

Course Name: Object Oriented Analysis and Design	Course Code: ITSE306
Pre-requisite: 1) ITSE203- Introduction to software engineering, AND 2) ITSE202- Object Oriented Programming	Credit Hours: 3
Passing Grade: Depending on the Type of the course belongs to the Audit Degree.	Level: Year 3
No. Of Theory & Practical Hours : 2:2	
Goal: Provides the knowledge of software analysis and design principles in object oriented approach.	
Objectives: The course should enable the student to: 1. Explain the principles and requirements of OOA and Design 2. Describe the object-oriented approach to system development, modeling objects, relationships and interactions. 3. Discuss software design in an object-oriented manner. 4. Use a modeling languages 5. Use the tools for OOA and Design.	
Outcomes:	Method
At the end of this course, students should be able to	
1. Discuss OOA and Design principles	Theory
2. Discuss Object-Oriented Requirements Analysis and Systems Behavior.	Theory
3. Analyze Objects and Classes of the software system.	Theory and practical
4. Construct object model using object types, attributes, structures and associations.	Theory and practical
5. Analyze Functional and Dynamic Modeling	Theory and Practical
6. Analyze Object-Oriented Methodologies	Theory and Practical
7. Use the modeling languages	Theory and Practical
8. Discuss Metrics of Object-Oriented Design	Theory
9. Use Object Oriented Design Principles and Patterns	Theory and Practical
10. Use case studies to illustrate the analysis and design concepts.	Theory and Practical
11. Use the tools for OOA and Design	Practical

Hardware / Software Tools: Visual Paradigm
Text Book: 1- Dennis A, Wixom B, Tegarden D. "Systems Analysis and Design with UML" , 2nd Edition, John Wiley & Sons
Reference Book: 1-Fowler M, "UML Distilled", 2nd Edition, PHI/Pearson Education, 2002. 2- Schach Stephen R., "Introduction to Object Oriented Analysis and Design" 2nd Edition, Tata McGraw-Hill, 2003.

HoS-IT 