

	<p>MIT 813: Object Oriented Analysis and Design By Omieno K. Kelvin (MSc IT, BSc. CS): +254 726 849197/+254 734 849197 www.kelvinomieno.com/ www.fs.mmust.ac.ke</p>	
Credit units	3 (42 Hours)	
Pre-requisite	None	
Aim	The learners will be able to understand the importance of systems analysis and design in solving complex problems and apply object oriented analysis and design techniques and tools in Problem formulation and decomposition (analysis) and solution building (design)	
Learning Outcomes	<p>By the end of the course, the learner should be able to:</p> <ul style="list-style-type: none"> i.) Show how the object-oriented approach differs from the traditional approach to systems analysis and design. ii.) Explain the importance of modeling and how the Unified Modeling Language (UML) represents an object-oriented system using a number of modeling views. iii.) Construct various UML models (including use case diagrams, class diagrams, interaction diagrams, state chart diagrams, activity diagrams, and implementation diagrams) using the appropriate notation. iv.) Recognize the difference between various object relationships: inheritance, association, whole-part, and dependency relationships. v.) Show the role and function of each UML model in developing object-oriented software. vi.) Apply the Rational Software Suit for the construction of UML models and expressing the appropriate notation associated with each model. 	
Content	Object-oriented analysis: conventional vs. OO approaches, OOA landscape, unified approach to OOA; Domain analysis: reuse and domain analysis, domain analysis process; OOA analysis model; OOA process: use cases, class responsibility, structures and hierarchies, defining subjects and subsystems; object relation model; object behavior model: event identification with use cases, state representation; design for OOS, system design process; object design process; design patterns	
Learning and Teaching Methodologies	Lectures, tutorials, practicals, Class discussions, Reading research	
Assessment	Type	Weighting (%)
	Examination	60
	Continuous Assessment	40
	Total	100