



Artificial Intelligence Hist-14548

ITAI-1370

S10 2021 Section 01 3 Credits 06/07/2021 to 08/15/2021 Modified 05/27/2021

Course Meetings

Meeting Days

The course is fully online. There will be weekly class meetings for discussion, review and help with assignments. Tentatively, these will be on Mondays.

Meeting Times

6:00 - 7:00 pm

Meeting Location

Online, through the course Cisco Webex tool.

Welcome and Instructor Information

Instructor: Dr. George Raymond Brown

Email: G.Brown@hccs.edu

Phone: 713-718-8010

What's Exciting About This Course

Welcome, you just selected the right course! There isn't a more necessary topic on the planet today. Artificial intelligence (AI) will affect everyone and everything. Our goal in providing the course is to step up the pace in educating as many people as possible, as fast as possible, about the key topics involved in Artificial Intelligence. In this beginning course we introduce you to a "sampling" of the important subjects and how far things have come.

We will present the finest information from the very best experts and institutions like MIT, IBM, Nvidia, Stanford, CalTech, CMU, Microsoft, Google, Amazon and others. You will learn the basics about the very "BEST PRACTICES."

We will go like the wind and provide you with as much information and training as you think you can hold. You should be taking this course if you: 1) LOVE the subject, 2) Need to find that high paying dream job or 3) you need to KNOW the real truth about the topics that will truly change your business, the marketplace and how to get ahead of the curve in any industry before it is too late. Our job is to properly prepare you with the fundamentals so you can be quickly effective or continue to learn on a valuable path. You will have unprecedented access to the finest resources, experts and "Know-How" as well as the opportunity to view the latest tools/equipment being used across most industries.

AI isn't new, it has been highly accelerated to warp speed because of GPU's, COVID-19 and Cloud Computing. Right now, there are not enough people to do the jobs required to move AI into Healthcare, Cybersecurity, Oil and Gas, Telecommunications, Defense and Education quickly enough to meet the demand. We are counting on you! Buckle-Up! This is a Great Course!

My Personal Welcome

Welcome to ITAI 1370. My name is G. Brown, PhD, and I am your Instructor and the Program Coordinator for the New Artificial

Intelligence Program at Houston Community College. We are delighted to have you enrolled in the first course “Artificial Intelligence History, Theory and Platforms”.

Please read the **syllabus** for the course description, pre-requisites, student learning outcomes, required textbook, instructional material, course assignments/assessments, as well as other course policies (participation, makeup, etc). Pay special attention to the **Course Calendar** section for assignments/assessments due dates. Any modifications to our schedule will appear there.

As the course progresses, I am available to support you if you need help in any aspect of the course. The fastest way to reach me is through the Canvas Inbox e-mail. If, for any reason, you can't access Canvas, you can reach me at my HCC e-mail (g.brown@hccs.edu). The best way to really discuss issues is in-person (online for now). I'm guaranteed available during posted office hours to tackle the questions, and usually can be reached anytime during business hours. My goal is for you to move on to the other courses or interests with a firm and complete foundation and understanding about the “best basic practices of AI.” We have put together one of the most exciting, interesting and informative Introductory courses available, so please visit me, or contact me by email, whenever you have a question.

A Special Note about the Online Nature of this Course. You are aware due to Covid-19 reasons this course is completely online which is far more of a benefit than a drawback. In fact, the modern AI practitioner is almost 100% online professionally – so it is a good idea to become acquainted with what the industry is doing. The course is so exciting in terms of being able to present professional level practices to you that it is almost easier for you to work online and learn to work in teams of 3 or 4 people (your colleagues). The pandemic is teaching all of us how to better focus, discuss, explore and collaborate much more quickly and easily. I consider this a nudge to be even better than we might have been in person. This method of working, learning and communicating has pushed me to locate not just good material but great material from the very best experts. We are using not only standard communication tools, but we are also using the very latest communication tools and techniques. So, this course is specifically built for you to be its very best – ONLINE. I am quite sure you will quickly adapt to the great stuff without ever noticing a difference between online and in person. Everything boils down to access, quality, support and your level of interest.

