

## Sch Interdisciplinary Studies

### Artificial Intelligence

2018-19 Academic Year

Program	Year	Semester
IS-General Education elective to be delivered across all programs	N/A	N/A

<b>Course Code:</b> GNED 1527	<b>Course Equiv. Code(s):</b> N/A
<b>Course Hours:</b> 42	<b>Course GPA Weighting:</b> 3
<b>Prerequisite:</b> N/A	
<b>Corequisite:</b> N/A	
<b>Laptop Course:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Delivery Mode(s):</b> In class <input type="checkbox"/> Online <input checked="" type="checkbox"/> Hybrid <input checked="" type="checkbox"/> Correspondence <input type="checkbox"/>	
<b>Authorized by (Dean or Director):</b> Stephanie Ball	<b>Date:</b> July 2018

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## Course Description:

This course explores the idea of artificial intelligence (A.I.) from three different perspectives: scientific, philosophical, and cultural. The scientific perspective provides insight as to how artificial intelligence technologies work, the current limitations, and supposed future potential. The philosophical perspective explores whether A.I. is good or bad, essential or dangerous, and what the future could hold. The cultural angle examines how society views A.I. and whether these views are accurate. Toward the end of the course deeper topics will be introduced including how A.I. compares to human intelligence, the singularity, and futurism.

This course is taught in one of two formats; completely online, or hybrid (two hours in class and one hour online). The Learning Plan described in this course outline applies to both formats, regardless of the delivery method stated in each week. It is the responsibility of the student to understand which format they have enrolled in, and to attend and actively engage with the learning environment.

## Subject Eligibility for Prior Learning Assessment & Recognition (PLAR):

Prior Learning Assessment and Recognition (PLAR) is a process a student can use to gain college credit(s) for learning and skills acquired through previous life and work experiences. Candidates who successfully meet the course learning outcomes of a specific course may be granted credit based on the successful assessment of their prior learning. The type of assessment method (s) used will be determined by subject matter experts. Grades received for the PLAR challenge will be included in the calculation of a student's grade point average.

The PLAR application process is outlined in <http://www.durhamcollege.ca/plar>. Full-time and part-time students must adhere to all deadline dates. Please email: [PLAR@durhamcollege.ca](mailto:PLAR@durhamcollege.ca) for details.

### PLAR Eligibility

Yes  No

### PLAR Assessment (if eligible):

- Assignment
- Exam
- Portfolio
- Other

A presentation discussing artificial intelligence concepts as they relate to philosophy (including a discussion of ethics), science (including a discussion of at least one common learning algorithm) and popular culture (including discussion of the realism of artificial intelligence in at least two pieces of popular media).

## Course Learning Outcomes

Course Learning Outcomes contribute to the achievement of Program Learning Outcomes for courses that lead to a credential (e.g. diploma). A complete list of Vocational/Program Learning Outcomes and Essential Employability Skill Outcomes are located in each Program Guide.

### Course Specific Learning Outcomes (CLO)

Student receiving a credit for this course will have reliably demonstrated their ability to:

- CLO1 Identify terminology and language commonly used in the field of artificial intelligence.
- CLO2 Defend a statement codifying rules to govern artificial intelligence with reference to the views of experts in the field of artificial intelligence.
- CLO3 Explain the use of AI principles and simple algorithms to solve problems including basic pathfinding problems.
- CLO4 Analyze current events in the media to illustrate ethical dilemmas related to artificial intelligence.
- CLO5 Compare representations of artificial intelligence from popular media with a scientific and ethical view of artificial intelligence.

### Essential Employability Skill Outcomes (ESSO)

This course will contribute to the achievement of the following Essential Employability Skills:

- EES 1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
- EES 2. Respond to written, spoken, or visual messages in a manner that ensures effective communication.
- EES 3. Execute mathematical operations accurately.
- EES 4. Apply a systematic approach to solve problems.
- EES 5. Use a variety of thinking skills to anticipate and solve problems.
- EES 6. Locate, select, organize, and document information using appropriate technology and information systems.
- EES 7. Analyze, evaluate, and apply relevant information from a variety of sources.
- EES 8. Show respect for the diverse opinions, values, belief systems, and contribution of others.
- EES 9. Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.
- EES 10. Manage the use of time and other resources to complete projects.
- EES 11. Take responsibility for one's own actions, decisions, and consequences.

## Evaluation Criteria:

The Course Learning Outcomes and Essential Employability Skills Outcomes are evaluated by the following evaluation criterion.

