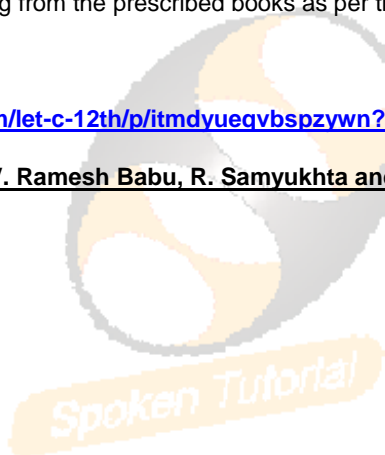| Exception handling		**Polymorphism,Abstract Class**	
		Polymorphism	
		Abstract Class	
		Friend Function	
		Exception handling	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link for C:

Let us C   http://www.flipkart.com/let-c-12th/p/itmdyueqvbspzywn?pid=9788183331630&query=8183331637

and Computer programming by V. Ramesh Babu, R. Samyukhta and M. Munirathnam.

Java – Theory and Practical Sessions outline

The scheme given below has incorporated Java learning so that in the alloted time, students learn and become equipped with a basic programming of Java . This training will empower and enable students to handle all basics of Java needs list which is in the curriculum and much more.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
   2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

1. In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

2. For Java programming you first need to know about Linux as the compiler runs only on the Linux Operating systems.

3. For testing purposes we offer the online assessment test on Java separately where it is required (Unit 4).

Theory Part (Java)	Duration	Practical sessions	Duration
Unit 1		**Unit 1**	
Basics Of Java	**7hrs (Total)**	**List of exercises**	**8 hrs**
Sub unit 1	4 hrs	**Basics of Java**	
Getting started with Java installation		**Sub unit 1**	
First Java Program		Introduction of Java languages with Installation	
Installing Eclipse		Installation of Eclipse compiler in Linux OS	
Getting started with Eclipse		Practice sessions for 1st Java program(including basic programming, compiling the program, solving errors which occur while running the program)	
Hello world Program		Getting started with Eclipse	
Java using Eclipse		Practice sessions for Hello World program(including basic programming, compiling the program, solving errors which occur while running the program)	
Sub Unit 2	3 hrs	**Java using Eclipse**	
Errors and Debugging		**Sub Unit 2**	
Programming features in Eclipse		Practice sessions of the programs using Errors and Debugging	
Arithmetic Operations		Practice sessions of the programs using Programming features in Eclipse	
Numerical datatypes		Practice sessions of the programs using Arithmetic Operations	
Strings		Practice sessions of the programs using Numerical datatypes	

Unit 2	**7hrs (Total)**	Practice sessions of the programs using Strings	
Some more on Java using Eclipse		**Unit 2**	
Sub Unit 1		**List of exercises**	**8 hrs**
Primitive type conversions	4 hrs	**Some more on Java using Eclipse**	
Relational Operators		**Sub Unit 1**	
Logical Operators		Practical sessions on Primitive type conversions	
If Else		Practical sessions on Relational Operators	
Nested If		Practical sessions on Logical Operators	
Sub unit 2	3 hrs	Practical sessions on If Else	
Statements and Loops		Practical sessions on Nested If	
Switch Statement			
For Loop		**Sub unit 2**	
While Loop		**Statements and Loops**	
Do while		Practical Sessions on Switch Statement	
		Practical Sessions on For Loop	
Unit 3	**7hrs (Total)**	Practical Sessions on While Loop	
Arrays,Class and Objects in Java		Practical Sessions on Do while	
Sub Unit 1	4 hrs	**Unit 3**	
Introduction of Arrays		**List of exercises**	**8 hrs**
Array Operation		**Arrays,Class and Objects in Java**	
Creating Class		**Sub Unit 1**	
Creating Object		How to write a Program using Arrays. Significance of Arrays	
Instance Fields		Practical Sessions on Array Operation	
		Practical Sessions on Creating Class	
Sub unit 2	3 hrs	Practical Sessions on Creating Object	
Constructor		Practical Sessions on Instance Feilds	
Methods in Java			
Default Constructor		**Sub unit 2**	
Parameterized Constructor		**Constructor**	
Using this Key Word		Practical sessions on Methods in Java	
Non-static Block		Practical sessions on Default Constructor	
		Practical sessions on Parameterized Constructor	
		Practical sessions on Using this Key Word	
Unit 4	**7hrs (Total)**	Practical sessions on Non-static Block	
Overloading and Working with Netbeans			
Sub Unit 1	4 hrs		
		Unit 4	
Constructor Overloading		**List of exercises**	
Method Overloading		**Overloading and Working with Netbeans**	**8 hrs**
Taking User input using buffered reader		**Sub Unit 1**	
Developing Web Applications on Netbeans			
		Practical sessions on Constructor Overloading	

Sub Unit 2	3 hrs	Practical sessions on Method Overloading	
		Practical sessions on Taking User input using buffered reader	
Working with Netbeans			
Integrating an Applet in a Web Applications		Practical sessions on Developing Web Applications on Netbeans	
Netbeans Debugger			
Handling Images in a Java GUI Applications		**Sub Unit 2**	
File chooser in Java Application		**Working with Netbeans**	
Connecting to MySql database		Practical sessions Integrating an Applet in a Web Applications	
		Practical sessions on Netbeans Debugger	
		Practical sessions on Handling Images in a Java GUI Applications	
		Practical Session on File chooser in Java Application	
		Practical Sessions on Connecting to MySql database	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link:

For JAVA

Java The Complete Reference, 7th Edition:

and The-Complete-Reference-Edition8   http://www.amazon.com/Java-The-Complete-Reference-Edition/dp/0071606300

GIMP – Theory and Practical Sessions outline

The scheme given below has incorporated GIMP learning so that in the alloted time, students learn and become equipped with the basics of GIMP . This training will empower and enable students to handle all basics of GIMP needs list which is in the curriculum and much more.

1. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
2. For the Practical Part we recommend a break-up of the 8 hours as –
   2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

1) In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.
2) For testing purposes for GIMP, a simple test can be devised by the course in charge
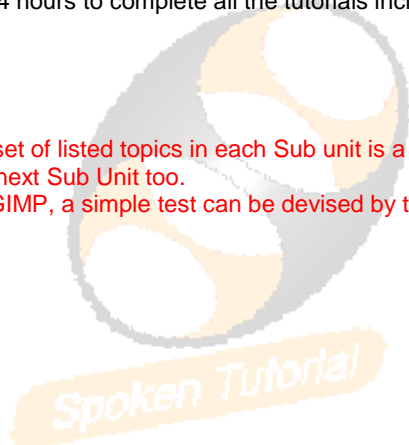
Theory Part (GIMP)	Duration	Practical sessions	Duration
Unit 1		Unit 1	
Starting up with GIMP	7hrs (Total)	List of exercises	8 hrs
Sub unit 1	4 hrs	Starting up with GIMP	
Introduction & Installation (Linux & Windows)		Sub unit 1	
Image for Web		Introduction & Installation (Linux & Windows)	
Assignments on the above topic		Practice sessions on Image for Web	
Setting up GIMP		Practice sessions on Setting up GIMP	
Assignments on the above topic			
Sub Unit 2	3 hrs		
Rotate and Corp the Image		Sub Unit 2	
Assignments on the above topic		Practice sessions on Rotate and Corp the Image	
Adjusting Colors in the Image		Practice sessions on Adjusting Colors in the Image	
Assignments on the above topic		Practice sessions on Healing and Cloning the image	
Healing and Cloning the image			
Assignments on the above topic			
Unit 2	7hrs (Total)		
Tools in GIMP		Unit 2	
Sub Unit 1		List of exercises	8 hrs
	4 hrs	Tools in GIMP	
Triptychs New Way		Sub Unit 1	
Assignments on the above topic			
Drawing Tools		Triptychs New Way	
Assignments on the above topic		Practice sessions on the above topic	
		Drawing Tools	
Sub unit 2	3 hrs	Practice sessions on the above topic	
Sketching in GIMP		Sub unit 2	
Assignments on the above topic			
Brushes in GIMP		Sketching in GIMP	
Assignments on the above topic		Practice sessions on the above topic	
		Brushes in GIMP	
Unit 3	7hrs (Total)	Practice sessions on th above topic	
Colors and Dialogs			
Sub Unit 1	4 hrs	Unit 3	
Introduction to Colors and Dialogs		List of exercises	8 hrs
Section-1		Colors and Dialogs	
Section-2		Sub Unit 1	
Assignments on the above topic		Introduction to Colors and Dialogs	
		Practice session on Section-1	
Sub unit 2	3 hrs	Practice session on Section-2	
Curves Tool			
Assignments on the above topic			
Edits in the Image using GIMP		Sub unit 2	
Drawing a Figure in GIMP		Practice sessions on Curves Tool	

Assignments on the above topic		Practice sessions on Edits in the Image using GIMP	
Unit 4	**7hrs (Total)**	Practice sessions on Drawing a Figure in GIMP	
Image Resolutions			
Sub Unit 1	4 hrs		
Image Resolutions		**Unit 4**	
Assignments on the above topic		**List of exercises**	
Fixed underexposed Images		**Image Resolutions**	**8 hrs**
Assignments on the above topic		**Sub Unit 1**	
Adjust Color with Curve tool		Practice sessions on Image Resolutions	
Assignments on the above topic		Practice sessions on Fixed underexposed Images	
Sub Unit 2	3 hrs	Practice sessions on Adjust Color with Curve tool	
Easy Animations			
Easy Animations in GIMP			
Assignments on the above topic			
Comics		**Sub Unit 2**	
Assignments on the above topic		**Easy Animations**	
Selective Sharpening		Practice sessions on Easy Animations in GIMP	
Assignments on the above topic		Practice sessions on Comics	
		Practice sessions on Selective Sharpening	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link for GIMP:

http://docs.gimp.org/2.8/en/index.html

http://www.gimpusers.com/

Blender – Theory and Practical Sessions outline

The scheme given below has incorporated Blender learning so that in the alloted time, students learn and become equipped with the basics of Blender. This training will empower and enable students to handle all basics of Blender needs list which is in the curriculum and much more.

3. For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.
4. For the Practical Part we recommend a break-up of the 8 hours as –
   2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.

IMPORTANT –

3) In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.
4) For testing purposes for Blender, a simple test can be devised by the course in charge

Theory Part (Blender)	Duration	Practical sessions	Duration
Unit 1		**Unit 1**	
Introduction and Navigation	**7hrs (Total)**	**List of exercises**	**8 hrs**
Sub unit 1	4 hrs	**Introduction and Navigation**	
Introduction		**Sub unit 1**	
Hardware Requirements		Practice session on Installation on Linux OS	
Assignments on the above topic		Practice session on Installation on Windows OS	
Installing in Windows			
Assignments on the above topic			
Sub Unit 2	3 hrs		
3D cursor		**Sub Unit 2**	
Assignments on the above topic		Practice session on 3D cursor	
Moving in 3D Space		Practice sessions on Moving in 3D Space	
Assignments on the above topic			
Unit 2	**7hrs (Total)**		
Blender Interface		**Unit 2**	
Sub Unit 1		**List of exercises**	**8 hrs**
Camera View	4 hrs	**Blender Interface**	
Assignments on the above topic		**Sub Unit 1**	
Basic Description		Practice session on Camera View	
Assignments on the above topic		Practice session on Basic Description	
Sub unit 2	3 hrs		

Change Window Types			
Assignments on the above topic		**Sub unit 2**	
File Browser and Info Panel Windows		Practice session on Change Window Types	
Assignments on the above topic		Practice session on File Browser and Info Panel Windows	
Unit 3	**7hrs (Total)**		
Window Properties			
Sub Unit 1	4 hrs	**Unit 3**	
User Preferences Window		**List of exercises**	**8 hrs**
Assignments on the above topic		**Window Properties**	
Outliner Window		**Sub Unit 1**	
Assignments on the above topic		Practice sessions on User Preferences Window	
Sub unit 2	3 hrs	Practice sessions on Outliner Window	
Window Properties-1			
Assignments on the above topic			
Window Properties-2		**Sub unit 2**	
Assignments on the above topic		Practice session on Window Properties-1	
Unit 4	**7hrs (Total)**	Practice sessions on Window Properties-2	
More on Window Properties			
Sub Unit 1	4 hrs		
		Unit 4	
Window Properties-3		**List of exercises**	
Assignments on the above topic		**More on Window Properties**	**8 hrs**
Window Properties-4		**Sub Unit 1**	
Assignments on the above topic		Practice sessions on Window Properties-3	
Sub Unit 2	3 hrs	Practice sessions on Window Properties-4	
Window Properties-5			
Assignments on the above topic			
Examples on Animation covering movie making etc			
		Sub Unit 2	
		Practice session on Window Properties-5	
		Practice different examples having all the above topics	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link for Blender

http://wiki.blender.org/index.php/Doc:2.6/Manual

http://wiki.blender.org/index.php/Doc:2.6/Books

FOSS for ITI and Vocational Training Courses

Course name-Computer Fundamentals,Office-Suite and Internet

The scheme given below has incorporated Basic -IT Skills (Linux, Libre Office, and Firefox) learning as valuable addition for students to get hands on training in Computer fundamentals, Office-suite and Internet

This training will empower and enable students to handle all the basic of Basic IT Skills needs list which is in the curriculum and much more.

1) For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.

2) For the Practical Part we recommend a break-up of the hours as –

2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.(Can modify as required)

IMPORTANT –

1) In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

2) For testing purposes we offer the online assessment test only on Linux separately where it is required.

Theory Part (Basic IT Skills)	Duration	Practical sessions	Duration
Libre Office Writer	**3.5 hrs**	**List of exercises**	
Introduction & Installation (Linux & Windows)	30 mins	**Libre Office Writer**	**3.5 hrs**
Typing text and basic formatting	30 mins	Introduction & Installation (Linux & Windows)	30 mins
Assignment on the above topic	30 mins	Typing text and basic formatting	30 mins
Inserting objects & Inserting pictures	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Inserting objects & Inserting pictures	30 mins
Viewing, Saving,Printing	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Viewing, Saving,Printing	30 mins
		Assignment on the above topic	30 mins
Calc	**4.5 hrs**	**Calc**	**4.5 hrs**
Introduction	30 mins	Introduction	30 mins
How to works with cells	30 mins	How to works with cells	30 mins
Assignment on the above topic	30 mins	Assignment on the above topic	30 mins