Preferred Method of Contact

I will respond to emails within 24-hours or less, Monday through Friday; I will reply to weekend messages on Monday mornings, or earlier if I am available. Please use the Eagle Online (Canvas) Inbox tool to send me emails. You can use emails to make appointments with me, to have Webex meetings. I encourage you if the need arises to include your Team in *ad hoc* Webex meetings for joint discussion. We may have email conversations involving as many messages as needed. I intend to be highly responsive to what you need during the course. Even though we are online, it is so easy to discuss anything you would like as the need arises. I am investigating weekly newsletters as a way of conveying ideas in addition to the posted content, and to let you know about new developments in AI. (In this field, there is rarely a month that goes by without a new advance.) As a special note of “Extra Care and Support” I will be offering 1 weekly Webex Online Session with the entire class during the term. Because we are completely online – it is nice to have the extra support/discussion as an open forum just for you. AI is such an important topic that it is a professional courtesy to include a weekly online session so we can “Bat around the Hot topics” as you investigate very interesting material. Sometimes the nuances of those topics are not obvious and require a little extra conversation. The time of the weekly meeting will be at your choosing (in accordance with your peers). We can cover this during the first week. But I encourage everyone to attend as it is quite productive as we get into the denser topics.

In case of the Canvas Inbox tool being unavailable, you can email my HCC address of g.brown@hccs.edu, or leave a voice message on my office phone at 713-718-8010.

Office Hours

Monday, Tuesday, 10:30 AM to 12:30 PM

Course Overview

Course Description

Credits: 3 (2 lecture, 4 lab). An overview of the history, theories, and platforms of Artificial Intelligence (A.I.), which are the core areas of A.I. - machine learning, neural networks, robotics, computer vision, natural language processing, open sources software, and algorithm development. Survey of different computer hardware, networking, cloud distribution, operating systems, and software for A.I. Practice the setup of sample A.I. platforms used to train various neural networks to learn.

Requisites

MATH 1314.

Requisites

MATH 1314.

Artificial Intelligence Department Website

[Artificial Intelligence | Houston Community College - HCC \(hccs.edu\)](https://www.hccs.edu/artificial-intelligence)

Core Curriculum Objectives (CCOs)

ITAI 1370 satisfies Component Area Option in the HCCS core curriculum. The HCCS Core Curriculum Committee has specified that the course address the following core objectives:

- **Critical Thinking:** Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking by completing a written assignment such as a book report, research paper, or essay.
- **Communication Skills:** Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication by completing a written assignment such as a book report, research paper, or essay.
- **Quantitative and Empirical Literacy:** Students will demonstrate the ability to draw conclusions based on the systematic analysis of topics using observation, experiment, and/or numerical skills by completing textbook reading assignments, completing assignments, and answering questions on quizzes and exams that pertain to Course Student Learning Outcome #2 below.

Student Learning Outcomes and Objectives

Learning Objectives for each CSLO are mapped within your Canvas Course.

Departmental Practices and Procedures

Department Specific Instructor and Student Responsibilities: Artificial Intelligence Department

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar
- Arrange to meet with individual students as needed

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reading and reviewing course material, interacting with classmates, and responding promptly in your communication with your instructor
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)

Program-Specific Student Success Information : Artificial Intelligence Department

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time is required for the assignments. The assignments provided will help you practice the concepts discussed in class lectures and hone your hands-on skills. Successful completion of this course requires a combination of the following:

- Reading the materials provided from the Internet
- Critically viewing the videos provided from the Internet
- Attending class in person and/or online
- Working with your teammates to complete assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading and studying the material and more importantly completing the assignments.

Instructional Materials and Resources

Instructional Materials

The [HCC Online Bookstore \(https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks\)](https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks) provides searchable information on textbooks for all courses. Check with your instructor before purchasing textbooks because the book might be included in your course fees.

Textbook Information

There is no required textbook. We make extensive use of information available on the web.

Supplemental Materials

Supplemental materials will be copious, primarily as external links and PDF, PowerPoint, Word and other files, all available through the Canvas course site.