Evaluation Description	Course Learning Outcomes	EESOs	Weighting
Participation (Discussions, Debates, and Activities)	CLO1, CLO2, CLO3, CLO4, CLO5	EES1, EES2, EES3, EES7, EES8	30
Assignment 1 - Summary and Response: A.I. Related Book/Show/Film/Game	CLO1, CLO2, CLO4, CLO5	EES1, EES2, EES7	10
Assignment 2 - Summary and Response: A.I. Article Relevant to Your Field	CLO1, CLO2, CLO4	EES1, EES2, EES7	10
Assignment 3 - Summary and Response: AI Article with an Ethical Issue	CLO1, CLO2, CLO4	EES1, EES2, EES7	10
Assignment 4 - Final Consolidation Assignment	CLO1, CLO2, CLO4, CLO5	EES1, EES6, EES7	25
Final Test	CLO1, CLO2, CLO3, CLO4, CLO5	EES1, EES7	15
<b>Total</b>			<b>100%</b>

### Notes:

1. **DUE DATES AND LATE SUBMISSIONS:** Assignments are due by the date assigned in class and posted on DC Connect. Each instructor will provide a facility for the submission of late assignments up to a maximum of 72 hours after the assignment due date and time. All late submissions will be assessed a penalty of 10% of the total possible grade for the assignment per 24 hours late up to 72 hours.

Example 1: Due date is Friday, Jan. 10 at 11:59 p.m.; Saturday, Jan. 11, 12:00 a.m. to 11:59 p.m. - 10%; Sunday, Jan. 12, 12:00 a.m. - 11:59 p.m. - 20%; Monday, Jan. 13, 12:00 a.m. - 11:59 p.m. 1 30%; Tuesday Jan. 14 or later - 0.

Example 2: Assignment is handed in on time, Friday Jan. 10 by or before 11:59 p.m. and is graded as 8/10; same assignment is handed in Saturday Jan. 11 by or before 11:59 and is graded as 8-1 or 7/10; same assignment is handed in Sunday Jan. 12 by or before 11:59 and is graded as 8-2 or 6/10; same assignment is handed in Monday Jan. 13 by or before 11:59 and is graded as 8-3 or 5/10; beyond Monday Jan. 13 there is no ability to submit the assignment and your grade will be 0 on that assignment.

These requirements reflect the importance of deadlines in a workplace environment, and the consequences of failing to meet such deadlines.

2. **TESTS AND MISSED TEST POLICY:** Tests must be written during the scheduled window of availability within the allowed time limit. To reflect established practice in the workplace and demonstrate responsibility, students are required to contact the instructor within twenty four hours of the test if unable to write the test within the scheduled window of availability. Voicemail messages and email messages are an acceptable form of contact if you are unable to contact the professor.

Make-up tests will not be provided in the case of a missed test, however, the weighting of Test 1 may be applied to Test 2 at the discretion of the instructor and after consultation with the instructor. A failure to comply will result in a mark of zero for that test.

If one test has already been missed, any subsequently missed tests will be assigned a mark of zero.

3. **MARKS FOR IN-CLASS ACTIVITIES:** In order to earn in-class discussions, debates and participation marks, students must be present in class the day the activities take place. Many of the activities require student-teacher and student-student interaction and the intended learning cannot take place if the student is absent from

this process.

All application marks are earned through both scheduled and random activities conducted throughout the semester and are intended to give students the opportunity to apply concepts covered in class to enhance and reinforce learning. Given the nature of these activities, there are no make-ups or facility for submitting after the submission deadline.

Application activities not completed within the established timelines and parameters will not be considered for grading purposes. Deviation from this policy will occur on a case by case basis where warranted at the full discretion of the professor. Documentation may be required.

4. MIDTERM MARK: A midterm mark will be calculated for all first year students at Week 7 based on Assignment 1 - Summary and Response: A.I. Related Book/Show/Film/Game, as well as the portion of the Participation marks that have been completed to date.
5. IN-CLASS DISCUSSIONS, DEBATES AND PARTICIPATION: In class, starting Week 2, the format of part of the class will be that of an open or guided discussion or a debate. Students will earn "Discussion Tokens" for meaningful participation which will be collected and will contribute to each student's grade. In order to earn full marks, students must be willing to participate in the class, and in order to participate fully students will typically have to have completed requisite work before class. A rubric or grading scheme will be supplied to all students to make the requirements for class participation clear.

If there is a reason that a student is unable to participate in an in-class discussion or debate, it is expected that they will contact the instructor beforehand to negotiate an alternative.

