CS3243
INTRODUCTION TO ARTIFICIAL INTELLIGENCE (2014/2015, Semester 2)

Module

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CS3243 : INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Created: 09-Jan-2015, Updated: 09-Jan-2015

Aims & Objectives | Prerequisites | Schedule | Syllabus | Assessment | Preclusions | Workload | Text & Readings

Module Code	**CS3243**
Module Title	**INTRODUCTION TO ARTIFICIAL INTELLIGENCE**
Semester	**Semester 2, 2014/2015**
Modular Credits	4
Faculty	School of Computing (Computer Science)
Timetable	Timetable
Module Facilitators	Click to view who is teaching the module.
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Aims & Objectives

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The module introduces the basic concepts in search and knowledge representation as well as to a number of sub-areas of artificial intelligence. It focuses on covering the essential concepts in AI. The module covers intelligent agents; uninformed/blind search: breadth-first search, uniform-cost search, depth-first search, depth-limited search, iterative deepening search; informed/heuristic search: greedy best-first search, A* algorithm; local search: hill climbing and simulated annealing; adversarial search: minimax algorithm and alpha-beta pruning; constraint satisfaction problems: backtracking search, constraint propagation, local search; logical agents: propositional logic, first-order logic, logical inference; uncertainty: Bayes' rule, Bayesian inference, independence and conditional independence, Bayesian networks; machine learning: decision tree learning, naive Bayes classifier.

Prerequisites

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(CS2010 or its equivalent) and (CS1231 or MA1100).

Schedule

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Lectures: Mon 1200-1400 I3 Auditorium

Syllabus Top

Week	Lecture Topics	Remarks
1 (12/01)	Introduction and Intelligent Agents	
2 (19/01)	Uninformed Search	
3 (26/01)	**NO CLASSES: Rescheduled to recess week 23 Feb (Mon) 12-2pm in I3 Auditorium**	
4 **(05/02)**	**Rescheduled from 2 Feb (Mon) to 5 Feb (Thurs) 12-2pm in I3 Auditorium within same week:** Informed Search	
5 (09/02)	Adversarial Search	
6 (16/02)	Constraint Satisfaction	
RECESS WEEK (23/02)	**Logical Agents (Part 1)**	
7 (02/03)	Logical Agents (Part 2)	
8 (09/03)	**MIDTERM EXAM**	
9 (16/03)	First-Order Logic	
10 (23/03)	Logical Inference	
11 (30/04)	Uncertainty	
12 (06/04)	Machine Learning	
13 (13/04)	Exam Revision	
FINAL EXAM		

Wednesday, 29 Apr 2015 (Afternoon)

Assessment

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Class participation + Homework Assignments + Term Project	30%
Midterm Exam	20%
Final Exam	50%

Preclusions

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EEE and CPE students can only take this module as a technical elective to satisfy the program requirements or UEM but not CFM/ULR-Breadth.

Workload

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2-1-0-3-4

Workload Components : A-B-C-D-E
A: no. of lecture hours per week
B: no. of tutorial hours per week
C: no. of lab hours per week
D: no. of hours for projects, assignments, fieldwork etc per week
E: no. of hours for preparatory work by a student per week

Text & Readings

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*If LINC does not return any results, please try alternative searches (e.g title). Any errors encountered, please report to the lecturer and the library.

Total 1 items

Title and Author	Edition/Year	ISBN	Publisher	Type
Artificial Intelligence: A Modern Approach **Author: Russell, S. and Norvig, P.**	3e / 2010	Search LINC/Libraries	Pearson Prentice Hall	Compulsory Companion Website

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