Required Software

The recommended web browser is Chrome. You should have free access to the Microsoft Office 365 suite of applications. You need the free Adobe Acrobat Reader for PDF files. The free Libre Office or Open Office suites may be used in place of MS Office 365. Python and Jupyter notebooks are free downloads that are helpful if you write code during the course. We suggest you use Anaconda to install Python and Jupyter notebooks.

Other Instructional Resources

HCC Open-Labs

HCC provides computer labs at most campuses. Information on HCC open-labs can be found at:

<http://www.hccs.edu/departments/division-of-instructional-services/institute-for-instructional-engagement--development/open-lab-schedule/>

Computer Science Open Labs and Tutoring

The Computer Science Department provides department computer labs, monitored by a lab tech (tutor) who can help with computer science assigned coursework. Go to the link below for more information. Select **Face-to-Face** tutoring. Leave **Any** for the College field, and then put **Artificial Intelligence** for the Subject. (While the campuses are closed for the COVID-19 pandemic, only online tutoring is available.)

<https://hccs.edu/find-a-tutor>

HCC Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

✓ Course Requirements

Assignments, Exams, and Activities

Assignments and Labs

All Assignments and Labs are Team activities. Work with your teammates to complete these activities such that all Team members fully understand what the Team submits for the activity, and that the submission meets the announced deadline. These submissions are graded as technical reports. The Assignment and Lab report submissions are text documents which may include tables, graphs and images, or they may be video technical reports featuring the work of the team. All Team submissions must state at the beginning of the submission the Team name and the names of all participating Team members. **Non-participating Team members receive a grade of Zero on the submission.** (Zero is the true grade for a non-participant, regardless of the Canvas gradebook perhaps stating the Team grade for all Team members.)

Participations

Participations appear in various ways in the course, all of which contribute to a Participation grade category. Examples are Joke and Puzzle Assignments, Discussions, special Skill Assignments, and participation in online class meetings. Class meetings are primarily used by students to ask questions about Assignments or Labs, or to display what their team has learned from them.

Term Project / Midterm Exam

The Term Project is a Glossary extension of Laboratory L01 to cover a topic chosen by the student Team. This is a **formative** assessment – which means that it reflects the learning you gain **as you move through the course**. It is a **Team assignment** and requires that you work with your teammates to build your Glossary module-by-module and week-by-week. It is not reasonable to expect a passing grade on this if your team crams the work into the last 2 weeks before the submission date. The Term Project submission due date is August 6, 2021.

The Glossary is a collection of new and/or important terms, including your understanding of their meanings, that you encounter during your study of artificial intelligence. **The meanings of the terms included must be in the words crafted by you and your**

teammates, not quotes lifted from the web. The included terms reflect the consensus of the Team members. Each Glossary entry should cite source(s) used to learn the meaning of the Glossary term.

Portfolio / Final Exam

The Final Exam submission date is August 12, 2021. The final exam is an **individual Portfolio** of each student's work during the term, to be submitted on the Final Exam date. This is a **formative** assessment – which means that it reflects the learning you gain **as you move through the course**. It is an individual (not team) assignment and requires that you work to build your Portfolio module-by-module and week-by-week.

The Portfolio provides a description of **your activities, results, accomplishments and learning** during the course. How you functioned as a Team member is an important part of this, especially as regards to overcoming any personnel problems that may have occurred. Note that the Portfolio is very different from a summary of course content. A simple summary of the topics covered in the course is NOT a Portfolio, and would not receive a passing grade.

Make-up exams will be given *only* in cases of extenuating circumstances. Extenuating circumstances are **unexpected and unavoidable** situations such as hospitalization or auto accident. They don't include forgetting about the date of the exam, busy work schedule, etc. You would need to provide documentation to your instructor as soon as possible after the missed assignment/assessment for consideration. Extenuating circumstances will be evaluated by your instructor on a case-by-case basis. It is your responsibility to contact your instructor with documentation of your situation as soon as possible, schedule a makeup exam, and submit the proper documentation to the department. All missed grades will be recorded as zeros.

Extra Credit

Extra credit, usually given as a grade above 100% on an assignment, can be earned in any of the activities of the course by extraordinary performance beyond that required by the assignment. Innovation, creativity or effort over and above the course standard can earn extra credit.