How to works with sheets	30 mins	How to works with sheets	30 mins
Assignment on the above topic	30 mins	Assignment on the above topic	30 mins
Formatting	30 mins	Formatting	30 mins
Assignment on the above topic	30 mins	Assignment on the above topic	30 mins
Basic data manipulation	30 mins	Basic data manipulation	30 mins
Assignment on the above topic	30 mins	Assignment on the above topic	30 mins
Working with data	30 mins	Working with data	30 mins
Assignment on the above topic	30 mins	Assignment on the above topic	30 mins
Impress	**5 hrs**		
Introduction	30 mins	**Impress**	**5 hrs**
Creating a presentation	30 mins	Introduction	30 mins
Assignment on the above topic	30 mins	Creating a presentation	30 mins
Viewing a presentation	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Viewing a presentation	30 mins
Inserting pictures in document	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Inserting pictures in document	30 mins
Printing	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Printing	30 mins
One lecture on presentation skills to enchance learning and communication	30 mins	Assignment on the above topic	30 mins
		One lecture on presentation skills to enchance learning and communication	30 mins
Firefox	**3.5 hrs**		
Introduction	30 mins	**List of exercises**	
Interference & tool bars	30 mins	**Firefox**	**3.5 hrs**
Assignment on the above topic	30 mins	Introduction	30 mins
Tab browsing	30 mins	Interference & tool bars	30 mins
Assignment on the above topic	30 mins	Assignment on the above topic	30 mins
Setting preference	30 mins	Tab browsing	30 mins
Assignment on the above topic	30 mins	Assignment on the above topic	30 mins
		Setting preference	30 mins
		Assignment on the above topic	30 mins
Computer Fundamentals	**14 hrs**		
K TUX Typing	**1.5 hr**	**Computer Fundamentals**	**14 hrs**
Introduction	30 mins	**K TUX Typing**	**1.5 hr**
Customizing K touch	30 mins	Introduction	30 mins
Configure settings	30 mins	Customizing K touch	30 mins
Tux typing	**1 hr**	Configure settings	30 mins
Introduction type	30 mins	**Tux typing**	**1 hr**
Advanced typing	30 mins	Introduction type	30 mins
		Advanced typing	30 mins
Linux basics	**11.5 hrs**		
Installation -10	30 mins	**Linux basics**	**11.5 hrs**
Ubuntu desktop	30 mins	Installation -10	30 mins
Synaptic packet manager	30 mins	Ubuntu desktop	30 mins
Ubuntu software center	30 mins	Synaptic packet manager	30 mins

Basic commands	30 mins	Ubuntu software center	30 mins
Assignment on the above topic	30 mins	Basic commands	30 mins
General Purpose utilities in Linux	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	General Purpose utilities in Linux	30 mins
File system	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	File system	30 mins
Working with regular files	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Working with regular files	30 mins
File attributes	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	File attributes	30 mins
Redirection & pipes	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Redirection & pipes	30 mins
Linux processes	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Linux processes	30 mins
Linux enviornment	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Linux enviornment	30 mins
Basic system administration	30 mins	Assignment on the above topic	30 mins
Assignment on the above topic	30 mins	Basic system administration	30 mins
Simple filters	30 mins	Assignment on the above topic	30 mins
		Simple filters	30 mins
		Linux environment	30 mins
		Basic system administration	30 mins
		Simple filters	30 mins

Notes:

Assignment for each level has to be solved in the practical sessions. Also they should practice the programs with different examples.

Text Books:

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus. Text books can be referred from the link given below.

Text Books link:

For Libre Office
http://www.taming-libreoffice.com/category/books/

For Linux
http://www.tldp.org/LDP/intro-linux/html/

Course name – Fundamentals of Java Programming

The scheme given below has incorporated Java learning as valuable addition for students to get hands on training in Fundamentals of Java.

This training will empower and enable students to handle all the basic of Java needs list which is in the curriculum and much more.

1) For the Theory Part we have provided a topic list which is in sync with the flow of topics as listed in the tutorials. The instructor can modify the content if needed.

2) For the Practical Part we recommend a break-up of the hours as –

2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.(Can modify as required)

IMPORTANT –

 1) In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

2) For testing purposes we offer the online assessment test on Java separately where it is required

Theory Part (Java)	Duration	Practical sessions	Duration
Basics Of Java	1 hr	List of exercises	
Getting started with Java installation	30 mins	Basics Of Java	1 hr
First Java Program	30 mins	Getting started with Java installation	30 mins
Java using Eclipse	7.5 hrs	First Java Program	30 mins
Installing Eclipse	30 mins	Java using Eclipse	7.5 hrs
Getting started with Eclipse	30 mins	Installing Eclipse	30 mins
Hello world Program	30 mins	Getting started with Eclipse	30 mins
Errors and Debugging	30 mins	Hello world Program	30 mins
Programming features in Eclipse	30 mins	Errors and Debugging	30 mins
Arithmetic Operations	30 mins	Programming features in Eclipse	30 mins
Numerical datatypes	30 mins	Arithmetic Operations	30 mins
Strings	30 mins	Numerical datatypes	30 mins
Primitive type conversions	45 mins	Strings	30 mins
Relational Operators	30 mins	Primitive type conversions	45 mins
Logical Operators	30 mins	Relational Operators	30 mins
If Else	30 mins	Logical Operators	30 mins
Nested If	30 mins	If Else	30 mins
Switch Statement	30 mins	Nested If	30 mins
For Loop	30 mins	Switch Statement	30 mins

While Loop	30 mins	For Loop	30 mins
Do while	30 mins	While Loop	30 mins
Introduction of Arrays	45 mins	Do while	30 mins
Array Operation	30 mins	Introduction of Arrays	45 mins
Creating Class	30 mins	Array Operation	30 mins
Creating Object	30 mins	Creating Class	30 mins
Instance Feilds	45 mins	Creating Object	30 mins
Methods in Java	45 mins	Instance Fields	45 mins
Default Constructor	30 mins	Methods in Java	45 mins
Parameterized Constructor	45 mins	Default Constructor	30 mins
Using this Key Word	45 mins	Parameterized Constructor	45 mins
Non-static Block	30 mins	Using this Key Word	45 mins
Constructor Overloading	30 mins	Non-static Block	30 mins
Method Overloading	30 mins	Constructor Overloading	30 mins
Taking User input using buffered reader	30 mins	Method Overloading	30 mins
		Taking User input using buffered reader	30 mins

Notes

In Practical session students should practice the above mention topics with also should solve assignments on it.

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books Link:

For JAVA

Java The Complete Reference, 7th Edition and The-Complete-Reference-Edition8

http://www.amazon.com/Java-The-Complete-Reference-Edition/dp/0071606300

For advanced JAVA learners

Java Programming black book

http://www.flipkart.com/java-6-programming-black-book-with-cd/p/itmdyufnp7yxczh7

Course name – Web Designing

The scheme given below has incorporated PHP&MySQL learning as valuable addition for students to get hands on training in Web Design.

This training will empower and enable students to handle all the basic of PHP&MySQL needs list which is in the curriculum and much more.

1) For the Theory Part the instructor can use content according to the need in the Web Designing course.

2) For the Practical Part we recommend a break-up of the hours as –

2 hours initial workshop + 4 hours to complete all the tutorials including practicing the assignments + Assessment test.(Can modify as required)

IMPORTANT –

 1) In the Practical hours the set of listed topics in each Sub unit is a general guideline only. Students may move ahead to the topics in the next Sub Unit too.

2) For testing purposes we offer the online assessment test on PHP&MySQL separately where it is required.

Practical sessions	Duration
List of exercises	
PHP	**2.5 hrs**
Introduction and Installation of PHP in Linux and Windows OS	30 mins
Echo Functions	30 mins
Variables	30 mins
If Statement	30 mins
Switch statement	30 mins
PHP	**11.5 hrs**
Introduction and Installation of PHP in Linux and Windows OS	30 mins
Echo Functions	30 mins
Variables	30 mins
If Statement	30 mins
Switch statement	30 mins
Arithmetic Operators	30 mins
Comparision Operators	30 mins
Logical Operator	30 mins
Arrays	30 mins
Multi-dimensional Array	30 mins
While statement	30 mins
Do-while statement	30 mins
For statement	30 mins
Foreach statement	30 mins
Functions(basic)	30 mins
Functions(Advanced)	30 mins
GET variable	30 mins

