# AMITY GLOBAL INSTITUTE

## MODULE SYLLABUS

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| Course | Bachelor of Science Honours in Computer Science<br>(University of London) |
| Module Title | Intelligent Signal Processing |
| Module Syllabus No. (if any) | CM3065 |
| Syllabus / Content / Learning Outcomes | This module aims to provide you with a broad experience of digital signal processing techniques and applications. You will study how audio and video signals can be captured and processed by a computer program. You will learn about time domain and frequency domain representations and processing. You will learn how you can extract information from audio signals. You will implement movement and face detection systems that work with live camera input. |
| No. of Teaching Hours | Contact Hours – Lectures, Seminars & online activity (22 x 3) = 66<br>Independent Preparation, pre-reading and analysis = 84<br>TOTAL = 150 |
| Teaching Methods | Lectures, tutorials, case-studies analysis, research journals and group discussion. |
| Assessment Methods and Weightages | Coursework I 50% and Coursework II 50%<br>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 www.london.ac.uk exam tables<br>If your effective date of registration is:<br>• 1 October, you will take your first examination(s) in March of the following year,<br>• 1 April, you will take your first examination(s) in September of the same year. |
| Topics covered | • Capturing representing and processing audio signals<br>• LTI systems and impulse responses<br>• Frequency domain representations<br>• Extracting features from signals<br>• Speech recognition<br>• Capturing, representing and processing camera input<br>• Computer vision: movement detection<br>• Computer vision: face detection<br>• Compressing signals |

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.