Type	Weight	Topic	Notes
Participation	15%	Puzzles, Jokes, Skills, Discussions, Meeting Presentations	Describe the assignment here.
Assignments	25%	Modules include Assignments that are Team Activities	Describe the assignment here.
Laboratories	25	Modules contain Laboratory hands-on Team exercises.	Describe the assignment here.
MidTerm Exam	20%	Teams develop Glossaries Module-by-Module	Describe the assignment here.
Final Exam	15%	Individual Portfolio of Activities, Results, Accomplishments & Learning	Describe the assignment here.

Grading Formula

Grade	Range	Notes
A	90+%	This grade indicates outstanding, exemplary performance by a student.
B	80 to 89%	This grade indicates good to very good performance by the student.
C	70 to 79%	This grade indicates adequate performance by a student.
D	60 to 69%	This grade indicates below-standard performance that needs improvement.
F	< 60%	This grade indicates inadequate performance.
Fx	< 60%	Student did not finish the course and did not officially withdraw. (This grade can affect financial-aid status.)

* Instructor's Practices and Procedures

Incomplete Policy

In order to receive a grade of Incomplete ("I"), a student must have completed at least 85% of the work in the course. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

Missed Assignments/Make-Up Policy

All Assignments and Labs contain the first names of the team members who contribute, with an indication of the contribution of each team member. This is also true for other Team assignments, such as Jokes and Puzzles. Students who do not contribute to an assignment or who miss any submission receive a grade of zero for the assignment. Missed assignments may be made up in extraordinary cases, by arrangement with the instructor. Assignments, Labs, Term Projects, participation assignments and exams are all "assignments".

Academic Integrity

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>
(<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>)

Attendance Procedures

1. Online students may be withdrawn before the Official Day of Record if they have not logged in or shown sufficient participation. See the Online Student Handbook for more information.
2. As an Online section or On-Campus section of this course, you must make satisfactory progress in this course. Students may be withdrawn if the student misses turning in assignments (Labs, quizzes, or discussions) that total to more than 12.5% of the course work prior to the Final Exam.
3. Contact your instructor if you are having a problem.
4. If you decide to quit participating in the course before the Last Day for Administrative/Student Withdrawals, you may withdraw yourself, or ask the instructor to withdraw you, or in some cases the instructor may withdraw you without your approval if you have not attended and participated. Talk to your instructor for details.
5. After the withdrawal date deadline, the instructor is not able to withdraw you.
6. You may receive an FX as your grade due to lack of participation if you have not withdrawn yourself. If you receive an FX, you may or may not have to return the financial aid.

For complete information regarding Houston Community College's policies on attendance, please refer to the Attendance Policy under Academic Information in the HCC Student Handbook .

Student Conduct

Two simple rules: (1) Students should be respectful to everyone in the class. (2) Students should come to class on-time, prepared, and ready to learn. These rules of simple respect apply just as well online.

Instructor's Course-Specific Information

WHERE DO I BEGIN?

1. **IF YOU ARE IN AN ONLINE SECTION**, make sure you complete the online orientation at: <http://www.hccs.edu/online/>.
 - Click on **Student Support** under HCC Online Services
 - Click on **Online Course Information** under Important Information
 - Click on the Semester link of your choice
 - Search for this course by choosing *Artificial Intelligence* or by entering the appropriate *CRN* number
 - Locate the course you have enrolled and click the *Course Information* link
2. **TO ACCESS OUR COURSE** go to <http://eagleonline.hccs.edu>.
 - Alternatively, you may go to <http://www.hccs.edu>. If you don't see the **MyEagle Student Sign-in** link at the top of your screen, scroll down to *College Links* (bottom right column) to select **Student Sign-in**, and then select *Eagle Online*

Canvas.

3. **READ THE MAIN PAGE OF OUR CLASS WEBSITE** and then click on **MODULES**. Start with the first module, read each link in the module, and proceed to the second module.
4. **ALWAYS CHECK THE CLASS WEBSITE AT LEAST TWICE A WEEK.**
5. **PRINT OUT THE COURSE CALENDAR** found in this syllabus. Mark off each assignment as completed. This will help you stay on schedule.
6. **THE EAGLE ONLINE USER ID** will be your HCC User ID (sometimes referred to as the “W” number). All HCC students have a unique User ID. If you do not know your User ID, you can look it up by visiting the HCC home page.