POST Variable	30 mins
Embedding PHP	30 mins
Common Way to display HTML	30 mins
Comman Errors 1	30 mins
Comman Errors 2	30 mins
Comman Errors 3	30 mins
MySQL	**16.5 hrs**
MySQL 1	30 mins
MySQL 2	30 mins
MySQL 3	30 mins
MySQL 4	30 mins
MySQL 5	30 mins
MySQL 6	30 mins
MySQL 7	30 mins
MySQL 8	30 mins
Simple visitor counter	30 mins
String function 1	30 mins
String function 2	30 mins
File upload 1	30 mins
File upload 2	30 mins
Cookies 1	30 mins
Cookies 2	30 mins
Sessions	30 mins
MD5 Encryption	30 mins
Sending Email 1	30 mins
Sending Email 2	30 mins
Sending Email 3	30 mins
Displaying images from directory	30 mins
User login 1	30 mins
User login 2	30 mins
User login 3	30 mins
User password change 1	30 mins
User password change 2	30 mins
User password change 3	30 mins
User Registration 1	30 mins
User Registration 2	30 mins
User Registration 3	30 mins
User Registration 4	30 mins
User Registration 5	30 mins
User Registration 6	30 mins

Notes :

PHP is used for Web-development and MySQL can be used for managing databases. For website design you can refer the tutorials on how to create user login, username ,password etc

Assignment for each level has to be solved in the practical sessions. Also they should practice the programs with different examples.
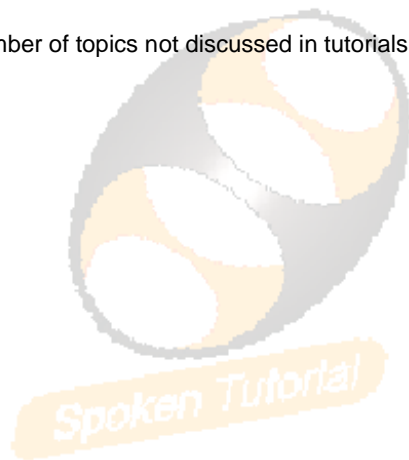
Text Books:

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text Books link:

For PHP

http://www.flipkart.com/beginning-php-mysql-novice-professional-4th/p/itmdyggzm6ygzccg?pid=9788184897456&ref=73b694e2-81dc-4d9f-b929

(This is a bit extensive and has number of topics not discussed in tutorials but it is quite useful)

FOSS For Under Graduates (B.Sc.-CS,IT, BCA)

Spoken Tutorials on FOSS for B.Sc. – Information Technology course

The relevant FOSS are given for the subjects taught in the Information Technology stream.

Each individual should go through the tutorials and practice accordingly.

The timing specified in the duration column is the maximum time required by an individual to view and practice that particular tutorial.

Course Name	Subjects	FOSS	Relevance	Duration
B.Sc.- IT	Professional Communication Skills, Report Writing and Technical Writing are sub topics of Professional Communication Skills	LaTeX	It is a document mark-up language hence can be useful to research Scholars and also in Report and Technical Writing	
	For Report Writing	LaTeX	Compilation in LaTeX	20 mins
			MikTeX installation	20 mins
			Letter writing using LaTeX	30 mins
			Report writing using LaTeX	30 mins
			Table-figures in LaTeX document	30 mins
			References in LaTeX document	30 mins
			Beamer in a Latex document	30 mins
	For Technical Writing	LaTeX	Compilation in LaTeX	20 mins
			MikTeX installation	20 mins
			Letter writing using LaTeX	30 mins
			Report writing using LaTeX	30 mins
			Mathematical operations symbols in LaTeX document	30 mins
			Equations in a LaTeX document	30 mins
			Table-figures in LaTeX document	30 mins

			References in LaTeX document	30 mins
			Beamer in a Latex document	30 mins

Text Books :

LaTeX: A Document Preparation System by Leslie Lamport

The LaTeX Companion by Mittelbach and Goossens

Course Name	Subjects	FOSS	Relevance	Duration
	Applied Mathematics I	Scilab	Why Scilab	20 mins
			Installing Scilab	20 mins
			Getting started with Scilab	30 mins
			Matix Operations	30 mins
			Vector Operations	30 mins
			Polynomials	30 mins
			ODES	30 mins

Text Books link for Scilab:
http://www.scilab.org/resources/documentation/books

Course Name	Subjects	FOSS	Relevance	Duration
	Electronics and Communication Technology	Oscad	Introduction and Installation of Oscad	20 mins
			Schematic creation and simulation of a circuit using Oscad	20 mins
			Designing Printed Circuit board (PCB) using Oscad	30 mins
			Operating point analysis in Ngspice	30 mins
			DC sweep analysis in Ngspice	30 mins
	Introduction to C and C++ Programming	C and C++	Introduction and Installation	30 mins
			First C Program	30 mins
			First C++ Program	30 mins
			Tokens	30 mins
			Functions	30 mins
			Scope of Variables	30 mins
			if & if else Statements	35 mins
			Nested if and Switch Statement	35 mins

				Increment and Decrement Operators	35 mins
				Arithmetic Operators	35 mins
				Relational Operators	35 mins
				Logical Operators	35 mins
				Loops	35 mins
				Arrays	40 mins
				Working with 2D Arrays	40 mins
				Strings	40 mins
				String Libraries	40 mins
				Working with Structures	40 mins
				Understanding Pointers	40 mins
				Function Calls	40 mins
				File handling in C	40 mins
	Basics of Java Programming	**Java**		Getting started - Installation	40 mins
				First Java Program	40 mins
				Installing Eclipse	40 mins
				Getting started - Eclipse	40 mins
				Hello World Program	40 mins
				Errors and Debugging	40 mins
				Programming features - Eclipse	40 mins
				Arithmetic Operations	40 mins
				Numerical Datatypes	40 mins
				Strings	40 mins
				Primitive type conversions	40 mins
				Relational Operations	40 mins
				Logical Operations	40 mins
				if.. else..	40 mins
				Nested if	40 mins
				Swtich statement	40 mins
				for Loop	40 mins
				while Loop	40 mins
				Do while	40 mins

Text Books link:

For JAVA

Java The Complete Reference, 7th Edition and The-Complete-Reference-Edition8
http://www.amazon.com/Java-The-Complete-Reference-Edition/dp/0071606300

Course Name	Subjects	FOSS	Relevance	Duration
	Basics of PHP	PHP	Installing in Windows	30 mins
			Installing in Ubuntu	30 mins
			Echo Function	30 mins
			Variables	30 mins
			If Statement	30 mins
			Switch Statement	30 mins
			Arithmetic Operators	40 mins
			Comparison Operators	40 mins
			Logical Operators	40 mins
			Arrays	40 mins
			Multi-Dimensional Arrays	40 mins
			While Statement	40 mins
			Do-While Statement	40 mins
			For Statement	40 mins
			Foreach Statement	40 mins
			Functions (Basic)	40 mins
			Functions (Advanced)	40 mins
			GET Variable	40 mins
			POST Variable	40 mins
			Embedding PHP	40 mins
			Common Way to Display HTML	30 mins
			Common Errors 1	30 mins
			Common Errors 2	30 mins
			Common Errors 3	30 mins
	Advanced PHP	PHP&MySQL	Simple Visitor Counter	30 mins
			String Functions 1	30mins
			String Functions 2	30 mins

			File Upload 1	30 mins
			File Upload 2	30 mins
			Cookies 1	40 mins
			Cookies 2	40 mins
			Sessions	40 mins
			MD5 Encryption	40 mins
			Sending Email 1	40 mins
			Sending Email 2	40 mins
			Sending Email 3	40 mins
			Display images from a Directory	30 mins
			User Login 1	30 mins
			User Login 2	30 mins
			User Login 3	30 mins
			User Password Change 1	30 mins
			User Password Change 2	30 mins
			User Password Change 3	30 mins
			User Registration 1	30 mins
			User Registration 2	30 mins
			User Registration 3	30 mins
			User Registration 4	30 mins
			User Registration 5	30 mins
			User Registration 6	30 mins
	Advanced SQL	**SQL**	Installing in Windows	30 mins
			Installing in Ubuntu	30 mins
			MySql - I	40 mins
			MySql - II	40 mins
			MySql - III	40 mins

