



## **Sub Committee for Curriculum Development**

**Course Name: Introduction to Best Programming Practices**

**(UG/PG): UG**

**Number of Credits: 4**

**Level: 2**

### **Learning Objective(s):**

This course will help students to understand the coding practices adopted in an organization. It will also help understand the code construction practices, its impact on various software characteristics such as maintainability, performance.

### **Pedagogy:**

Lectures  
Presentations

**Pre-learning:** Knowledge of any programming language – C, C++, Java

### **Course Outline:**

<b>S.No.</b>	<b>Topic</b>	<b>Hours</b>
1	Overview : Software Quality requirements and challenges	6
2	Programming paradigms	6
3	Introduction to design patterns	10
4	Defensive programming practices	6
5	Assertions and Exceptions	4
6	Documentation and Self documenting Code – Naming – Naming conventions – Comments – Self documenting code – Tools for documentation	6
7	Code design issues	6

	<ul style="list-style-type: none"> <li>- Modularity</li> <li>- Portability</li> </ul>	
8	Performance Tuning of the code - Optimization Techniques	12
9	Tools for code profiling	4
	<b>Total</b>	60

### Books Recommended

- ^ Code Complete, Microsoft Press
- ^ Code craft, Pete Goodliffe, SPD

### Suggested Evaluation Methods:

1. Quizzes
2. Presentation
3. Assignments

### Parallel/Similar courses the existing curriculum:

S.No.	Name of the course	Institute where it was offered

Name of Member	Mr.Harshad Gune				
Designation	Assoc. Professor				
Org. / Inst.	SICSR				
Signature					

Name of the Expert:

Signature:

Date:

