1.	Title of the course	Object Oriented Programming
2.	Course number	CS311M
3.	Structure of credits (L-T-P-C)	2-0-3-4
4.	New course/modification to	New
5.	To be offered by	Computer Science and Engineering
6.	Prerequisite	ES104M/COMPUTER PROGRAMMING
7.	**Course Objective(s):** To apply principled techniques of conceiving and managing stateful software components such as objects. To design and implement software in an object-oriented paradigm.	
8.	**Course Content:** Motivation: computational paradigms behind object oriented programming; Fundamentals: programming constructs, classes, objects, abstraction and encapsulation, building classes from given specifications; Object-based design space: class design using UML, inheritance, polymorphism, abstract classes and interfaces, exception handling and hierarchy from the context of inheritance, concurrency; Object serialization and persistence: several ways of serialization and their schemes such as JSON, YAML, CSV and XML; Case studies of object-oriented design; Comparison with functional and logic paradigms.	
9.	**Textbook(s):** 1. Booch G, Maksimchuk R. A, Engle M. W, Young B. J, Conallen J, Houston K A, Object Oriented Analysis and Design with Applications. Addison-Wesley, 3rd Edition, 2009.	
10.	**Reference(s):** 1. Horstmann C, Big Java: Early Objects. Wiley, 7th Edition, 2020. 2. Lott S.F, Mastering Object-Oriented Python, Packt Publishing, 2nd Edition, 2019. 3. Eckel B, Thinking in Java, Pearson, 4th Edition, 2008.	