## **Required Text(s) and Supplies:**

## **Recommended Resources (purchase is optional):**

N/A

# Policies and Expectations for the Learning Environment:

## General Policies and Expectations:

<p><b>General College policies related to</b></p> <ul style="list-style-type: none"><li>+ Acceptable Use of Information Technology</li><li>+ Academic Policies</li><li>+ Academic Honesty</li><li>+ Student Code of Conduct</li><li>+ Students' Rights and Responsibilities can be found on-line at <a href="http://www.durhamcollege.ca/academicpolicies">http://www.durhamcollege.ca/academicpolicies</a></li></ul>	<p><b>General policies related to</b></p> <ul style="list-style-type: none"><li>+ attendance</li><li>+ absence related to tests or assignment due dates</li><li>+ excused absences</li><li>+ writing tests and assignments</li><li>+ classroom management can be found in the Program Guide (full time programs only) in MyCampus <a href="http://www.durhamcollege.ca/mycampus/">http://www.durhamcollege.ca/mycampus/</a></li></ul>
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## Course Specific Policies and Expectations:

In order to ensure a quality learning environment for all students, the following policies have been established. Any behaviour that disrupts the learning environment will be dealt with according to the Durham College Academic Policies and Procedures.

**LEARNING EXPECTATIONS:** Course concepts will be explained through the use of presentation materials and examples. This will be supplemented and supported by some or all of the following: in class exercises, homework readings, questions, tutorial exercises, self and collaborative study, and assignments to be completed during class and outside of class time.

**DC CONNECT:** Students are expected to check MyCampus/DC Connect daily for both college-wide and program specific information. Each Durham College student has a DC Mail address which they should check daily. Communication between students and faculty via e-mail is limited to the DC Connect system. Should a student have a login and/or performance issue with their MyCampus/DC Connect, it is their responsibility to report the issue(s) to the IT Help Desk by calling 905-721-3333 or visiting the Computer Commons, Room SW100.

**ATTENDANCE:** Attendance has been shown to be the best predictor of student success. Students are expected to attend classes, tests and other forms of evaluation. It is also expected that students will actively participate in class activities and discussions. A student missing topics will be less able to complete subsequent assignments. Students are responsible for knowing all course requirements and instructions given in class. Handouts will not be available in subsequent classes. Students are encouraged to form support groups of three to four people for classes. Students are responsible for any missed materials and instruction as a result of an absence from class. In addition, it is the student's responsibility to complete all assignments and to be aware of announcements made. It is the student's responsibility to arrive to class on time, review notes, readings, and other requirements in preparation for class.

**ABSENCE FROM CLASS:** Students are required to submit the appropriate documents when serious illness or other occurrences interfere with the ability to complete the course requirements. If an emergency occurs, contact the professor by DC Mail, e-mail or telephone as soon as possible, ideally prior to missing class or evaluation. As soon as you return to the college, make an appointment to see the professor. Any arrangements to make up missed assignments will be at the sole discretion of the course professor.

**ARRIVAL TO CLASS:** Faculty recognize that there are often legitimate reasons for late arrivals. If you arrive late for class, please enter the classroom as quietly as possible and/or wait until there is a formal break in the class to minimize disruption to students who arrived on time. If you disturb the class upon your arrival, you may be asked to leave the class. If you arrive late on a regular basis and disturb a class already in progress, the faculty has the right to prohibit entry to the classroom until a suitable break occurs. During classes in which a guest speaker is scheduled or when student peers are making a presentation, late arrival may not be permitted. (Special circumstances may be presented to the faculty in advance of the class for consideration). Students who arrive late on the day of a test will not be given any additional time to complete the test. No late arrivals will be permitted after the first 30 minutes of the test start time.

**PLAGIARISM:** Plagiarism is a serious breach of the College's Academic Integrity policy. That policy, defined in ACAD-101 and the accompanying procedure, defined in ACAD-101-1 will be enforced on any students involved in incidents of plagiarism, of any type. This could include any or all of the following: a mark of zero on an evaluation, a mark of zero in the course, non-admittance to a course or program, withdrawal from a course, or dismissal from the college. In all cases, a formal Academic Alert will be issued that will document the infraction that has taken place, notification will be given to the Dean/Associate Dean and a record will be placed in the student's file. Professors may request electronic files of written submissions. Plagiarism detection software may be used during the marking process. Any work that has been plagiarized will receive a mark of zero. If it is determined that a student has shared any work with or copied from another student, ALL STUDENTS INVOLVED will receive a mark of zero for the entire assignment or test. This includes sending files to other students for review of concepts.