			MySql - IV	40 mins
			MySql - V	40 mins
			MySql - VI	40 mins
			MySql - VII	40 mins
			MySql - VIII	40 mins

Notes

PHP is used for Web-development and MySQL can be used for managing databases. For website design you can refer the tutorials on how to create user login,username,password etc

Assignment for each level has to be solved in the practical sessions. Also they should practice the programs with different examples

Text Books link for PHP

http://www.flipkart.com/beginning-php-mysql-novice-professional-4th/p/itmdyggzm6ygzccg?pid=9788184897456&ref=73b694e2-81dc-4d9f-b929

(This is a bit extensive and has a number of topics not discussed in tutorials but it is quite useful)

Any of the 3 FOSS can be used depending upon the topic taught in the institute

	Computer Graphics	Q-CAD for 2D	Introduction to QCAD	30 mins
		animation	Drawing Methods in QCAD	30 mins
			Using Modification Tools I	30 mins
			Using Modification Tools to Stretch and Mirror in QCAD	30 mins
			Using Modification Tools to Scale and Rotate in QCAD	30 mins
		Blender for 3D	Hardware Requirements	20 mins
		animation	Installing in Windows	20 mins
			3D Cursor	30 mins
			Moving in 3D Space	30 mins
			Camera View	30 mins
			Basic Description	30 mins
			Change Window types	30 mins
			File Browser and Info Panel Windows	30 mins
			User Preferences Window	30 mins
			Outliner Window	30 mins

			Window Properties - 1	30 mins
			Window Properties - 2	30 mins
			Window Properties - 3	30 mins
			Window Properties – 4	30 mins
			Window Properties - 5	30 mins
		GIMP for image editing	Image for Web	20 mins
			Setting up GIMP	20 mins
			Rotate & Crop	20 mins
			Adjusting Colors	20 mins
			Healing & Cloning	20 mins
			Triptychs New Way	20 mins
			Drawing Tools	20 mins
			Sketching	20 mins
			Brushes	20 mins
			Colors & Dialogs	30 mins
			Selections - 1	30 mins
			Selections - 2	30 mins
			Curves Tool	20 mins
			2 Mins Edits	20 mins
			Draw a Figure	30 mins
			Image Resolutions	30 mins
			Fix Underexposed Image	30 mins
			Adjust Colors with Curve tool	30 mins
			Easy Animation	30 mins
			Comics	30 mins
			Selective Sharpening	30 mins

Text Books link for GIMP:

http://docs.gimp.org/2.8/en/index.html

http://www.gimpusers.com/

For Blender :

http://wiki.blender.org/index.php/Doc:2.6/Manual

http://wiki.blender.org/index.php/Doc:2.6/Books

	OOPs	**Advance C++**	Classes and Objects in C++	40 mins	
			Constructor and Destructor	40 mins	
			Static members in C++	40 mins	
			Inheritance	40 mins	
			Multiple and Hierarchical Inheritance	40 mins	
			Function overloading and overriding	40 mins	
			Polymorphism in C++	40 mins	
			Abstract class in C++	40 mins	
			Exception Handling	40 mins	
	Operating System	**Linux-ubuntu**	Ubuntu Desktop	30 mins	
			Synaptic Package Manager	30 mins	
			Ubuntu Software Center	30 mins	
			Basic Commands	30 mins	
			General Purpose Utilities in Linux	30 mins	
			Linux File System	30 mins	
			Working with Regular Files	30 mins	
			File Attributes	30 mins	
			Redirection Pipes	30 mins	
			Working with Linux process	30 mins	
			The Linux Environment	30 mins	
			Basics of System Administration	30 mins	
			Simple Filters	30 mins	
			Assignments on all the above topic		

Text Books link for Linux:

http://www.tldp.org/LDP/intro-linux/html/

Spoken Tutorials on various FOSS for B.Sc. Computer Science stream

The relevant FOSS with tutorial topic details are given for the subjects taught in Computer Sciences stream.

Each individual should go through the tutorials and practice accordingly.

The timing specified in the duration column is the maximum time required by an individual to view and practice that particular tutorial.

Course Name	Subjects	FOSS	Relevance	Duration
B.Sc-CS	Mathematics I	Scilab	Why Scilab	20 mins
			Installing Scilab	20 mins
			Getting started with Scilab	30 mins
			Matrix Operations	30 mins
	Mathematics II	Scilab	Vector Operations	30 mins
			ODES	30 mins

Text Books link for Scilab:

http://www.scilab.org/resources/documentation/books

Course Name	Subjects	FOSS	Relevance	Duration
	Introduction to Programming C	C and C++	Introduction and Installation	30 mins
			First C Program	30 mins
			Tokens	30 mins
			Functions	30 mins
			Scope of Variables	30 mins
			If & If else Statements	35 mins
			Nested if and Switch Statement	35 mins
			Increment and Decrement Operators	35 mins

			Arithmetic Operators	35 mins
			Relational Operators	35 mins
			Logical Operators	35 mins
			Loops	35 mins
			Arrays	40 mins
			Working with 2D Arrays	40 mins
	Advanced C and C++	C and C++	Introduction and Installation	30 mins
			First C++ Program	30 mins
			Strings	40 mins
			String Libraries	40 mins
			Working with Structures	40 mins
	OOPs	Advance C++	Classes and Objects in C++	40 mins
			Constructor and Destructor	40 mins
			Static members in C++	40 mins
			Inheritance	40 mins
			Multiple and Hierarchical Inheritance	40 mins
			Function overloading and overriding	40 mins
			Polymorphism in C++	40 mins
			Abstract class in C++	40 mins
			Exception Handling	40 mins

Text Books link for C:

Let us C http://www.flipkart.com/let-c-12th/p/itmdyueqvbspzywn?pid=9788183331630&query=8183331637

and Computer programming by V. Ramesh Babu, R. Samyukhta and M. Munirathnam

Course Name	Subjects	FOSS	Relevance	Duration
	Data Base Management System	**MySQL**	MySQL-1	40 mins
			MySQL-2	40 mins
			MySQL-3	40 mins
			MySQL-4	40 mins
			MySQL-5	40 mins
			MySQL-6	40 mins
			MySQL-7	40 mins
			MySQL-8	40 mins
			String Functions 1	30 mins
			String Functions 2	30 mins
			User Login 1	30 mins
			User Login 2	30 mins
			User Login 3	30 mins
			User Password Change 1	30 mins
			User Password Change 2	30 mins
			User Password Change 3	30 mins
			User Registration 1	30 mins
			User Registration 2	30 mins
			User Registration 3	30 mins
			Assignments on all the above topic	
			Practice each topic with different examples	
	Web Programming	**PHP**	Common Way to Display HTML	30 mins
			Common Errors 1	30 mins
			Common Errors 2	30 mins

			Common Errors 3	30 mins
			Assignments on all the above topic	
			Practice each topic with different examples	

Notes

PHP is used for Web-development and MySQL can be used for managing databases. For website design you can refer to the tutorials on how to create user login, username, password etc.

