# ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING, CERTIFICATE

## Certificate in  Artificial Intelligence and Machine Learning (346010C)

This certificate program is designed for both degree and non-degree seeking students who have an interest in computing and AI techniques and skills.

The program offers both core coursework in artificial intelligence (AI) and a range of electives. The core courses provide skills and training necessary for students to start or progress in the growing field of AI, while the electives allow students to focus their studies within the field.  The program is designed to help students prepare for the many careers and industries in which employers are looking for AI experience. This AI certificate provides recognition of their AI experience.

## Requirements for Admission

Admission to this certificate program requires that students have completed the following two introductory programming courses or their equivalents with a GPA of 2.5 or better:

| Code | Title | Hours |
| --- | --- | --- |
| CPSC 209 | Computer Science I | 4 |
| CPSC 210 | Computer Science II | 4 |

Students must also complete this computer science core course or its equivalent before or near the beginning of their study for the certificate program:

| Code | Title | Hours |
| --- | --- | --- |
| CPSC 316 | Data Structures | 3 |

While not required for the certificate directly, this course is a prerequisite to a required course for the certificate program.

Please note that some of the required and elective courses for this certificate have additional prerequisites that must be met.

The following information has official approval of **The Department of Computer Science** and **The College of Engineering and Polymer Science**, but is intended only as a guide. Completion of this certificate is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.

The following courses constitute a "Certificate in Computer Science" and must be completed with a minimum grade point average of 2.0 overall for the certificate to be noted on the student's record. The credits earned in the certificate program cannot be counted towards the Computer Science minor program.

## Summary

| Code | Title | Hours |
| --- | --- | --- |
| Required Courses | | 6 |
| Electives | | 6 |
| **Total Hours** | | **12** |

## Required Courses

| Code | Title | Hours |
| --- | --- | --- |
| CPSC 435 | Algorithms | 3 |
| CPSC 460 | Artificial Intelligence & Heuristic Programming | 3 |
| **Total Hours** | | **6** |

## Electives

| Code | Title | Hours |
| --- | --- | --- |
| **Complete six credits:** | | **6** |
| CPSC 411 | Human-Computer Interaction | |
| CPSC 415 | Big Data Programming | |
| CPSC 436 | Applied Machine Learning | |
| CPSC 438 | Interactive Game & Game Engine Design | |
| CPSC 445 | Introduction to Bioinformatics | |
| CPSC 477 | Introduction to Parallel Processing | |
| CPSC 489 | Topics in Computer Science [1] | |
| **Total Hours** | | **6** |

[1]  Must be on a related topic approved by the Department of Computer Science.