

Access to H.E. National Programme Unit



Unit Title:	Introduction to Machine Learning		
Graded Unit Code:	GA33COM22	Ungraded Unit Code:	UA33COM22
Unit Groups:	Computing		
Level:	3	Credit Value:	3
Valid from:	01/07/2021	Valid to:	31/07/2026

The following QAA grade descriptors must be applied if you are delivering the graded version of this unit:

1	Understanding of the subject
2	Application of knowledge
7	Quality (automatically attached for all graded units)

LEARNING OUTCOMES

ASSESSMENT CRITERIA

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The learner will:	The learner can:
1. Understand the biological principal behind the basics of machine learning	1.1 Describe an action potential including the following terms: stimulus, threshold, “All or Nothing” response, depolarisation, hyperpolarisation and repolarisation 1.2 Describe the transmission of a signal at the synaptic junction. 1.3 Explain the Hebbian Rule.
2. Understand a basic Perception model of an artificial neural network.	2.1 Illustrate a single layer perception. Indicate on the diagram the layers including input and output layers, weighted sum and step function. 2.2 State the Delta Rule and state what each of the terms represent. 2.3 Explain the basic principal behind the perceptron in terms of inputs, the hidden layer, and the output. 2.4 Describe how the perception mimics the nervous system.
3. Understand other aspects of machine learning	3.1 Describe the main idea behind the two algorithms used in machine learning below. A) Fuzzy logic B) Baye’s theorem 3.2 Give two examples of applications of AI in your daily experience and evaluate your interactions with them. 3.3 Evaluate the efficacy of AI as it currently exists in replicating human responses and tasks in a field of your choice.