Assignment for each level has to be solved in the practical sessions. Also they should practice the programs with different examples

Text Books link for PHP

http://www.flipkart.com/beginning-php-mysql-novice-professional-4th/p/itmdyggzm6ygzccg?pid=9788184897456&ref=73b694e2-81dc-4d9f-b929

(This is a bit extensive and has a number of topics not discussed in tutorials but it is quite useful)

Course Name	Subjects	FOSS	Relevance	Duration
	Operating System	Linux-ubuntu	Ubuntu Desktop	30 mins
			Synaptic Package Manager	30 mins
			Ubuntu Software Center	30 mins
			Basic Commands	30 mins
			General Purpose Utilities in Linux	30 mins
			Linux File System	30 mins
			Working with Regular Files	30 mins
			File Attributes	30 mins
			Redirection Pipes	30 mins
			Working with Linux process	30 mins

			The Linux Environment	30 mins
			Basics of System Administration	30 mins
			Simple Filters	30 mins
			Assignments on all the above topics	

Text Books link for Linux:

http://www.tldp.org/LDP/intro-linux/html/

Course Name	**Subjects**	**FOSS**	**Relevance**	**Duration**
	Core Java	**Java**	Getting started - Installation	40 mins
			First Java Program	40 mins
			Installing Eclipse	40 mins
			Getting started - Eclipse	40 mins
			Hello World Program	40 mins
			Errors and Debugging	40 mins
			Programming features - Eclipse	40 mins
			Arithmetic Operations	40 mins
			Numerical Datatypes	40 mins
			Strings	40 mins
			Primitive type conversions	40 mins
			Relational Operations	40 mins
			Logical Operations	40 mins
			if.. else..	40 mins
			Nested if	40 mins
			Switch statement	40 mins
			for Loop	40 mins
			while Loop	40 mins
			Do while	40 mins
	Advanced Java	**Java**	Getting started - Installation	40 mins
			First Java Program	40 mins
			Installing Eclipse	40 mins
			Getting started - Eclipse	40 mins
			Introduction to Array	40 mins
			Array Operations	40 mins
			Creating class	40 mins

			Creating object	40 mins
			Instance fields	40 mins
			Methods	40 mins
			Default constructor	40 mins
			Parameterized constructors	40 mins
			Using this keyword	40 mins
			Non-static block	40 mins
			Constructor overloading	40 mins
			Method overloading	40 mins
			User Input	40 mins

Text Books link:
For JAVA
Java The Complete Reference, 7th Edition and The-Complete-Reference-Edition8
http://www.amazon.com/Java-The-Complete-Reference-Edition/dp/0071606300

For advanced JAVA learners

Java Programming black book

http://www.flipkart.com/java-6-programming-black-book-with-cd/p/itmdyufnp7yxczh7

Any of the 3 FOSS can be used depending upon the topic taught in the institute

Course name	**Syllabus subjects**	**FOSS**	**Relevance**	**Duration**
	Computer Graphics	**Q-CAD for 2D animation**	Introduction to QCAD	30 mins
			Drawing Methods in QCAD	30 mins
			Using Modification Tools I	30 mins
			Using Modification Tools to Stretch and Mirror in QCAD	30 mins
			Using Modification Tools to Scale and Rotate in QCAD	30 mins
		Blender for 3D animation	Hardware Requirements	20 mins
			Installing in Windows	20 mins
			3D Cursor	30 mins
			Moving in 3D Space	30 mins
			Camera View	30 mins
			Basic Description	30 mins
			Change Window types	30 mins
			File Browser and Info Panel Windows	30 mins

				User Preferences Window	30 mins
				Outliner Window	30 mins
				Window Properties - 1	30 mins
				Window Properties - 2	30 mins
				Window Properties - 3	30 mins
				Window Properties - 4	30 mins
				Window Properties - 5	30 mins
		GIMP for image editing		Image for Web	20 mins
				Setting up GIMP	20 mins
				Rotate & Crop	20 mins
				Adjusting Colors	20 mins
				Healing & Cloning	20 mins
				Triptychs New Way	20 mins
				Drawing Tools	20 mins
				Sketching	20 mins
				Brushes	20 mins
				Colors & Dialogs	30 mins
				Selections - 1	30 mins
				Selections - 2	30 mins
				Curves Tool	20 mins
				2 Mins Edits	20 mins
				Draw a Figure	30 mins
				Image Resolutions	30 mins
				Fix Underexposed Image	30 mins
				Adjust Colors with Curve tool	30 mins
				Easy Animation	30 mins
				Comics	30 mins
				Selective Sharpening	30 mins

Text Books link for GIMP:

http://docs.gimp.org/2.8/en/index.html

http://www.gimpusers.com/

For Blender :

http://wiki.blender.org/index.php/Doc:2.6/Manual

http://wiki.blender.org/index.php/Doc:2.6/Books

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text books can be referred from the link given above.

Spoken Tutorials on FOSS for BCA

Course Name	Subjects	FOSS	Relevance	Duration
BCA				
	Business communications	LaTeX	It is a document mark-up language hence can be useful to research	
			Scholars and also in Report and Technical Writing	
			Compilation in LaTeX	20 mins
			MikTeX installation	20 mins
			Letter writing using LaTeX	30 mins
			Report writing using LaTeX	30 mins
			Mathematical operations symbols in LaTeX document	30 mins
			Equations in a LaTeX document	30 mins
			Table-figures in LaTeX document	30 mins
			References in LaTeX document	30 mins
			Beamer in a Latex document	30 mins

Text Books :

LaTeX: A Document Preparation System by Leslie Lamport

The LaTeX Companion by Mittelbach and Goossens

Course Name	Subjects	FOSS	Relevance	Duration
	Basic Programming	K-turtle	Introduction	20 mins
			Grammar of Turtle Script - 1	20 mins
			Grammar of Turtle Script - 2	20 mins
			Programming Concepts	20 mins
			Control Execution	20 mins
			Question Glues	20 mins
	C	C	Introduction and Installation	30 mins
			First C Program	30 mins
			Tokens	30 mins
			Functions	30 mins
			Scope of Variables	30 mins
			if & if else Statements	35 mins
			Nested if and Switch Statement	35 mins

			Increment and Decrement Operators	35 mins
			Arithmetic Operators	35 mins
			Relational Operators	35 mins
			Logical Operators	35 mins
			Loops	35 mins
			Arrays	40 mins
			Working with 2D Arrays	40 mins
			Strings	40 mins
			String Libraries	40 mins
			Working with Structures	40 mins

Text Books link for C :

Let us C http://www.flipkart.com/let-c12th/p/itmdyueqvbspzywn?pid=9788183331630&query=8183331637

and Computer programming by V. Ramesh Babu, R. Samyukhta and M. Munirathnam

Course Name	Subjects	FOSS	Relevance	Duration
	OOPs	Advance C++	Classes and Objects in C++	40 mins
			Constructor and Destructor	40 mins
			Static members in C++	40 mins
			Inheritance	40 mins
			Multiple and Hierarchical Inheritance	40 mins
			Function overloading and overriding	40 mins
			Polymorphism in C++	40 mins
			Abstract class in C++	40 mins
			Exception Handling	40 mins
	Core Java	Java	Getting started - Installation	40 mins

			First Java Program	40 mins
			Installing Eclipse	40 mins
			Getting started - Eclipse	40 mins
			Hello World Program	40 mins
			Errors and Debugging	40 mins
			Programming features - Eclipse	40 mins
			Arithmetic Operations	40 mins
			Numerical Datatypes	40 mins
			Strings	40 mins
			Primitive type conversions	40 mins
			Relational Operations	40 mins
			Logical Operations	40 mins
			if.. else..	40 mins
			Nested if	40 mins
			Swtich statement	40 mins
			for Loop	40 mins
			while Loop	40 mins
			Do while	40 mins
	Advanced Java	**Java**	Getting started - Installation	40 mins
			First Java Program	40 mins
			Installing Eclipse	40 mins
			Getting started - Eclipse	40 mins
			Introduction to Array	40 mins
			Array Operations	40 mins

			Creating class	40 mins
			Creating object	40 mins
			Instance fields	40 mins
			Methods	40 mins
			Default constructor	40 mins
			Parameterized constructors	40 mins
			Using this keyword	40 mins
			Non-static block	40 mins
			Constructor overloading	40 mins
			Method overloading	40 mins
			User Input	40 mins

Text Books link for Java:

