

# AMITY GLOBAL INSTITUTE

## MODULE SYLLABUS

Course	Advanced Diploma in Computing
Module Title	Modern Systems Design & Development
Syllabus / Content / Learning Outcomes	<p>This module introduces students to areas of object technology, CASE Tool and Implementation of system, explore building GUIs and resources offered by class libraries so that the idea of specifying general software components and implementing re-usable classes in software development domains.</p> <p><b>Learning Objectives</b></p> <ol style="list-style-type: none"> <li>1. Provide an appreciation of developing large object-oriented software engineering systems.</li> <li>2. To provide students with GUI and class design and implementation experience and concepts.</li> </ol> <p><b>Learning Outcomes</b> On successful completion of the module students will be able to:</p> <p><b>Knowledge and Understanding</b></p> <ol style="list-style-type: none"> <li>1. Understand the principles of SDLC in object-oriented approach to developing software systems;</li> <li>2. Understand OO analysis and design to enable rudimentary</li> </ol> <p><b>Subject Specific Skills</b></p> <ol style="list-style-type: none"> <li>1. Ability to create simple and complete class definitions (in terms of behaviour, responsibilities and collaborations with other classes), and class inheritance hierarchies using contemporary design strategies and approaches;</li> <li>2. Ability to recognise the different levels of abstraction involved in designing a system, and to incorporate the use of third party software modules within a simple model;</li> <li>3. Ability to model and implement simple systems using standard tools and environments</li> </ol>
No. of Teaching Hours	<p>Teacher Managed Learning Lectures, Tutorials, Seminars etc : 48 hours</p> <p>Student Managed Learning Independent Preparation, pre-reading and analysis etc : 22 hours</p> <p>TOTAL = 70 hours</p>
Teaching Methods	Lectures, tutorials, case-studies analysis, research journals and group discussion
Assessment Methods and Weightages	<p>Written Assessment 1 (1500 Words) – 50%</p> <p>Written Assessment 2 (1500 Words) – 50%</p>
Skills for Maximising Learning Outcomes	Reading and Research
Dates of Examination and Submission of Assignment	To be advised and confirmed by respective module lecturer on detailed/specific assignment deadlines
Recommended Text & Reference	<p>This module will build on modules studied in the first year, in which students were introduced to object technology in the creation and development of small-scale design models and software systems.</p> <p>James Woodcock - Formal Aspect of Computing - Springer</p>

Lesson No.	Learning Outcome
1	Design issues
2	Object Oriented Modelling
3	Run-time system support & Testing
4	Event-driven programming
5	Agile practices

**Note:** All Information provided to Amity will be kept strictly confidential except for those required under statutory requirements and by government authorities and relevant university partners and accreditation bodies as part of the regulatory or course requirements.