Division of Digital and Information Technology Computer Programming Department

https://www.hccs.edu/programs/areas-of-study/science-technology-

engineering--math/computer-programming/

COSC 1436: Programming Fundamentals I (Using C++)| Lecture| #10656

Fall 2019 08/26/2019 - 12/15/2019 face to face
4 Credit Hours | 96 hours per semester

2811 Hayes Rd. C422 (713)718-6576

Instructor Contact Information

Instructor: homied,Asgary   Office Phone: 713-718-6576
Office: 2811 Hayes, Room C422   Office Hours: posted on CANVAS   HCC
Email: homied.Asgary @hccs.edu   Office Location: NW 2811 Hayes   Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear the concerns and just to discuss course topics over the **class email (Inbox) 24 by 7**.

Instructor's Preferred Method of Contact
Please set appointment before stop by office by class email or HCC email.

I will respond to emails within 24 hours Monday through Friday; I will reply to weekend messages on Monday mornings.

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 these solutions and code them into programs that can be

executed by a computer. You will learn the basic elements of C++ which is one of the most widely used programmings languages in the industry, the various ways of storing and organizing data, the fundamental programming constructs such a decision structures, loops, and functions, and the mechanics of testing and debugging programs.

My Personal Welcome

Welcome to Programming Fundamentals I. My name is Homied Asgary, professor of Computer Science at HCC. I'm delighted that you have chosen this course!

As its title indicates, this is an introductory course to computer programming. The course starts with an overview of computers, both at the hardware and software levels, and an introduction to programming languages and the programming process. The rest of the course will provide an introduction to computer programming using java.

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. The fastest way to reach me is through Canvas Inbox e-mail. If, for any reason, you can't access Canvas, you can reach me at my HCC email ([homied.asgary.@hccs.edu)](mailto:homied.asgary.@hccs.edu). The best way to really discuss issues is in person and I'm available during posted office hours to tackle the questions. My goal is for you to walk out of the course with a solid understanding of computer programming and its applications. So please visit me or contact me by email whenever you have a question.

Prerequisites and/or Co-Requisites

Must be at college-level skills in reading and writing, place 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.](#)

Canvas Learning Management System

This section of COSC 1436 will use [Canvas](https://eagleonline.hccs.edu) (https://eagleonline.hccs.edu) to supplement inclass assignments, exams, and activities. For the seven chapter we have to cover on this class, on Canvas, I have extra video and hand out example. Please When you get the permission to login the Canvas, look the tile first day of class instruction and review all option on Module page and the **My recommendation learn how to write program** HCCS Open Lab locations may be used to access the Internet and Canvas. **USE [FIREFOX](#) OR [CHROME](#) AS THE INTERNET BROWSER**.

HCC Online Information and Policies

Here is the link to information about HCC Online classes including the required Online Orientation for all fully online classes: http://www.hccs.edu/online/

Scoring Rubrics, Sample Assignments, etc.

Look in Canvas for samples of class assignments, and other information to assist you in the course.

Instructional Materials
Textbook Information

The textbook listed below is *required* for this course.
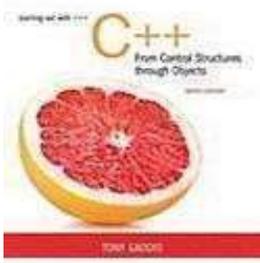
"**Starting Out with C++ from Control Structures to Objects**" by T. Gaddis 9th Edition

Other Instructional Resources

Available on the Canvas resource of the module page.

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. Also, I will posting the programming tutoring schedule on home page of Canvas, when I recived form Department.

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

This course will be using Internet and videos materials (Java Tutorial) that are designed as supplemental to your text book. These on line materials will be sufficient for some students

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/currentstudents/supplemental-instruction/.

Course Overview

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. CSOC 1436 is in the Computer Science Field of Study course list.)

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 programming assignments that involve analyzing a problem, designing a solution to solve the problem, and implementing the solution including testing it against problem specifications and debugging it.
- *Communication Skills*: Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication by analyzing the merits and drawbacks of alternative approaches to solving problems through online or in-class discussions and/or answering questions on quizzes and exams.
- *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.