Java The Complete Reference, 7th Edition and The-Complete-Reference-Edition8

http://www.amazon.com/Java-The-Complete-Reference-Edition/dp/0071606300

For advanced Java learners

Java Programming black book http://www.flipkart.com/java-6-programming-black-book-with-cd/p/itmdyufnp7yxczh7

Course Name	Subjects	FOSS	Relevance	Duration
	RDBMS	**PHP&MySQL**	Simple Visitor Counter	30 mins
			String Functions 1	30 mins
			String Functions 2	30 mins
			File Upload 1	30 mins
			File Upload 2	30 mins
			Cookies 1	40 mins
			Cookies 2	40 mins
			Sessions	40 mins
			MD5 Encryption	40 mins
			Sending Email 1	40 mins
			Sending Email 2	40 mins
			Sending Email 3	40 mins
			Display images from a Directory	30 mins

			User Login 1	30 mins
			User Login 2	30 mins
			User Login 3	30 mins
			User Password Change 1	30 mins
			User Password Change 2	30 mins
			User Password Change 3	30 mins
			User Registration 1	30 mins
			User Registration 2	30 mins
			User Registration 3	30 mins
			User Registration 4	30 mins
			User Registration 5	30 mins
			User Registration 6	30 mins

Notes

PHP is used for Web development and MySQL can be used for managing databases. For website design you can refer the tutorials on how to create user login,username,password etc

Assignment for each level has to be solved in the practical sessions. Also they should practice the programs with different examples.

Text Books link for PHP :

http://www.flipkart.com/beginning-php-mysql-novice-professional-4th/p/itmdyggzm6ygzccg?pid=9788184897456&ref=73b694e2-81dc-4d9f-b929

(This is a bit extensive and has a number of topics not discussed in tutorials but it is quite useful)

Course Name	Subjects	FOSS	Relevance	Duration
	Mathematics	Scilab	Why Scilab	20 mins
			Installing Scilab	20 mins
			Getting Started	30 mins
			Vector Operations	30 mins
			Matrix Operations	30 mins
			Scripts and Functions	30 mins
			Conditional Branching	30 mins
			Iterations	30 mins
			Plotting 2D Graph	30 mins
			ODES (Source files)	30 mins
			Polynomials	30 mins

Text Books link for Scilab :

http://www.scilab.org/resources/documentation/books

Note:
B.Sc, other streams, B.Com, BMS, BMM etc are in the pipeline

FOSS For the Faculty, Research Scholars,PG students.

LaTeX Spoken Tutorials for Research Writing – suited for Faculty, Research Scholars, PG students

LaTeX is a document markup language and document preparation system for the TeX typesetting program.

Given below is a flow of topics with timings that would be needed to cover the tutorials on that topic. These can be played during the class and shown to the students, students can later listen individually and train.

Course Name	FOSS	Relevance	Duration
LaTeX for Research Scholars	LaTeX	Compilation in LaTeX	20 mins
		MikTeX installation	20 mins
		Letter writing using LaTeX	30 mins
		Report writing using LaTeX	30 mins
		Mathematical operations symbols in LaTeX document	30 mins
		Equations in a LaTeX document	30 mins
		Table-figures in LaTeX document	30 mins
		References in LaTeX document	30 mins
		Beamer in a Latex document	30 mins

Text Books:

LaTeX: A Document Preparation System by Leslie Lamport

The LaTeX Companion by Mittelbach and Goossens

Notes:

We encourage students to go for workshops and tests. See link spoken-tutorial.org.

Assignments are provided for each topic. These should be solved when students revise for the test.

Spoken Tutorials on Scilab for Applied Mathematics and Statistics

Scilab is an open source scientific software package for numerical computations and provides a powerful open computing environment for engineering and scientific applications.

It is a perfect substitute for Matlab and well suited for Academic work. Being open source it is free as opposed to Matlab which has to be purchased.

Given below is a flow of topics with timings that would be needed to cover the tutorials on that topic. These can be played during the class and shown to the students, students can later listen individually and train.

Course Name	FOSS	Relevance	Duration
Applied Mathematics and Statistics	Scilab	Why Scilab	20 mins
		Installing Scilab	20 mins
		Getting Started with Scilab	30 mins
		Vector Operations	30 mins
		Matrix Operations	30 mins
		Scripts and Functions	30 mins
		Conditional Branching	30 mins
		Iterations	30 mins
		Plotting 2D Graph	20 mins
		ODES (Source files)	30 mins
		Polynomials	30 mins
		SBHS Overview	30 mins
		SBHS Interface	30 mins
		XCos Introduction	30 mins

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text books can be referred from the link given below.

Text Books link for Scilab :

http://www.scilab.org/resources/documentation/books

Many more Applications of Scilab can be found on scilab.in.

OpenFOAM Spoken Tutorials for III Yr. Mechanical Engg – suited for Faculty, Research Scholars, PG students

OpenFOAM (Open Source Field Operation and Manipulation) is an open source/free CFD software available for solving and creating a fluid movie.

For learning OpenFOAM a student should have knowledge of Linux-Ubuntu and C++

Given below is a flow of topics with timings that would be needed to cover the tutorials on that topic. These can be played during the class and shown to the students, students can later listen individually and train.

Course name	FOSS	Relevance	Duration
Computational Fluid Dynamics	OpenFOAM	Installing & Running	30 mins
		Creating simple geometry	30 mins
		Creating curved geometry	30 mins
		Simulating flow in a Lid Driven Cavity	30 mins
		Supersonic flow over a wedge	30 mins
		2D Laminar flow in a channel	30 mins
		Turbulent flow in a Lid Driven Cavity	30 mins

Notes:

We encourage students to go for workshops and tests. See link spoken-tutorial.org.

Assignments are provided for each topic. These should be solved when students revise for the test.

Spoken Tutorials on FOSS for MCA

Course name	Syllabus subjects	FOSS	Relevance	Duration
1	Discrete Mathematics	**Scilab**		
MCA			What is Scilab	30 mins
			Why Scilab	30 mins
			Installing	30 mins
			Getting Started	30 mins
			Vector Operations	40 mins
			Matrix Operations	40 mins
			Scripts and Functions	40 mins
			Web Search on tool boxes of scilab	30 mins
			for Discrete Mathematics	
2	Mathematics & Statistics	**Scilab**	Conditional Branching in Scilab	40 mins
			Iterations	40 mins
			Plotting 2D Graphs	40 mins
			Ordinary differential Equations	40 mins
			Polynomials	40 mins
			SBHS Overview	40 mins
			SBHS Interface	40 mins
			X Cos Introduction	40 mins
			Web Search on tool boxes of scilab for various Xcos functions	
			for various X Cos functions	30 mins

Text Books link:

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text books can be referred from the link given below.

Text Books link:

For Scilab click on

http://www.scilab.org/resources/documentation/books

Course name	Syllabus subjects	FOSS	Relevance	Duration
3	**Programming & Data Structures**	**C**	Introduction and Installation	30 mins
			First C Program	30 mins
			Tokens	30 mins
			Functions	30 mins
			Scope of Variables	30 mins
			if & if else Statements	35 mins
			Nested if andSwitch Statement	35 mins
			Increment andDecrement Operators	35 mins
			Arithmetic Operators	35 mins
			Relational Operators	35 mins
			Logical Operators	35 mins
			Loops	35 mins
			Arrays	40 mins
			Working with 2D Arrays	40 mins
			Strings	40 mins
			String Libraries	40 mins
			Working with Structures	40 mins
			Assignments on all the above topic	
			Practice each topic with different examples	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text books can be referred from the link given below.

Text Books link:

For C click on

Let us C http://www.flipkart.com/let-c-12th/p/itmdyueqvbspzywn?pid=9788183331630&query=8183331637

and Computer programming by V. Ramesh Babu, R. Samyukhta and M. Munirathnam

Course name	Syllabus subjects	FOSS	Relevance	Duration
4	**Data Base Management System**	**MySQL**	MySQL-1	40 mins
			MySQL-2	40 mins
			MySQL-3	40 mins
			MySQL-4	40 mins
			MySQL-5	40 mins
			MySQL-6	40 mins
			MySQL-7	40 mins
			MySQL-8	40 mins
			String Functions 1	30 mins
			String Functions 2	30 mins
			User Login 1	30 mins
			User Login 2	30 mins
			User Login 3	30 mins
			User Password Change 1	30 mins
			User Password Change 2	30 mins
			User Password Change 3	30 mins
			User Registration 1	30 mins
			User Registration 2	30 mins
			User Registration 3	30 mins
			Assignments on all the above topic	
			Practice each topic with different examples	
5	**Client Server Programming**	**PHP**	Installing PHP in Windows	30 mins
			Installing in Ubuntu	30 mins
			Echo Function	30 mins
			Variables	30 mins
			If Statement	30 mins
			Switch Statement	30 mins
			Arithmatic Operators	40 mins
			Comparison Operators	40 mins
			Logical Operators	40 mins
			Arrays	40 mins
			Multi-Dimensional Arrays	40 mins
			While Statement	30 mins
			Do-While Statement	30 mins
			For Statement	30 mins
			Foreach Statement	30 mins

			Functions (Basic)	30 mins
			Functions (Advanced)	30 mins
			GET Variable	30 mins
			POST Variable	30 mins
			Embedding PHP	30 mins
			Assignments on all the above topic	
			Practice each topic with different examples	
6	**Web Programming**	**PHP**	Common Way to Display HTML	30 mins
			Common Errors 1	30 mins
			Common Errors 2	30 mins
			Common Errors 3	30 mins
			Assignments on all the above topic	
			Practice each topic with different examples	

PHP is used for Web-development and MySQL can be used for managing databases. For website design you can refer the tutorials on how to create user login,username, password etc

Assignment for each level has to be solved in the practical sessions. Also they should practice the programs with different examples

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text books can be referred from the link given below.

Text Books link:

For PHP click on

http://www.flipkart.com/beginning-php-mysql-novice-professional-4th/p/itmdyggzm6ygzccg?pid=9788184897456&ref=73b694e2-81dc-4d9f-b929

(This is a bit extensive and has a number of topics not discussed in tutorials but it is quite useful)

Course name	Syllabus subjects	FOSS	Relevance	Duration
7	**Operating System**	**Linux-ubuntu**	Ubuntu Desktop	30 mins
			Synaptic Package Manager	30 mins
			Ubuntu Software Center	30 mins

			Basic Commands	30 mins
			General Purpose Utilities in Linux	30 mins
			Linux File System	30 mins
			Working with Regular Files	30 mins
			File Attributes	30 mins
			Redirection Pipes	30 mins
			Working with Linux process	30 mins
			The Linux Environment	30 mins
			Basics of System Administration	30 mins
			Simple Filters	30 mins
			Assignments on all the above topic	

Text Books :

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text books can be referred from the link given below.

Text Books link:

For Linux Click on

http://www.tldp.org/LDP/intro-linux/html/u

Note:

MBA, MCom, MMS and related fields are in the pipeline

FOSS For Fine Arts Stream

Spoken-tutorial curriculum on GIMP for various courses

GIMP has tools used for image retouching and editing, free-form drawing, resizing, cropping, converting between different image formats, and more specialised tools

From fine art to instructional manuals, TV ads to children's books, digital illustration is everywhere. GIMP helps illustrators create work that delights, persuades, and teaches.

The software's(GIMP) robust editing tools help publishers bring maximum visual impact to their products.

GIMP Extended helps physicians better understand and communicate about medical conditions.

All the GIMP tutorials are used in all the courses given below.

A individual has to go through the tutorials and practice the assignments on each tutorials for better learning

The timing specified in the duration column is the maximum time required by an individual to view and practice that particular tutorial.

Course name	FOSS	Relevance	Duration
Animations and Computer Graphics	**GIMP for animations and graphics**	Image for Web	20 mins
		Setting up GIMP	20 mins
		Rotate & Crop	20 mins
		Adjusting Colors	20 mins
		Adjust Colors with Curve tool	30 mins
		Easy Animation	30 mins
		Comics	30 mins
		Selective Sharpening	30 mins
Architectural Design,Graphic Designing,Industrial Designing,Publishing Designing,Textile designing	**GIMP for designing a image**	Image for Web	20 mins
		Setting up GIMP	20 mins
		Rotate & Crop	20 mins
		Adjusting Colors	20 mins
		Healing & Cloning	20 mins

		Triptychs New Way	20 mins
		Drawing Tools	20 mins
		Sketching	20 mins
		Brushes	20 mins
		Colors & Dialogs	30 mins
		Selections - 1	30 mins
		Selections - 2	30 mins
		Curves Tool	20 mins
		2 Mins Edits	20 mins
		Draw a Figure	30 mins
		Image Resolutions	30 mins
		Fix Underexposed Image	30 mins
		Adjust Colors with Curve tool	30 mins
		Easy Animation	30 mins
		Comics	30 mins
		Selective Sharpening	30 mins
Illustarions,Photography, Architectural Photography	**GIMP for image editing**	Image for Web	20 mins
		Setting up GIMP	20 mins
		Rotate & Crop	20 mins
		Adjusting Colors	20 mins
		Healing & Cloning	20 mins
		Triptychs New Way	20 mins
		Image Resolutions	30 mins
		Fix Underexposed Image	30 mins
		Adjust Colors with Curve tool	30 mins
		Easy Animation	30 mins
		Comics	30 mins
		Selective Sharpening	30 mins

Text Books link for GIMP

http://docs.gimp.org/2.8/en/index.html

http://www.gimpusers.com/

QCAD and Blender Spoken Tutorials for Animations

QCAD and Blender are open source software which can be used for 2D and 3D animations respectively.

An individual has to go through the tutorials and practice the assignments given after each tutorial for better learning.

The timing specified in the duration column is the maximum time required by an individual to view and practice that particular tutorial.

Tech Communicators 3D models help technical communicators convey complex ideas and create and perfect designs. Blender gives them a rich set of tools for creating 3D objects and enhancing them with textures, lights, and shadows.

Course name	FOSS	Relevance	Duration
Computer Graphics,2D and 3D animations	**Q-CAD for 2D animations**	Introduction to QCAD	30 mins
		Drawing Methods in QCAD	30 mins
		Using Modification Tools I	30 mins
		Using Modification Tools to Stretch and Mirror in QCAD	30 mins
		Using Modification Tools to Scale and Rotate in QCAD	30 mins
	Blender for 3D animations	Hardware Requirements	20 mins
		Installing in Windows	20 mins
		3D Cursor	30 mins
		Moving in 3D Space	30 mins
		Camera View	30 mins
		Basic Description	30 mins
		Change Window types	30 mins
		File Browser and Info Panel Windows	30 mins
		User Preferences Window	30 mins
		Outliner Window	30 mins
		Window Properties - 1	30 mins
		Window Properties - 2	30 mins
		Window Properties - 3	30 mins
		Window Properties - 4	30 mins
		Window Properties - 5	30 mins

It is alright to go ahead with teaching from the prescribed books as per the existing syllabus.

Text books can be referred from the link given below.

Text Books link for Blender

http://wiki.blender.org/index.php/Doc:2.6/Manual

http://wiki.blender.org/index.php/Doc:2.6/Books

The immediate step

Give us your College/ Institute/ School name
...We will register your institute on our website

Register yourself
...click on
http://www.spoken-tutorial.org/user/login

This is a very simple procedure ... will take a couple of minutes for you