HCC

Instructional Services · Digital and Information Tech · Computer Programming

Programming Fundamentals I-13294

COSC-1436

RT 2021   Section 605   4 Credits   08/23/2021 to 12/12/2021   Modified 08/19/2021

🕐 Course Meetings

Meeting Days

ONLINE

Meeting Location

ONLINE

👤 Welcome and Instructor Information

Welcome to Computer Programming. My name is Javad Ameri. I'm excited that you have chosen this course!

I graduated from University of Houston. I graduated with a BS and MS in Computer Science. I have worked as a faculty member for more than 15 years.

As the title of the course indicates, this is an introductory course to computer programming. The course starts with an overview of programming, both at the coding and designing levels, and an introduction to programming languages and the programming process. The rest of the course will introduce computer programming concepts using Swift.

Please read the **rest of this syllabus** for course description, pre-requisites, students learning outcomes, required textbook and instructional material, course assignments/assessments, as well as other course policies (participation, makeup, etc.). See also the **Course Calendar on Canvas** for assignments/assessments due dates.

As the course progresses, you may encounter challenging ideas or difficulties completing your coursework. I am available to support you. Please feel free to contact me for any questions or assistance in the order of Inbox Email messages within Canvas, or if you are having problems connecting with Canvas, you can use my HCCS email: javad.amerisianaki@hccs.edu. The best way to really discuss issues is send me an email in your Eagle Online Canvas course to tackle the questions. My goal is for you to walk out of the course with a solid foundation of beginning computer programming concepts. Please visit me or contact me by email whenever you have a question.

Instructor: Javad Ameri

- **Email:** javad.amerisianaki@hccs.edu
- **Office:** Virtual
- **Phone:** Virtual
- **Website:** eagleonline.hccs.edu

What's Exciting About This Course

In this course, you will learn how computers work, how to solve problems in systematic and logical ways, and how to design solutions

and code them into programs that can be executed by a computer. You will learn the basic concepts of programming using the Python programming languages. A big part of this course is hands-on. You will get to write programs, not just read about them. It will most likely take more time than anticipated, but the excitement of watching your first programs run is like no other. It's fun, it's exciting, it's challenging, and it's creative.

Instructor: Professor Javad Ameri

Email: javad.amerisianaki@hccs.edu
Office: Virtual
Phone: Virtual

Preferred Method of Contact

Students should send their emails to instructor only from iInbox message in Eagle Online course.

Office Hours

🖥 Course Overview

Course Description

(4 Credits | 96 hours per semester) COSC 1436 introduces the fundamental concepts of structured programming and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. This course is included in the Field of Study Curriculum for Computer Science.

Prerequisites

Must be at college-level skills in reading and writing, **placed into MATH 1314 College Algebra or higher**, and have had high school computer literacy or equivalent. If you have enrolled in this course having satisfied these prerequisites, you have a higher chance of success than students who have not done so. Please carefully read and consider the repeater policy in the HCCS Student Handbook. (http://www.hccs.edu/resources-for/current-students/student-handbook/)

Computer Programming Department Website

https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/computer-programming/ (https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/computer-programming/)

◎ Core Curriculum Objectives (CCOs)

COSC 1436 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 the class project and assignments, along with answering questions on quizzes and exams.
- *Communication Skills*: Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication by completing assignments and participating in online or in-class discussions.
- *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 assignments, and answering questions on quizzes and exams.

📊 Student Learning Outcomes and Objectives

Program Student Learning Outcomes (PSLOs)

Can be found at:

/https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/computer-programming/

Course Student Learning Outcomes (CSLOs)

Upon completion of COSC 1436, the student will be able to:

- Describe how data are represented, manipulated, and stored in a computer.
- Categorize different programming languages and their uses.
- Understand and use the fundamental concepts of data types, structured programming, algorithmic design, and user interface design.
- Demonstrate a fundamental understanding of software development methodologies, including modular design, pseudo code, flowcharting, structure charts, data types, control structures, functions, and arrays.
- Develop projects that utilize logical algorithms from specifications and requirements statements.
- Demonstrate appropriate design, coding, testing, and documenting of computer programs that implement project specifications and requirements.
- Apply computer programming concepts to new problems or situations.

Learning Objectives

Learning Objectives for each CSLO are mapped to course material within Canvas.

☰ Departmental Practices and Procedures

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 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:

- *To complete your own work! Do not copy from outside sources, friends, or tutors. It is very easy to determine when students are using 'copied' code. See below.*
- Attend class in person and/or online
- Be on-time!!
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook/course materials
- 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/)

Program-Specific Student Success Information

There is no short cut for success in this course; it requires reading, studying the material, completing the assignments, *but most importantly, practicing the concepts on your own.*

A programming concept can be used multiple ways. Using a concept once (or twice), in one assignment, will not provide you the necessary proficiency. "Practice" with the concepts on your own.

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

Students may ask questions to other students, to me, or to anyone else. This is how we learn, and we encourage this. **HOWEVER, all work must be started and completed in its entirety on your own. If your code is found online (Chegg, etc…) you will receive a 0. If your code is copied from a classmate, both students will receive a 0. If it is found that students are sharing the same files, and then making minor changes to submit the work as their own, both students will receive a 0 on the assignment and may possibly be removed from the class. Note: It is very easy for instructors to determine if code was copied from another student. Please refer to the student handbook regarding cheating. For more information see the Academic Integrity section of the syllabus, shown below.**

📙 Instructional Materials and Resources

Instructional Materials

This course uses a book called "Introduction to Python Programming and Data Structures"; Author Daniel Liang in Pearson Revel software. Students do not need to buy the textbook. The instructional materials are provided for you. All course materials and textbook materials will be made available to you via our Canvas course. Students will need to purchase access code from bookstore or Pearson website.

