

# AMITY GLOBAL INSTITUTE

## MODULE SYLLABUS

Course	Bachelor of Science Honours in Computer Science (Web and Mobile Development) (University of London)
Module Title	Fundamentals of Computer Science
Module Syllabus No. (if any)	CM1025
Syllabus / Content / Learning Outcomes	By taking this module, you will gain a broad understanding of many of the key topic areas in computer science and the fundamental concepts that underpin them. In the area of fundamental concepts, you will study binary representations and logic, complexity theory and theories of computation, finite state machines and Turing machines. Building on this, you will then study key areas of interest in computer science including databases, artificial intelligence, and machine learning. These will be presented in the light of practical examples to illustrate how they are implemented in modern computer systems.
No. of Teaching Hours	Contact Hours – Lectures, Seminars & online activity (22 x 3) = 66 Independent Preparation, pre-reading and analysis = 84 TOTAL = 150
Teaching Methods	Lectures, tutorials, case-studies analysis, research journals and group discussion.
Assessment Methods and Weightages	One two hour unseen written examination and coursework Coursework 50% and Written examination 50% At least 35% in each element of summative assessment and a combined weighted average of at least 40%, subject to the application of rules for compensation.
Skills for Maximising Learning Outcomes	Reading and research
Dates of Examinations, Major Assessments and Assignments	Please refer to <a href="http://www.london.ac.uk">www.london.ac.uk</a> exam tables If your effective date of registration is: <ul style="list-style-type: none"> <li>• 1 October, you will take your first examination(s) in March of the following year,</li> <li>• 1 April, you will take your first examination(s) in September of the same year.</li> </ul>
Topics covered	<ul style="list-style-type: none"> <li>• Boolean logic</li> <li>• Algorithms</li> <li>• Searching and sorting algorithms</li> <li>• Theory of Computation and complexity</li> <li>• Turing machines and universal machines</li> <li>• Basic combinatorial principles</li> <li>• Proof techniques</li> <li>• Finite automata</li> <li>• Regular languages</li> <li>• Context-free grammar</li> </ul>

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.