

# Course Syllabus – Spring 2023

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## Course Information

Course	<b>CS 4365, Section 002</b>
Course Title	<b>Artificial Intelligence</b>
Term	Spring 2023
Days & Times	Mondays & Wednesdays 11:30 am – 12:45 pm

## Professor Contact Information

Professor	Anjum Chida
Office Phone	972-883-2185
Email Address	anjum.chida@utdallas.edu
Office Location	ECSS 4.230
Online Office Hours	In-person - 10:00 am to 12:00 noon (Tuesdays & Thursdays) (Or by appointment, meeting can be virtual as well via MS-Teams)

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## Course Pre-requisites, Co-requisites, and/or Other Restrictions

- CS 3345 (Data Structures and Algorithms). An understanding of inference in first-order logic and propositional logic and basic probability theory is also assumed.

## Course Description

- **CS 4365 - Artificial Intelligence** (3 semester credit hours) Basic concepts and techniques that enable computers to perform intelligent tasks. Examples are taken from areas such as natural language understanding, computer vision, machine learning, search strategies and control, logic, and theorem proving.

## Student Learning Objectives/Outcomes

1. Understand and use uninformed and heuristic search techniques
2. Understand and use local search algorithms.
3. Understand and use constraint satisfaction problems.
4. Understand and use logical inference using the resolution algorithm.
5. Understand and use probabilistic inference in Bayesian networks
6. Understand and use planning
7. Understand and use games with perfect information (adversarial search)
8. Understand and use zero-sum games with hidden information

## Required Textbooks and Materials

*Artificial Intelligence, A Modern Approach. 4ed. Stuart Russell and Peter Norvig.*

\*\* The textbook resource site: <http://aima.cs.berkeley.edu/>

\*\* The 3rd edition is available and acceptable.

\*\* This book is the primary textbook of this course and is referred as [AI].

## Academic Calendar

Class	Date	Material Covered	Major Topic
1	Jan 18	Chapter 1&2	Introduction Intelligent Agent
2, 3	Jan 23, 25	Chapter 3	Solving Problems by Searching
4, 5	Jan 30, Feb 1	Chapter 4	Beyond Classical Search
6, 7	Feb 6, 8	Chapter 5	Adversarial Search
8, 9	Feb 13, 15	Chapter 7	Logical Agents
10, 11	Feb 20, 22	Chapter 8	First Order Logic
<b>12</b>	<b>Feb 27</b>		<b>Exam I</b>
13	March 1	Chapter 9	Inference in First Order Logic
14, 15	March 6, 8	Chapter 6	Constraint Satisfaction Problem
<i>Spring Break March 13-16</i>			
16, 17	March 20, 22	Chapter 13	Quantifying Uncertainty
18, 19	March 27, 29	Chapter 14	Probabilistic Reasoning
<b>20</b>	<b>April 3</b>		<b>Exam II</b>
21	April 5	Chapter 10	Classical Planning
22, 23	April 10, 12	Chapter 11	Planning and Acting in Real World
24, 25	April 17, 19	Chapter 12	Knowledge Representation
26, 27	April 24, 26		Review
28, 29	May 1		Review
<b>30</b>	<b>May 3</b>		<b>Exam III</b>

Assignments will be through eLearning. For academic calendar [Click Here](#)

**Grading Policy:**

The grade will be determined as described below. The lowest assignment score will be dropped. No other bonus work, make-up work, dropped scores, or other means of raising your grade should be expected. At the end of the semester, it is possible that grades may be curved, but a curve should not be expected.

***Grades are not based on needs or consequences but are based only on performance.***

Total score will be calculated as follows:

<b>Assessment</b>	<b>Percentage towards your Total Score</b>
Exam – I	20 %
Exam – II	20 %
Exam – III	25 %
Programming Assignments	20 %
Homework	10%
Class Participation	5 %

Assignment of letter grade is as follows:

Total	Letter Grade
98-100	A+
93-97	A
90-92	A-
88-89	B+
83-87	B
80-82	B-
78-79	C+
73-77	C
70-72	C-
60-69	D
0-59	F

## Tentative Test Dates:

Exam 1: February 27  
Exam 2: April 3  
Exam 3: May 3

*\*All examinations will be at the Testing Center (<https://ets.utdallas.edu/testing-center>). Seats will fill up quickly; students are encouraged to register for **ALL** three exams early in advance during the **first two weeks** of semester.*

*\*Failure to take the exam due to incorrect registration or absence will result in score of zero for that exam, NO EXCEPTIONS.*

## Course & Instructor Policies:

### *Exams*

All three exams will be at the Testing Center. All students are required to register and **reserve seats at the center at least 48 hours before the exam**. This 48-hour deadline is strictly followed by the testing center. If a student misses an exam due to not registering 48 hours prior to the exam, this will constitute a ZERO for the exam. No Exceptions will be made for missing the exam due to missed or incorrect registration.