A first breach of academic integrity shall result in one or more of the following penalties, at the discretion of the appropriate dean or designate:

- A referral to Student Academic Learning Services (SALS) to complete the Academic Integrity modules;
- Repeat the original assessment or alternative assessment;
- A deduction of the assessment by a portion of the grade;
- A zero on the assessment;
- An academic performance contract;
- Removal from a course with a grade of "0" or F;
- Removal from a program.

A second breach of academic integrity shall be referred to the Associate Dean and will result in one or more of the following penalties:

- A deduction of the assessment by a portion of the grade;
- A zero on the assessment;

- An academic performance contract;
  - Removal from a course with a grade of "0" or "F";
  - Removal from a program
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- Removal from a course with a grade of "0" or "F";
  - Removal from a program;
  - Dismissal from the college for two academic years.

A third breach of academic integrity will be referred to the vice-president, Academic and may result in dismissal from the college for two academic years. If the student is dismissed from the college the office of the president will be notified.

**RESPECT FOR THE LEARNING ENVIRONMENT:** At all times, students are expected to respect that other students have the right to a distraction-free learning environment. Any conduct as outlined, but not limited, to the items below will not be tolerated and could result in disciplinary action. It is expected that all members of the learning environment conduct themselves in a professional manner at all times.

- Habitual lateness for class. Arrive on time and be prepared for class.
- Cheating (or suspicion of).
- Laptops and other digital devices (tablets, smart phones, etc.) are to be used for educational purposes only during class time.

- Inappropriate behaviour will not be tolerated (swearing, vulgarity, and disrespect toward professor or students). It is expected that all members of the class, including the faculty, will treat one another with courtesy and respect. If individual behaviours interfere with the rights of others to teach or to learn, the faculty has the right to ask the disruptive student(s) to leave the class and apply the necessary consequences in accordance with Durham College's Academic Policies and Procedures.

Students are expected to read the college's Student Rights & Responsibilities policy to ensure they understand the guiding principles of expected student behaviour while a student at Durham College.

**STUDENT SUCCESS:** It is the student's responsibility to keep the faculty informed about any circumstances which may be interfering with the student's success in that course. The faculty cannot provide support and assistance if s/he is not aware that a problem exists. Students can leave messages on the faculty's voice mail or e-mail to make arrangements for the faculty and the student to meet and work together to resolve any issues or challenges. If a student has a concern about an individual course, the first line of solution should be a discussion with their faculty. If the issue cannot be solved through collaboration, the student is advised to make an appointment with the Student Advisor in the School of Interdisciplinary Studies.

**RETURNING ASSESSMENTS:** Faculty shall return assessments to students within an appropriate timeframe for the assessment type, typically three weeks at a maximum with exceptions negotiated between the faculty and the class. Students shall consult their course outlines for specific information on evaluation protocols. It is a student's responsibility to obtain returned assessments if absent from class.

Evaluations shall be assigned a grade, and where appropriate, faculty may provide feedback to assist students in improving academic performance. Students may request an interview with a faculty member for further clarification of evaluation results.

Marked tests and assignments will be kept for 20 working days after the student's grades are made available at the end of the semester. If they are not retrieved in that time, they will be discarded.

**DIVERSITY:** This course acknowledges pluralism and that through distinctions in race, ethnicity, place of origin, creed, ability, gender identity and/or sexual orientation, there are many ways of making meaning in this world. This course specifically endorses, where possible, the use of readings, discussions, and case studies that enable students to adapt to differences with real empathy, recognize the legitimacy of those differences, and develop acceptance for new concepts of compatibility.



## General Course Outline Notes:

1. Students should use the course outline as a learning tool to guide their achievement of the learning outcomes for this course. Specific questions should be directed to their individual professor.
2. The college considers the electronic communication methods (i.e. DC Mail or DC Connect) as the primary channel of communication. Students should check the sources regularly for current course information.
3. Professors are responsible for following this outline and facilitating the learning as detailed in this outline.
4. Course outlines should be retained for future needs (i.e. university credits, transfer of credits etc.)
5. A full description of the Academic Appeals Process can be found at <http://durhamcollege.ca/gradeappeal>.
6. Faculty are committed to ensuring accessible learning for all students. Students who would like assistance with academic access and accommodations in accordance with the Ontario Human Rights Code should register with the Access and Support Centre (ASC). ASC is located in room SW116, Oshawa Campus and in room 180 at the Whitby Campus. Contact ASC at 905-721-3123 for more information.
7. Durham College is committed to the fundamental values of preserving academic integrity. Durham College and faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that by taking this course all assignments could be subject to submission either by themselves or by the faculty member for a review of textual similarity to Turnitin.com. Further information about Turnitin can be found on the Turnitin.com Web site.

