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Title: Systems Modelling and Requirements Analysis
Status: Definitive
Code: **5603TECYPC** (121716)
Version Start Date: 01-08-2021
Owning School/Faculty: Engineering
Teaching School/Faculty: YPC International College (Kolej Antarabangsa YPC)

Team	Leader
Karl Jones	Y

Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 72
Total Learning Hours: 200 **Private Study:** 128

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	48
Tutorial	24

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Analysis Coursework	40	
Exam	AS2	Group Design Coursework	50	

Aims

*To capture and analyse user requirements.
To investigate the theory behind object orientated analysis and design.
To design complex systems using various system modelling techniques.*

Learning Outcomes

After completing the module the student should be able to:

- 1 Employ fact-finding techniques in capturing and analysing user requirements.
- 2 Apply the processes of object oriented analysis and design using the unified modelling language.
- 3 Apply alternative modelling techniques such as entity relational and object relational mapping.
- 4 Develop system models from a set of user requirements.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Analysis Coursework	1	2
Group Design Coursework	3	4

Outline Syllabus

Introduction to Information Systems.

Software Development Life Cycles.

Types of Requirements.

Fact-Finding Techniques.

Analysis Processes and Methodologies.

Systems / Data Modelling Concepts.

Object Oriented Theory.

Object Oriented Analysis & Design.

The Unified Modelling Language (Use Case, Activity, Class, Sequence Diagrams).

Alternative Analysis Models (Entity-Relational, Object Relational).

Learning Activities

Learning activities include lectures where students are encouraged to ask questions and discuss scenarios, and supported tutorials where students are encouraged to put theory gained through lecture into practice.

Notes

The module will give students an understanding of requirement gathering & analysis along with system analysis & design with the Unified Modelling Language (UML). Students will be exposed to various concepts of system analysis and design as well as various techniques to employ UML as a tool for system development. The students should be able to transfer the skills learnt in this module to other modules on their degree including their final year project.