All exams could be registered in the first few weeks of the semester, once registered a confirmation email will be sent to the student. It is the student responsibility to ensure proper registration and to follow all the guidelines and dress code restrictions given in the Testing center website.

Exams must be taken on time. Exceptions require advance approval by the instructor. It is up to the instructor to determine whether an exception will be made and will depend largely on proof of extraordinary circumstances. Otherwise, a missed exam will either incur a substantial penalty or be recorded as a zero.

### *Make-Up Exams*

Make-Up exams will be administered only under extreme extenuating circumstances like hospitalization or road accidents. Proof of such incident is required to request a Make-Up and will be approved after instructors' discretion.

### *Assignments and Homework*

All assignments and HWs will be available via elearning and must be submitted via elearning as well. No email submission allowed. Assignments must be turned in on time. All assignments will be due on eLearning. Late submissions will be accepted, but any late submission made within 24 hours of when the assignment is due will have its score deducted by 10% the maximum score possible. Late submissions made more than 24 but less than 48 hours after the assignment is due will have the score deducted an additional 10% (so 20% total). No points will be awarded for submissions more than 48 hours late. Even after deductions, scores cannot be negative. It is your responsibility to upload your

work early enough to avoid possible problems uploading to eLearning. It is your responsibility to ensure that you have submitted the correct items. It is recommended that you double-check your submission to ensure it is correct.

All Assignments are to be individual efforts. You are allowed to collaborate with other students, or to discuss solutions with other students, but make sure that the work you submit is your own and not simply copied from other students work. Copying of Assignments in whole or in part, from other students in this semester or previous semesters will be considered an act of scholastic dishonesty. There will be no makeup exams or other extra credit opportunity in the semester.

No makeup work is possible for Assignments, but the lowest Assignment score and lowest Homework score will be dropped before calculating Assignment Total and HW total respectively.

### *Class Attendance*

Regular and punctual class attendance is expected. Attendance will be taken in every class, and this will constitute a part of Class Participation credit. **Attendance will be taken as an elearning Quiz, students need to login into elearning and take the Attendance Quiz in every class.** Students who fail to attend class regularly are inviting scholastic difficulty. Attendance score will be used to calculate Class Participation credit. Every student is allowed up to 3 absence per semester with no excuse, more if proper documentation is given for a valid excuse.

### *Class Participation*

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

### *Additional Videos*

In addition to regular class and lecture, the student will be required to watch additional videos covering some class material or providing help with Assignments. These additional videos will be released every week. Students will be expected to watch these videos in timely manner and contribute to class discussions pertaining to these videos.

### *Email Correspondence with the Instructor.*

Any courses related questions can be asked via email to the instructor. It is the instructor's policy to respond to every email within 24 hours, if a response is not given in 24 hours, the student is encouraged to email again. On occasions, the instructor gets too

many emails and might forget to respond or read the email, student patience is highly appreciated in this matter.

### *Class Assessment Surveys*

There are three class assessment survey, one at the Beginning of the Semester, one at the Middle and one at the end of the semester. The end of semester survey is the official UTD course evaluation survey taken from the website [eval.utdallas.edu](http://eval.utdallas.edu) . The other two surveys will be via elearning. All surveys are anonymous, but the instructor has the information whether a particular student has submitted the survey. Survey submission will be considered for Class Participation score calculation.

### *Class Materials*

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

### *Class Recordings*

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class, the intent is to supplement the classroom experience.

### *OSA Students*

If you are seeking classroom accommodations under the Americans with Disabilities Act (2008), you are required to register with the Office of Student AccessAbility, located in the Administration Building. Their phone number is 972-883-2098, email: [studentaccess@utdallas.edu](mailto:studentaccess@utdallas.edu) and website is <https://studentaccess.utdallas.edu> . OSA students need to submit a letter from OSA to the instructor as soon as possible preferable within first two weeks of the semester. The student must meet the instructor during the first two weeks of the semester to ensure all facilities and accommodations are properly met for their needs.

### *Comet Creed*

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

**“As a Comet, I pledge honesty, integrity, and service in all that I do.”**

### *Academic Support Resources*

The information contained in the following link lists the University’s academic support resources for all students.

Please see <http://go.utdallas.edu/academic-support-resources>.

The University of Texas at Dallas is committed to providing reasonable accommodations for all persons with disabilities. The syllabus is available in alternate formats upon request. If you are seeking classroom accommodations under the Americans with Disabilities Act (2008), you are required to register with the Office of Student AccessAbility, located in the Administration Building, Suite 2.224. Their phone number is 972-883-2098, email: [studentaccess@utdallas.edu](mailto:studentaccess@utdallas.edu) and website is <https://studentaccess.utdallas.edu>. To receive academic accommodations for this class, please obtain the proper Office of Student AccessAbility letter of accommodation and meet with me at the beginning of the semester."

### *UT Dallas Syllabus Policies and Procedures*

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. Please review the catalog sections regarding the [credit/no credit](#) or [pass/fail](#) grading option and withdrawal from class.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

*The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.*