# Learning Plan

The Learning Plan is a planning guideline. Actual delivery of content may vary with circumstances.

Students will be notified in writing of changes that involve the addition or deletion of learning outcomes or evaluations, prior to changes being implemented, as specified in the Course Outline Policy and Procedure at Durham College.

Wk.	Hours:	3	Delivery:	In Class
1	<b>Course Learning Outcomes</b>			
	CLO1			
	<b>Essential Employability Skills</b>			
	EES1, EES8			
	<b>Intended Learning Objectives</b>			
	Orientation  -Discuss course outline and evaluation criteria -Review course expectations, policies, and code of conduct  Introduction  -Discuss: what does artificial intelligence mean to you?			
	<b>Intended Learning Activities</b>			
Interactive in-class/online activities  Large and small group guided discussion				
<b>Resources and References</b>				
Course outline Articles and resources provided via DC Connect				
<b>Evaluation</b>			<b>Weighting</b>	
Participation (ongoing throughout semester)			30	

<b>Wk.</b>	<b>Hours:</b>	<b>3</b>	<b>Delivery:</b>	<b>In Class</b>
2	<b>Course Learning Outcomes</b> CLO1, CLO2			
	<b>Essential Employability Skills</b> EES1, EES2, EES6, EES7			
	<b>Intended Learning Objectives</b> What is Artificial Intelligence?  -Define artificial intelligence (A.I.) -Define the Turing Test -Discuss examples of what is (and is not) artificial intelligence			
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion			
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect			
	<b>Evaluation</b>			
<b>Wk.</b>	<b>Hours:</b>	<b>3</b>	<b>Delivery:</b>	<b>In Class</b>
3	<b>Course Learning Outcomes</b> CLO1, CLO4, CLO5			
	<b>Essential Employability Skills</b> EES1, EES2, EES6			
	<b>Intended Learning Objectives</b> A.I. on Film & T.V.  -Discuss the quality and accuracy of a portrayal of artificial intelligence in popular media			
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion			
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect			
	<b>Evaluation</b>			

Wk.	Hours: 3	Delivery: In Class
4	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO4, CLO5	
	<b>Essential Employability Skills</b> EES1, EES2, EES6, EES7	
	<b>Intended Learning Objectives</b> What is Intelligence? -Define intelligence -Discuss the components of intelligence -Discuss whether things are intelligent or not and how they differ from artificial intelligence	
	<b>Intended Learning Activities</b> Interactive in-class/online activities Large and small group guided discussion	
	<b>Resources and References</b> Presentation slides Articles and resources provided via DC Connect	
	<b>Evaluation</b> Assignment 1 - Summary and Response: A.I. Related Book/Show/Film/Game	<b>Weighting</b> 10

<b>Wk.</b>	<b>Hours:</b> 3	<b>Delivery:</b> In Class
5	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO3	
	<b>Essential Employability Skills</b> EES1, EES2, EES3, EES7	
	<b>Intended Learning Objectives</b> Simple Learning Algorithms  -Define what an algorithm is -Examine the Traveling Salesman problem -Examine the Bellman equation and Bellman-Ford algorithm -Examine path optimization	
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion	
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect	
	<b>Evaluation</b>	
<b>Wk.</b>	<b>Hours:</b> 3	<b>Delivery:</b> In Class
6	<b>Course Learning Outcomes</b> CLO1, CLO2	
	<b>Essential Employability Skills</b> EES1, EES2, EES7	
	<b>Intended Learning Objectives</b> Everyday Uses of A.I.  -Discuss how people use AI in their everyday lives -Discuss how people actively and passively contribute to the data used by emerging A.I. systems	
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion	
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect	
	<b>Evaluation</b>	

<b>Wk.</b>	<b>Hours:</b> 3	<b>Delivery:</b> In Class
7	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO3, CLO4, CLO5	
	<b>Essential Employability Skills</b> EES1, EES2, EES6, EES7	
	<b>Intended Learning Objectives</b> A.I. In Education  -Explore the history of teaching machines -Describe adaptive learning -Discuss the possibility of replacing human teachers with an A.I. system	
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion	
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect	
	<b>Evaluation</b>	Assignment 2 - Summary and Response: A.I. Article Relevant to Your Field