7. **EMAIL ME VIA THE EAGLE ONLINE INBOX TOOL.** If you cannot access the Eagle Online (Canvas) Inbox tool, you may send me a message via your normal email provider to g.brown@hccs.edu, making sure to add your NAME and COURSE and CRN *in the Subject line. Emails received without this information will not be answered.*
8. **EAGLE ONLINE TECHNICAL HELP** Go to <http://hccs.edu/online> and click on **Technical Support** and then on **Eagle Online Technical Support**. It lists the support methods available:
 - The recommended way to get support is to complete the form under the **Student Help Form**
 - Technical Support number: 713-718-5275, option 3
 - IT Password Reset number: 713-718-8800, option 1

9. **POP Ups** If a pop-up is blocked, you will need to set your pop-up blocker to allow pages from our websites. More information is located in the first module of the course. Do this before beginning the course as many of the early links in the course are pop-ups!
 - The hardest part of this course is completing all the work on-time. Do not procrastinate. Work ahead! Have fun!

Devices

Use of computing devices in pursuit of meeting course requirements is a necessity in this course. This need should never be used to disrupt the activities of the class.

Faculty Statement about Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time is required for the assignments. The assignments provided will help you practice the concepts discussed in class lectures and hone your hands-on skills. Successful completion of this course requires a combination of the following:

- Reading the materials provided from the Internet
- Critically viewing the videos provided from the Internet
- Attending class in person and/or online
- Working with your teammates to complete assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading and studying the material and more importantly completing the assignments.

Faculty-Specific Information Regarding Canvas

This course section will use Canvas (<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)) to supplement in-class assignments, exams, and activities.

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

Instructional Modalities

Online Anytime (WW)

Traditional online course without scheduled meetings

Social Justice Statement

Houston Community College is committed to furthering the cause of social justice in our community and beyond. HCC does not discriminate on the basis of race, color, religion, sex, gender identity and expression, national origin, age, disability, sexual orientation, or veteran status. I fully support that commitment and, as such, will work to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. In this course, we share in the creation and maintenance of a positive and safe learning environment. Part of this process includes acknowledging and embracing the differences among us in order to establish and reinforce that each one of us matters. I appreciate your suggestions about how to best maintain this environment of respect. If you experience any type of discrimination, please contact me and/or the Office of Institutional Equity at 713-718-8271.

HCC Policies and Information

HCC Grading System

HCC uses the following standard grading system:

Grade	Grade Interpretation	Grade Points
A	Excellent (90-100)	4
B	Good (80-89)	3
C	Fair (70-79)	2
D	Passing (60-69), except in developmental courses.	1
F	Failing (59 and below)	0
FX	Failing due to non-attendance	0
W	Withdrawn	0
I	Incomplete	0
AUD	Audit	0
IP	In Progress. Given only in certain developmental courses. A student must re-enroll to receive credit.	0
COM	Completed. Given in non-credit and continuing education courses.	0

Link to Policies in Student Handbook

Here's the link to the HCC Student Handbook <https://www.hccs.edu/resources-for/current-students/student-handbook/> (<https://www.hccs.edu/resources-for/current-students/student-handbook/>) In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

Link to HCC Academic Integrity Statement

<https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/> (<https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/>)

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<https://www.hccs.edu/departments/police/campus-carry/> (<https://www.hccs.edu/departments/police/campus-carry/>)

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID \(https://www.hccs.edu/resources-for/current-students/student-e-maileagle-id/\)](https://www.hccs.edu/resources-for/current-students/student-e-maileagle-id/) and activate it now. You may also use Canvas Inbox to communicate.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<https://www.hccs.edu/departments/institutional-equity/> (<https://www.hccs.edu/departments/institutional-equity/>))

Ability Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <https://www.hccs.edu/support-services/ability-services/> (<https://www.hccs.edu/support-services/ability-services/>)

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross

Director EEO/Compliance

Office of Institutional Equity & Diversity

3100 Main

(713) 718-8271

Houston, TX 77266-7517 or Institutional.Equity@hccs.edu (<mailto:Institutional.Equity@hccs.edu>)

<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/> (<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>)

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/> (<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>)

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content.

Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely.

Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Canvas Learning Management System

Canvas is HCC's Learning Management System (LMS), and can be accessed at the following URL:

<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

HCC Online Information and Policies

Here is the link to information about HCC Online classes, which includes access to the required Online Information Class Preview for all fully online classes: <http://www.hccs.edu/online/> (<http://www.hccs.edu/online/>)

Scoring Rubrics, Sample Assignments, etc.

Look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. <https://eagleonline.hccs.edu/login/ldap> (<https://eagleonline.hccs.edu/login/ldap>)

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students during office hours, and before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](http://www.hccs.edu/resources-for/current-students/student-handbook/) (<http://www.hccs.edu/resources-for/current-students/student-handbook/>)

Sensitive or Mature Course Content

In this college-level course, we may occasionally discuss sensitive or mature content. All members of the classroom environment, from your instructor to your fellow students, are expected to handle potentially controversial subjects with respect and consideration for one another's varied experiences and values.

EGLS3

The EGLS³ ([Evaluation for Greater Learning Student Survey System](http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/) (<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/> (<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>)

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Student Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services \(http://www.hccs.edu/resources-for/current-students/tutoring/\)](http://www.hccs.edu/resources-for/current-students/tutoring/) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu> (<http://library.hccs.edu/>).

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/> (<http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>).

Resources for Students:

<https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/>
(<https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/>)

Basic Needs Resources:

<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/> (<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/>)

Student Basic Needs Application:

https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH
(https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH)

COVID-19

Here's the link to the HCC information about COVID-19:

<https://www.hccs.edu/resources-for/current-students/communicable-diseases/> (<https://www.hccs.edu/resources-for/current-students/communicable-diseases/>)

Course Calendar

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

When	Topic	Notes
Module 01 Week #1 Online	Introduction to AI - Course Setup, the Big Issues	
Module 03 Week #2 Online	Games, Prelude to AI	
Module 04 Week #3 Online	Games Change Everything	

When	Topic	Notes
Module 05 Week #4 Online	Machine Learning – The Data	Independence Day Holiday July 04.
Module 06 Week #5 Online	Machine Learning – The Pipeline	
Module 08 Week #6 Online	Deep Learning – Real Learning Good Analytics	
Module 10 Week #7 Online	Computer Vision – Image Understanding	
Module 12 Week #8 Online	Natural Language Processing – Speech Does It All	
Module 13 Week #9 Online	Robotics - Grand Tour	MidTerm Glossary due date August 6, 2021.
Final Exam Week #10 Online	Modules Covered	Portfolio due date is August 12, 2021.

Additional Information

Artificial Intelligence

Artificial Intelligence is the current, future discipline fostering the next generation of Computer Science, Networking, Cloud and High Performance Computing environments.

Degrees and Certificates

- Artificial Intelligence (A.I.) - AAS (Associate of Applied Science)

Degree program for Artificial Intelligence will prepare students for the following entry- level job roles:

- A.I. Application Developer
- A.I. Software Architect
- Artificial Intelligence Developer (software)

Employment

Examples of specific jobs held by AI professionals include:

- Software analysts and developers and programmers
- Computer scientists, computer engineers, cyber security specialists
- Algorithm specialists, Data Scientists, Data Engineers, Data Researchers
- Research scientists, engineering consultants, Cloud Computing Specialists
- Mechanical engineers and maintenance technicians.
- Manufacturing and electrical engineers. Software analysts and developers.

The estimated annual job openings is approx. 3,000+ jobs a year.

- Median Wages - \$79 hourly, \$92,000 - \$150,000 annually.

- Job Roles and the shift from Computer Software Developers to AI Developers.

Student Clubs

- Computer Science Association (CSA) club dit.csa@hccs.edu
- Women in Technology (WIT) club <https://hccs.presence.io/organization/women-in-technology>

Process for Expressing Concerns about the Course

If you have concerns about any aspect of this course, please reach out to your instructor for assistance first. If your instructor is not able to assist you, then you may wish to contact the Department Chair.

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