



## **CPS540-01: ARTIFICIAL INTELLIGENCE**

### **Course Description**

Artificial intelligence (AI) is primarily concerned with giving computer programs abilities that require intelligence. Problem solving, game playing, theorem proving, and planning are a few examples. In addition, AI is concerned with providing computer programs with abilities that are very difficult to achieve using standard computer science techniques (even though they are very simple for humans). Examples of such abilities include understanding and generating a natural language (e.g., English), vision, and commonsense reasoning. In this course we will focus on addressing the question of how to devise means to create “intelligent” programs.

### **Course Details**

**Credit Hours: 3**

**Class Days, Time, Location:**

*Tuesdays and Fridays: 9:30AM-10:45AM, LC102*

**Course Modality:**

- *Fully Seated*
- *WebEx:* <https://newpaltz.webex.com/join/chenm>

**Pre/Co-requisites: N/A**

### **Instructor Details**

**Name and Title:** Min Chen, Associate Professor

**Pronouns:** She/Hers

**Campus Email:** [chenm@newpaltz.edu](mailto:chenm@newpaltz.edu)

**Office Phone:** X-3547

**Office Location:** SH255

**Office Hours:** Tuesdays /Fridays: 11:00AM-12:00PM, Wednesdays: 10:00AM-12:00PM

### **Student Learning Outcomes**

This course aims to help students to understand the up-to-date techniques in Artificial Intelligence. This course will prepare the students to understand how AI can be used, and it will prepare the students to take advanced courses, and provide the students with experience using AI techniques.

By the end of this course the student will be able to:

- have a general knowledge of the field of AI;
- implement and design evolutionary algorithms;
- be able to recognize when AI techniques are necessary to solve a problem;
- be able to apply standard AI techniques to solve optimization problems;
- be able to evaluate new techniques encountered.

## Reading Materials

- *Artificial Intelligence: A Modern Approach* , 3rd edition, Pearson 2009, ISBN: [0136042597](#), [978-0136042594](#);
- Other materials will be provided on Brightspace

## Attendance / Participation

- Attendance (5%).
- Two unexcused absences
- Students who believe they have an illness that will prevent them from attending class should contact [Student Health Services \(SHS\)](#) promptly. Under some circumstances, SHS will provide students with “professor notes” to share with faculty for their approval of absence. Please be advised that no retroactive notes will be given.

## Grading Information

Progress in the course will be reflected in assignment and examination grades covering the subject areas in the course. There will be homework/quizzes, project, and tests:

- Homework and Tests: 60%. Assignments will be made regularly; If you keep up with, and do well on the homework assignments/in-class quizzes, it is very likely you will do well on the exams. (No Final Exam).
- Project and Final Report: 35% (5% proposal, 5% progressive report, 5% presentation, 10% code and 10% final report). The project provides an opportunity for you to use the knowledge from class to build something interesting of your choice. Projects could be done in groups of up to three.

### Grade Scale by Weighted Percentage

<i>A</i>	<i>100.00 – 93.00 (4.0)</i>	<i>A-</i>	<i>92.9 – 90.00 (3.67)</i>
<i>B+</i>	<i>89.9 – 87.10 (3.33)</i>	<i>B</i>	<i>87.00 – 83.00 (3.0)</i>
<i>B-</i>	<i>82.9 – 80.00 (2.67)</i>	<i>C+</i>	<i>79.9 – 77.10 (2.33)</i>
<i>C</i>	<i>77.00 – 73.00 (2.0)</i>	<i>C-</i>	<i>72.9 – 70.00 (1.67)</i>
<i>D+</i>	<i>69.9 – 67.10 (1.33)</i>	<i>D</i>	<i>67.00 – 60.00 (1.0)</i>
<i>F</i>	<i>Below 60 (0.00)</i>		

## Generative AI Tools

### *AI Exploration*

AI is used creatively to enhance problem-solving, generate novel insights, or develop innovative solutions to solve problems. Students and educators co-design assessments to explore unique AI applications within the field of study.

**You should use AI creatively to solve the task, potentially co-designing new approaches with your instructor.**

## Last Day to Withdraw without Grade Penalty

Fall 2025: November 14; Spring 2026: April 7

## Campus Policies

1. Academic integrity policy statement: Students are expected to maintain the highest standards of honesty in their college work. Cheating, forgery, and plagiarism are serious offenses, and students found guilty of any form of academic dishonesty are subject to disciplinary action. New Paltz's policy on academic integrity is found at [www.newpaltz.edu/ugc/policies/policies\\_integrity.html](http://www.newpaltz.edu/ugc/policies/policies_integrity.html), and several excellent resources to help with avoiding plagiarism are available on the Sojourner Truth Library's website: [lib.newpaltz.edu/assistance/plag.html](http://lib.newpaltz.edu/assistance/plag.html).