<b>Wk.</b>	<b>Hours:</b>	<b>3</b>	<b>Delivery:</b>	<b>In Class</b>
8	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO4, CLO5			
	<b>Essential Employability Skills</b> EES1, EES2, EES6, EES7			
	<b>Intended Learning Objectives</b> Ethics of A.I.  -Discuss the use of big data by companies to commodify digital experiences -Examine how the implementation of A.I. effects society with regard to safety and trust, automation and unemployment, unemployment and inequality, and machines with moral status			
	<b>Intended Learning Activities</b> Interactive in-class/online activities  Large and small group guided discussion			
	<b>Resources and References</b> Presentation slides  Articles and resources provided via DC Connect			
	<b>Evaluation</b>			
<b>Wk.</b>	<b>Hours:</b>	<b>3</b>	<b>Delivery:</b>	<b>In Class</b>
9	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO3			
	<b>Essential Employability Skills</b> EES1, EES2, EES6			
	<b>Intended Learning Objectives</b> A.I. in Games  -Define A.I. as it applies to video games colloquially -Compare and contrast examples of A.I. in electronic games			
	<b>Intended Learning Activities</b> Interactive in-class/online activities  Large and small group guided discussion			
	<b>Resources and References</b> Presentation slides  Articles and resources provided via DC Connect			
	<b>Evaluation</b>			

Wk.	Hours: 3	Delivery: In Class
10	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO3, CLO5	
	<b>Essential Employability Skills</b> EES1, EES2, EES6, EES7	
	<b>Intended Learning Objectives</b> The Singularity - Part 1  -Define "The Singularity" as it applies to technology -Discuss the perspectives of futurists, such as Ray Kurzweil, regarding the future of A.I. and humanity -Examine the inevitable improvement of A.I. to the point of an emerging artificial super intelligence	
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion	
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect	
	<b>Evaluation</b>	



<b>Wk.</b>	<b>Hours:</b>	<b>3</b>	<b>Delivery:</b>	<b>In Class</b>
11	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO3, CLO5			
	<b>Essential Employability Skills</b> EES1, EES2, EES6, EES7			
	<b>Intended Learning Objectives</b> The Singularity - Part 2  -Examine the possible effects on humanity of an emergent artificial super intelligence -Discuss possible constraints and guidelines for A.I. development -Discuss if A.I. is safe			
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion			
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect			
	<b>Evaluation</b> Assignment 3 - Summary and Response: AI Article with an Ethical Issue			<b>Weighting</b> 10

<b>Wk.</b>	<b>Hours:</b>	<b>3</b>	<b>Delivery:</b>	<b>In Class</b>
12	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO5			
	<b>Essential Employability Skills</b> EES1, EES2, EES7			
	<b>Intended Learning Objectives</b> Build your Own A.I.  -Learn how to build a chatbot that relies on Natural Language Processing, without having to write any computer code -Explore how Machine Learning works by teaching an A.I. how to perform tasks			
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion			
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect			
	<b>Evaluation</b>			
<b>Wk.</b>	<b>Hours:</b>	<b>3</b>	<b>Delivery:</b>	<b>In Class</b>
13	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO3, CLO4, CLO5			
	<b>Essential Employability Skills</b> EES1, EES2, EES6, EES7			
	<b>Intended Learning Objectives</b> Compare and Contrast Artificial and Human Intelligence  -Examine the physical forms, functioning, and evolution of A.I and human intelligence -Discuss the characteristics and behaviours of intelligent creatures -Discuss the goals of A.I. research as they relate to human intelligence			
	<b>Intended Learning Activities</b>  Interactive in-class/online activities  Large and small group guided discussion			
	<b>Resources and References</b>  Presentation slides  Articles and resources provided via DC Connect			
	<b>Evaluation</b> Assignment 4 - Final Consolidation Assignment			<b>Weighting</b> 25

<b>Wk.</b>	<b>Hours:</b> 3	<b>Delivery:</b> In Class
14	<b>Course Learning Outcomes</b> CLO1, CLO2, CLO3, CLO4, CLO5	
	<b>Essential Employability Skills</b> EES1, EES7	
	<b>Intended Learning Objectives</b> Consolidation/contingency	
	<b>Intended Learning Activities</b> Interactive in-class/online activities Large and small group guided discussion Student presentations (as needed)	
	<b>Resources and References</b> Presentation slides Articles and resources provided via DC Connect	
	<b>Evaluation</b> Final Test	<b>Weighting</b> 15