



Technical University of Mombasa

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**UNIT CODE: UNIT TITLE**  
**CSE 4201: OBJECT – ORIENTED ANALYSIS AND DESIGN**

Lecturer Details: DR. FULLGENCE MWAKONDO

**GENERAL INTRODUCTION TO THE UNIT**

This unit intends to provide students with concepts and practical skills of Object-Oriented analysis and design approach and methods. The aim is to empower students with skills on using Object-Oriented analysis and design tools and techniques not only to develop quality software but also discover useful software requirements that fulfill user requirements.

**Course Description**

Topic1: Introduction to Systems Development Methodologies

Topic2: Object – Oriented Principles and Concepts

Topic3: Object-oriented modeling

Topic4: Requirements\_Engineering

Topic5: Structural modeling

Topic6: Behavioral\_modeling

Topic7: Design Pattern

**Expected Learning Outcomes**

By the end of this course, the student should be able to;

- i. Describe object-oriented concepts and methodologies.
- ii. Use UML tools to capture and analyze requirements
- iii. Use UML tools to design an object-oriented system.

**Mode of Delivery**

Lectures, tutorials, practical.



TUM is ISO 9001:2015 Certified



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### Instructional Materials /Equipment

A computer laboratory, laboratory manuals, software prototyping tools, software application development framework; journals, overhead presentation equipment.

### Course Evaluation

Type	Weighting (%)
Examination	70%
Continuous Assessment	30%
Total	100%

### Core Text Books

- i. Dathan, B., & Ramnath, S. (2015). *Object-oriented analysis, design and implementation: an integrated approach* (2nd ed.). Cham, Switzerland: Springer. ISBN: 3319242784.
- ii. Wazlawick, R. S. (2014). *Object-oriented analysis and design for information systems: modeling with UML, OCL, and IFML*. Amsterdam: Elsevier, Morgan Kaufmann. ISBN: 0124172938.
- iii. Mala, D. J., & Geetha, S. (2013). *Object oriented analysis and design using UML*. New Delhi: McGraw Hill Education. ISBN: 1259006743.



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