

Module code	SS-2207		
Module Title	Introduction to Artificial Intelligence and Soft Computing		
Degree/Diploma	Bachelor of Science (Computer Science)		
Type of Module	Major Core		
Modular Credits	4	Total student workload	10 hours/week
		Contact hours	4 hours/week
Prerequisite	SS-2202 Algorithms and Data Structures		
Anti-requisite	SS-4302 Artificial Intelligence		
Aims			
<p>This module introduces to students the principles behind artificial intelligence and soft computing and their extensive applications in the real-world. This forms a platform to background knowledge of this area.</p> <p>This module is a major core module for Soft Computing Stream. This module is a major core module for Computer Science and Soft Computing Stream for January 2016 & later intakes.</p>			
Learning Outcomes:			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	20%	<ul style="list-style-type: none"> - understand the core principles of artificial intelligence - understand concepts of soft computing in artificial intelligence - describe how learning systems work - identify and explain the different artificial intelligence techniques 	
Middle order :	60%	<ul style="list-style-type: none"> - identify and understand the elements of soft computing in well-known artificial intelligence techniques with soft computing - work out the output of the different artificial intelligence algorithms given a specific problem 	
Higher order:	20%	<ul style="list-style-type: none"> - apply heuristics to techniques based on their problem specifications 	
Module Contents			
<p>The main contents of the module are:</p> <ul style="list-style-type: none"> - Introduction to artificial intelligence and its applications - Classical and modern artificial intelligence - Soft computing in artificial intelligence; learning systems - Heuristics: searches; constrained satisfaction problems - Quantifying uncertainty; probabilistic reasoning; artificial neural network - Fuzzy logic; genetic algorithms 			
Assessment	Formative assessment	Interactive Quizzes and Feedback	
	Summative assessment	Examination: 50% Coursework: 50% <ul style="list-style-type: none"> - 2 class tests (20%) - 1 written assignment (15%) - 1 laboratory exercise (15%) 	