2. Reasonable accommodation of individuals with disabilities statement: Students needing classroom and/or testing accommodations related to a disability should contact the Disability Resource Center (Student Union, Room 210, 845-257-3020) as close as possible to the beginning of the semester. The DRC will then provide students' instructors with an Accommodation Memo verifying the need for accommodations. Specific questions about services and accommodations may be directed to Deanna Knapp, Assistant Director ([knappd@newpaltz.edu](mailto:knappd@newpaltz.edu)) or Jean Vizvary, Director ([vizvaryj@newpaltz.edu](mailto:vizvaryj@newpaltz.edu)).

3. Veteran & Military Services statement: New Paltz's Office of Veteran & Military Services (OVMS) is committed to serving the needs of veterans, service members and their dependents during their transition from military life to student life. Student veterans, service members or their dependents who need assistance while attending SUNY New Paltz may refer to [www.newpaltz.edu/veterans](http://www.newpaltz.edu/veterans); call 845-257-3120, -3124 or -3074; e-mail [np-vms@newpaltz.edu](mailto:np-vms@newpaltz.edu); or stop by the Student Union, Room 100 South.

4. Computer and network policies statement: Users of New Paltz's computer resources and network facilities are required to comply with the institutional policies outlined in the Acceptable Uses and Privacy Policy, available at [www.newpaltz.edu/itpolicy/](http://www.newpaltz.edu/itpolicy/).

5. Identity verification policy statement for online courses: New Paltz's Online Identity Verification Policy is designed to verify that students enrolled in our online courses and/or programs are the ones who take the courses, complete the programs, and receive the academic credit. See [www.newpaltz.edu/ugc/policies/policies\\_onlineverification.html](http://www.newpaltz.edu/ugc/policies/policies_onlineverification.html) for the complete policy.

### 6. Taking Care: Illness and Absences

While the national COVID-19 public health emergency has ended, SUNY New Paltz still has policies in place to protect the health of our community. [Click here to view COVID-19 FAQs and up-to-date information about those policies](#). Students with an illness that prevents them from attending class (COVID-19, influenza, etc.) should exercise self-care and consult the testing recommendations on the Student Health Service (SHS) website. Faculty will receive "professor notes" from the SHS when a student has an illness that prevents them from attending class.

## Student Evaluation of Instruction (SEI)

You are responsible for completing the Student Evaluation of Instruction (SEI) for this course and for all your courses with an enrollment of five (5) or more students. I value your feedback and use it to improve my teaching and planning. Please complete the online form during the appropriate period: November 24-December 8 (Fall 2025); April 22-May 5 (Spring 2026).

## Summary of Topics Covered and Course Schedule

### Main Topics:

Topic	Textbook Chapters
Intelligent Agent	Chapter 1-2
Problem solving by searching	Chapter 3-5

Knowledge and reasoning	Chapter 7-10
Uncertainty	Chapter 13-14
Machine Learning	Other Materials
Generative AI	Other Materials

### Schedule

Calendar	Week	Tuesday	Friday	Tasks Due
<b>Aug/Sep 2025</b>	Week No 1	<b>26</b>  Class will be Online	<b>29</b>	
	Week No 2	<b>2</b> Class will be Online	<b>5</b>	
	Week No 3	<b>9</b>	<b>12</b>	
	Week No 4	<b>16</b>	<b>19</b>	Assignment 1
<b>Sep/Oct 2025</b>	Week No 5	<b>23</b>  Class will be Online (Proposal)	<b>26</b>	Exam 1
	Week No 6	<b>30</b>	<b>3</b>	
	Week No 7	<b>7</b>	<b>10</b>	
	Week No 8	<b>14</b> Fall Break-no Class	<b>17</b>	Assignment 2
	Week No 9	<b>21</b>	<b>24</b>	Exam 2

<b>Oct/Nov 2025</b>	Week No 10	<b>28</b>	<b>31</b>	
	Week No 11	<b>4</b>	<b>7</b>	
	Week No 12	<b>11</b> Class will be Online (Progress)	<b>14</b>	Assignment 3
	Week No 13	<b>18</b>	<b>21</b>	Exam 3
<b>Nov/Dec 2025</b>	Week No 14	<b>25</b>	<b>28</b>  No Classes	
	Week No 15	<b>2</b> Presentation	<b>5</b> Presentation	
	Week No 16	<b>9</b>	<b>12</b>	Final Report/Code
	Week No 17	<b>16</b>	<b>19</b>	