Program Student Learning Outcomes (PSLOs)

Can be   found at:
https://www.hccs.edu/programs/areasofstudy/sciencetechnologyengineeringmath/computerprogramming/

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 under development.

Chapter1: Introduction to computer Program?, Computer Systems, Hardware and Software & more.

Chapter2: Print Method, Println Method Example video Clip, Variable and Literals, Reserved word, Primitive data type for numeric data List Example
Escape Sequences
(
\n
\t
\b
\r
\\
\"
\'
)
Arithmetic Operator, Integer Division, Operator Precedence List, using Math Class, Combined Assignment Operator

Chapter 3: Boolean expressions, if statements, if statements with block statements, if - else statements, Relational Operators, Boolean Expressions, Logical Operators (||, &&, !)
Relational Operators and Boolean expressions, Unary, negation (!), Multiplication and Division, and Modulus (*, /, %), Addition and subtraction (
- , +) Less - than, Greater - Than, Less - Than or equal to, Greater - Than or equal to (<>
<= >=) Equal to (==) Not equal (!=) Logical NOT (||)
The order of Precedence, Comparing string object Scope & Conditional operator
Epression1? Epression2: Epression3 X=10; y=15; int result = (x>Y) ? 10:5; //then result is5
Switch Statement, Comparing Character and object by using class equal.

Chapter 4: while loop, do loop for loop, nested loop Combine for - loop and nested if else with jeliot Simulation File Input and Output Reading data from a file (FileReader) checking/detecting the end of file & number of lines to read from file Writing data to a file and close file (FileWriter), try, catch, exception on file I/O The Random Class, String Value Conversion

Midterm Exam

Chapter 5: Passing Arguments to a Method/function, More About Local Variables, Returning a Value from a Method, Problem Solving with Methods, returning object form method.

Chapter 6: First look at object, Classes and Objects: Simple Class, Instance Fields, Methods and Object Public private & static Method and class property and methods.

Chapter 7: Primitive variables and Array, Creating Arrays Bounds Checking, Array Initialization, Alternate Array Declaration, ,Reassigning Array, References, Copying Arrays, Passing Array Elements to a Method Useful feature of Array, Finding the Highest Value, Finding the Lowest Value, Summing Array Elements, Comparing Arrays Elements Swap elements Averaging Array Elements, Sort Array Elements
Search for Element in array, Sequential Search, Parallel array, and Two Dimensional Array
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 programming assignments. The assignments provided will help you practice the concepts discussed in class lectures and hone your programming hand-on skills. 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 studying the material and more importantly completing the programming assignments.

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 ss as needed

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

Assignments, Exams, and Activities

Programming Assignment

There will be several programming assignment in each module, form your test book or handout., all programming assignments will be assigned and submitted for grading, require you to write a full program. Programming Assignments are to be completed individually. See Grading Formula below for programming assignments weight toward your course grade.

Quizzes

Quizzes are short assessments administered online (on Canvas) each consisting of a set of multiple-choice question covering material in one module. The purpose of quizzes is to help you assess your knowledge of the material covered in a module and prepare for the major exams.
Quizzes y are to be completed individually and may not be made up for any reason. There will be one quiz in each module.

Exams

There will be midterm test and a final exam**.** All exams will be closed-book, closed-notes, proctored exams to be taken in-person. Please see Grading formula for the weight of each exam toward your course grade and see the Course Calendar on Canvas for scheduled exam dates and the time limit for each.

In-Class Activities

this is on-line class

Final Exam

The final exam will be administered on campus (i.e. must be taken in person). It will be closed book, closed notes and comprehensive.

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.

Grading Formula

This is just a sample. You may also use percentages instead of point system.

Programming Assignments 20 points
Quizzes   20 points
Exams   30 points each
Final Exam   30 points

Grade	Total Points
A	90+
B	80-89
C	70-79
D	60-69
F	< 60

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.

