

1.	Title of the course	Programming Methodology
2.	Course number	CS202M
3.	Structure of credits	2-0-3-4
4.	Offered to	UG
5.	New course/modification to	Modification To CS2105/8
6.	To be offered by	Department of Computer Science and Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	<b>Course Objective(s):</b> To understand the principles, design and evolution of multiple programming languages across various paradigms; To apply these principles for developing solutions to programming problems.	
10.	<b>Course Content:</b> History and evolution of programming languages; Introduction to different programming paradigms: imperative, object oriented, functional, logic, parallel programming; Syntax and semantics; Concepts in programming languages: scope, binding, data types, expressions, subprograms; Programming language design trade-offs; Object-oriented design concepts: abstraction, decomposition, encapsulation, inheritance, polymorphism; Design patterns; Programming languages and tools: development tools, debugging tools; Version control.	
11.	<b>Textbook(s):</b> 1. Lopes C V, <i>Exercises in Programming Style</i> , Chapman and Hall/CRC (2014). 2. Sebesta R W, <i>Concepts of Programming Languages</i> , Pearson Education (2015).	
12.	<b>Reference(s):</b> 1. Felleisen M, Findler R B, Flatt M and Krishnamurthi S, <i>How to Design Programs</i> , MIT Press (2014). 2. Friedman D P, Wand M and Haynes C T, <i>Essentials of Programming Languages</i> , MIT Press (2008). 3. Scott M L, <i>Programming Language Pragmatics</i> , Morgan Kaufmann (2009). 4. Sethi R, <i>Programming Languages: Concepts and Constructs</i> , Addison-Wesley (2006).	