	PROGRAMMING LAB	L	T	P	C
15CS101L	**Total contact hours: 45**	**1**	**0**	**2**	**2**
	Prerequisite: Nil				

PURPOSE	
This Lab Course will enable the students to understand the fundamentals of programming and gain knowledge on using the preliminary constructs in solving simple applications	
INSTRUCTIONAL OBJECTIVES	
1	Learn the fundamentals of programming and its environment
2	Ability to write programs using commands and functions
3	To be able to apply programming skills in their area of specialization
4	Learn to work with team members in developing mini projects

Students shall be given experiments covering the following topics:

- Practicing the environment for programming to familiarize Workspace, Directory, Windows, Edit options, Help, Shortcuts etc. Simple exercises to familiarize Basic Commands.
- Data types, Constants and Variables, operators, Input-output functions, reading and storing data, Assignment statements, Control Structures, Iterative statements
- Vectors and Matrices, commands to operate on vectors and matrices, Matrix Manipulations, Arithmetic, Relational and Logical operations on Matrices.
- Polynomial Evaluation, Roots of Polynomial, Arithmetic operations on Polynomials.
- Basic Graphics: 2D / 3D plots, Printing labels, Grid & Axes box, Text in plot, Bar and Pie chart, Histograms, Animation.
- Experiments in solving simple Engineering problems – To be decided by the Lab Course Coordinator.
- Students shall be encouraged to form groups (Maximum 3) to do a mini Project covering the above mentioned topics.

Theory : 15
Practical: 30

TEXT BOOK

1. www.scilab.org
2. RudraPratap., " Getting started with MATLAB", Oxford University Press, 2010.
3. Bansal R.K, Goel A.K., Sharma M.K., "MATLAB and its Applications in Engineering", Pearson Education, 2012.

15CS101L – Programming Lab															
CourseDesignedby		**DepartmentofComputer Science and Engineering**													
1.	Student outcome	a	b	c	d	e	f	g	h	i	j	k	l	m	n
			x	x	x							x			
2.	Mapping of instructional objectives with student outcome		2	4	3							1			

3.	Category	General (G)	Basic Sciences (B)	Engineering Sciences and Technical Arts (E)	Professional Subjects (P)
		X			

4.	Broad Area	Core Engineering	Computer Hardware Engineering /	Software Engineering	Network Engineering	Knowledge Engineering