

AMITY GLOBAL INSTITUTE

MODULE SYLLABUS

Course	Bachelor of Science Honours in Computer Science (University of London)
Module Title	Machine Learning and Neural Networks
Module Syllabus No. (if any)	CM3015
Syllabus / Content / Learning Outcomes	This module provides a broad view of machine learning and neural networks. You will learn how to solve common machine learning problems such as regression, classification, clustering, matrix completion and pattern recognition. You will learn about neural networks and how they can be trained and optimised, including an exploration of deep neural networks. You will learn about machine learning and neural network software libraries that allow you to develop machine learning systems rapidly, and you will learn how to verify and evaluate the results.
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 www.london.ac.uk exam tables If your effective date of registration is: <ul style="list-style-type: none"> • 1 October, you will take your first examination(s) in March of the following year, • 1 April, you will take your first examination(s) in September of the same year.
Topics covered	<ul style="list-style-type: none"> • Regression and classification • Features and distances • Supervised clustering • Evaluation: accuracy, precision, recall and cross validation • Dimensional reduction: principal component analysis • Matrix completion • Unsupervised clustering • Multi-Layer Perceptrons and back propagation • Network optimisers • Deep and recurrent networks

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.