1	**Name of Course/Module : ARTIFICIAL INTELLIGENCE**						
2	**Course Code:AFI-353**						
3	**Name(s) of academic staff:**						
4	**Rationale for the inclusion of the course /module in the programme:** This course is an introductory course that provides basic understanding on how to realize the intelligent human behaviors on a computer.						
5	**Semester and Year offered:** year 3 semester 5						
6	**Course Hours**	Face to Face				ILT	TSLT
		L	T	P	O		
	L=Lecture T=Tutorial P=Practical O=Others TSLT=Total student learning time	46	7	27	6	80	166
7	**Credit Value:4**						
8	**Prerequisite:** Nil						
9	**Course Learning Outcomes:** On completion of this course students will be able to: • Describe what constitutes "Artificial" Intelligence and how to identify systems with Artificial Intelligence. • Use classical Artificial Intelligence techniques, such as search algorithms, minimax algorithm, neural networks, tracking, robot localisation. • Apply Artificial Intelligence techniques for problem solving.						
10	**Transferable Skills:** • Critical Thinking & Problem Solving Skills • Information Management & Life Long Learning • Evaluating results						
11	**Teaching –learning and assessment strategy** • Lectures • Tutorials At the end of the programme, students are given an opportunity to evaluate the course and the lecturer.						
12	**Synopsis:** This course offers in deep learning and other AI applications with the neural networks & nature language processing. It helps to know the ethics of AI with intelligent agents. It covers the topics like searching techniques, Machine learning, Knowledge, reasoning and planning.						
13	**Mode of Delivery:** Lectures, Tutorials, Practical.						
14	**Assessments Methods and Types:** Assignments 20% Mid Exam 20% Final Exam 50% Quiz 10% **Total 100%**						

15	Content Outline of the course/module and the SLT per topic								
	No	Subject description	Face to face				ILT	Total
			Lecture	Tutorial	Practical	Others		
	1.	**Introduction to Artificial Intelligence:** • Introduction to AI • Why AI in today's tech world • Definition of AI • Characteristics of AI • Application of AI • Some Terminology of AI	6	2	-	-	8	16
	2.	**Intelligent Agent:** • Introduction to Intelligent Agent • Properties of Agent • Sensor / Actuator / effectors and actions • Types of Agents • Properties of Task Environments	6	3	-	-	9	18
	3.	**Problem Solving:** • Introduction to problems • Problem Searching by search • Example Problems • Search Algorithms	4	-	4	-	8	16
	4.	**Searching Techniques:** • Uninformed Searching – Depth-First Search – Breadth-First Search – Uniform-Cost Search • Informed searching – Heuristics – Greedy Search – A* Search	5	-	7	-	12	24
	5.	**Knowledge, Reasoning and Planning:** • Knowledge based agents • Propositional Logic • First order logic • Backward chaining & Forward chaining	7	-	6	-	13	26

	6.	**Machine Learning:** • Forms and learning • Supervised learning • The theory of everything • Linear regression and classification • Developing Machine Learning Systems	8	-	5	-	13	26
	7.	**Deep Learning and Other AI Applications:** • Deep Learning Fundamentals • Neural Networks & Nature Language Processing • Deep Leaning for NLP • Computer Vision	7	-	5	-	12	24
	8.	**Philosophy, Ethics and Safety of AI:** • The Limits of AI • Can machine really think? • The Ethics of AI	3	2	-	-	5	10
		Total	46	7	27	-	80	160
16.	**Main references supporting the course:** • Russell and Norvig, Artificial Intelligence, A Modern Approach. 4th Edition. ISBN: 0134610997 / 3rd Edition. ISBN: 0136042597							