Pearson Revel

All students must create an account in Pearson Revel to access course resources and assignments. Click on the following link to learn how to create your account and access course material in Pearson Revel:

[Pearson Revel Instructions for Students (https://www.pearsonhighered.com/revel/students/registration/register-lms.html)](https://www.pearsonhighered.com/revel/students/registration/register-lms.html)

Under brightspace by D2L:

- Click on Registration instructions (to read the instructions in PDF format)
- Click on Registration instructions video (to watch the instructions in video)

The *Develop in Python Explorations* online text will introduce you to core programming concepts through hands-on activities, You'll also have opportunities to think about the impact of computing innovations, and the decisions you make about your actions online and as an app developer.

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.

Add Instructional Materials Here

Introduction to Python Programing Data Structures

Author: Daniel Liang
Publisher: Pearson
Edition: First edition

✔️ Course Requirements

Assignments, Exams, and Activities

TYPE	WEIGHT
FINAL EXAM	20%
MID-TERM EXAM	20%
REVEL ASSIGNMENTS	20%
PROGRAMMING ASSIGNMENTS	20%

CHAPTER QUIZZES	15%
DISCUSSIONS	5%

Grading Formula

Grade	Range	Notes
A	90 - 100	
B	80 - < 90	
C	70 - < 80	
D	60 - < 70	
F	0 - < 60	

✳ 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

Late work may be accepted with a penalty.

Make-up exams will *only* be given in cases of extenuating circumstances. Extenuating circumstances are **unexpected and unavoidable** situations such as hospitalization, auto accidents, etc. You will need to provide documentation to your instructor as soon as possible after (or even before, if possible) 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.

If you will be out of town during the final exam dates, you must inform your instructor at least 2-weeks PRIOR to the exam.

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

Students should log in to the course on the first day of class. Students should also log in and complete work on time as documented. It is recommended to log in daily during the summer sessions. If you have not already done so, it is suggested to download the Canvas app onto your phone so that you can be notified when new e-mails and announcements are posted.

Student Conduct

Three simple rules:

(1) Students should be respectful to everyone in the classroom.

(2) Students should be willing to spend time on this course.

(3) Students should be ready to learn and have fun.

Instructor's Course-Specific Information

The course modality of this class is *online Anytime (WW)*. Faculty will instruct this class as a traditional online course utilizing Canvas Eagle Online. Attendance will be taken through completion of online assignments.

The most important advise I can give you is to practice. Assignments are not always able to be completed an hour or two before the due date. For some, it may take a couple of days of practice. For others, it may take even longer. Summer courses move at a fast-pace. Start work immediately and work ahead so that you have extra time when, or if, it is needed.

Devices

Students should have access to a Windows PC/laptop or a Mac/Macbook.

Faculty Statement about Student Success

Add Content Here

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.

Social Justice Statement

Add Content Here

🏛 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

Grade	Grade Interpretation	Grade Points
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/) 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: https://www.hccs.edu/online/ (https://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 (https://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 EGLS[3] (Evaluation for Greater Learning Student Survey System (https://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.

https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/ (https://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 (https://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 https://library.hccs.edu (https://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 https://www.hccs.edu/resources-for/current-students/supplemental-instruction/ (https://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/)

Instructional Modalities

In-Person (P)

Safe, face-to-face course with scheduled dates and times

Online on a Schedule (WS)

Fully online course with virtual meetings at scheduled dates and times

Online Anytime (WW)

Traditional online course without scheduled meetings

Hybrid (H)

Course that meets safely 50% face-to-face and 50% virtually

Hybrid Lab (HL)

Lab class that meets safely 50% face-to-face and 50% virtually

📅 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.

Course Calendar

DUE DATE	MODULE
10/02	CHAPTER 1 MODULE
10/02	CHAPTER 2 MODULE
10/02	CHAPTER 3 MODULE
10/16	CHAPTER 4 MODULE
10/16	CHAPTER 5 MODULE
10/13	MID-TERM EXAM
12/04	CHAPTER 6MODULE
12/04	CHAPTER 7 MODULE
12/04	CHAPTER 1 MODULE
12/08	FINAL EXAM

☰ Additional Information

Computer Programming Information

Houston Community College's Computer Programming offers Associate of Applied Science (AAS) degrees, an Associate of Arts (AA) degree, an Associate of Science (AS) degree, and various certificates that help students develop the knowledge, communication and creative skills, critical thinking, and technical competencies required in the modern workplace.

Visit the [Computer Programming website (https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/computer-programming/)](https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/computer-programming/) for more information about our programs.

Award Types

- Associate in Science
    - Computer Information Systems
- Associate in Arts
    - Computer Science
- Associate of Applied Science
    - Cloud Computing and Application Development
    - Application Development (in C++, Java, Python, Swift, C#)
- Certificate Level 2
    - Database Administrator
    - Mobile Application Developer
    - Web Application Developer

Student Organizations

- [Computer Science Association (https://hccs.presence.io/organization/computer-science-association)](https://hccs.presence.io/organization/computer-science-association) (CSA)
- [Women in Technology (https://hccs.presence.io/organization/women-in-technology)](https://hccs.presence.io/organization/women-in-technology) (WIT)

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.

- Ancelin (Anci) Shah
- [anci.shah@hccs.edu (mailto:anci.shah@hccs.edu)](mailto:anci.shah@hccs.edu)
- 713-718-7939