HCC Grading Scale can be found on this site under Academic Information:

http://www.hccs.edu/resources-for/current-students/student-handbook/

Course Calendar

Date	Details	Due Date 11:59PM
Sat Feb 1, 2020	Assign0	due by 11:59pm
Sun Feb 9, 2020	Quiz01	due by 11:59pm
	assign1	due by 11:59pm
Sun Feb 16, 2020	Assign2_1	due by 11:59pm
Sun Feb 23, 2020	Quiz02	due by 11:59pm
	Assign2_2	due by 11:59pm
Sun Mar 1, 2020	Quiz03	due by 11am
	Assig3_1	due by 11:59am
	Quiz04	due by 11:59am
Sun Mar 8, 2020	Assign4_1	due by 11:59am
Mon Mar 16, 2020	Quiz07	due by 11:55am
Tue Mar 24, 2020	Quiz05	due by 11:59am
Fri Mar 27, 2020	assign5_1	due by 11:59am
	Midterm2020	due by 11am
Sun Apr 5, 2020	Assign6.1	due by 11:59am
Sat Apr 11, 2020	Quiz06	due by 11:59am
Sun Apr 12, 2020	Assign6.2	due by 11:59am
Fri Apr 24, 2020	Assign7.1	due by 11:59am
Thu Apr 30, 2020	Final P(c++) Fact to Face	due by 1pm

Final Exam is NW college, correct date will posted close to End of this term

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.

Instructor's Practices and Procedures

Missed Assignments

<< Modify Section & Delete Placeholder Text >> Insert your make-up policy for course work other than the departmental final exam. It is acceptable to have a "no makeups" for exams if you drop the lowest exam. You may also allow makeups accompanied by a latework penalty. You might consider requiring documentation of an emergency to allow a make up. Please also clearly state that a make-up exam is not a retake. That is, make-up exams are allowed only for missed exams. You are responsible for proctoring make-up exams if you allow them.

Academic Integrity

<< Modify Section & Delete Placeholder Text >> Insert a specific description of your expectations for academic integrity. Specify the consequences for cheating, plagiarism, collusion, etc. Consider including the following statement: Scholastic Dishonesty will result in a referral to the Dean of Student Services. See the link below for details.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):
http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/studentprocedures/

Attendance Procedures

<< Modify Section & Delete Placeholder Text >> Insert a specific description of your expectations for attendance. Be specific about In-Person, Hybrid, and Online classes. Include your practice regarding withdrawals, never attending, etc.

This is an on-line class:
You MUST submit your weekly assignments, otherwise you will be drop from this class.

Important: **If you missed the first assignment, I have to mark you as absent.on class schedule and HCC will drop you form class, this is Official Day of Record rule.**

This on-line class if you did not

Student Conduct

<< Modify Section & Delete Placeholder Text >> Insert a specific description of your expectations for student conduct. Be specific about In-Person, Hybrid, and Online classes and the consequences that will be implemented for disruptive behavior.

Instructor's Course-Specific Information (As Needed)   <<

Modify Section & Delete Placeholder Text >> Insert additional information on how you

manage your course. For example, include your grading policy describing when students can expect grades and feedback after they submit coursework. For on-line class, you MUST pass the final exam, >60 or 60+.

<div align="center">

Electronic Devices
</div>

<< Modify Section & Delete Placeholder Text >> Insert a specific description of your expectations regarding electronic devices.

HCC Policies

Here's the link to the HCC Student Handbook http://www.hccs.edu/resourcesfor/currentstudents/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

<div align="center">

EGLS³

</div>

The EGLS³ (<u>Evaluation for Greater Learning Student Survey System</u>) 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/resourcesfor/currentstudents/egls3evaluate-your-professors/   **Campus Carry Link** Here's   the link to the HCC information about Campus Carry:
http://www.hccs.edu/departments/police/campus-carry/

<div align="center">

HCC Email Policy

</div>

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 and activate it now. You may also use Canvas Inbox to communicate.

<div align="center">

Housing and Food Assistance for Students

</div>

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.

<div align="center">

Office of Institutional Equity

</div>

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

disAbility 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   http://www.hccs.edu/supportservices/disabilityservices/

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
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/abouthcc/procedures/studentrightspolicies-procedures/studentcomplaints/speak-with-the-dean-ofstudents/

Department Chair Contact Information   Reni Abraham
reni.abraham@hccs.edu 713)718-2067