



**Digital and Information Technology, Center of Excellence
Computer Programming Department**

<https://www.hccs.edu/programs/areas-of-study/science-technologyengineering--math/computer-programming/>

**COSC 1436: Fundamentals of Programming I (C++)
LECTURE/LAB | CRN: 19292**

Fall 2019 | 16Weeks (8.26.2019 -12.15.2019)
Online | 4 Credit Hours | 96 hours per semester

Instructor Contact Information

Instructor:	Reni Abraham, Ed.D.	Office Phone:	713-718-2067
Office:	West Loop	Office Hours:	Fraga STEM Bldg. 203 7:30am-8:00am 1:50pm-2:50pm
HCC Email:	reni.abraham@hccs.edu	Office Location:	West Loop

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.

Instructor's Preferred Method of Contact

Email is the best way to contact me. I will respond to your course in Canvas/Eagle Online (EO) Inbox Email much quicker than HCC Email/Phone. I will respond to emails within 48 hours Monday through Friday; reply to weekend messages Tuesday morning.

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 solution 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 programming 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. I will take you through the steps of programming concepts and implementing them in the code. So, get ready!

My Personal Welcome

Welcome to Introduction to Game Programming. My name is Reni Abraham, professor of Digital Gaming and Simulation at HCC. I have a Bachelor of Science (BS) and a Master of Science (MS) in Computer Science and went on to complete a Doctor of Education (Ed.D.) in my 50s. In 2005, I had the pleasure to start the gaming program at HCC. Now I have completed 27 years of service at HCC. I am delighted that you have chosen a career in gaming programming and enrolled in this course!

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

As the course progresses, you may encounter difficulties completing your coursework. I am available to support you. The fastest way to reach me is through Canvas Inbox e-mail. My goal is for you to walk out of the course with a solid understanding of computer programming and its applications. So please 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>) for all class activities. I expect my students to logging into Canvas at least twice a week.

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 the scoring rubrics for assignments, and other information to assist you in the course. <https://eagleonline.hccs.edu/login/ldap>

Instructional Materials

Textbook Information

The textbook listed below is **required** for this course.



Starting Out with C++ from Control Structures to Objects Plus MyLab Programming -- Access Card Package, T. Gaddis 9th Edition, Pearson.

The book is included in a package that contains the text as well as an access code to MyProgrammingLab (also known as MyLab Programming, MPL, MLP, or MyLab) and are found at the HCC Bookstore. You may either use a hard or electronic copy of the book or rent the e-book from Pearson.

Textbook available in Paper-back, Loose leaf, and eText Plus MyLab:

Loose-leaf: ISBN 9780134596174

Paper-back: ISBN 9780134544847

eText: ISBN 9780134484198

When registering for MyLab you will need the following:

1. An access code which comes with the book when purchased from the HCC bookstore (or the eText from the MyLab website).
2. Our section Course ID: **HCC-SWWES-2855-0** (more info. on registering to MyLab @ <http://myprogramminglab.com> will be available within our Canvas course)

Note: If you purchase a used textbook, make sure it has the access code to MPL. Most often used books don't. If the textbook you purchase doesn't come bundled with the MPL access code, you must purchase an access code separately from the MPL website.

Other Required Resources

The course requires that you have access to an IDE (Integrated Development Environment). We will use the **Microsoft Visual Studio**. There is a free Community Edition that can be downloaded for Windows at: <https://www.visualstudio.com/vs/community>

NOTE: You must have access to a computer running a Microsoft Visual Studio IDE with access to the Internet to be able to complete this class.

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 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. COSC 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/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 under development.

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
- Logging in to your class in online
- Completing assignments and all required work
- Participating in all 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 and quizzes.

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:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with the instructor
- Read and comprehend the textbook
- Complete the required assignments, quizzes and all other required work.
- 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
- Manage your personal life (work, playing games, etc.) wisely.

Assignments, Exams, and Activities

Programming Assignment

There will be one or more programming assignments from each chapter. All assignments will be posted in Canvas. 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 objective questions covering material over the chapter. The purpose of quizzes is to help you assess your knowledge of the material covered in the chapter topic and prepare you for the comprehensive final. Quizzes are to be completed individually and may not be made up for any reason.

Comprehensive Final Exam

The comprehensive final is encompassed of all the topics. The best preparation for the final is to study the individual quizzes.

Make-up for quizzes or comprehensive final exam 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 written 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

Percent	Item	Grade
30%	Programming Assignments	A = 100- 90
50%	Chapter Quizzes (Canvas)	B = 89 - 80:
20%	Comprehensive Final (Canvas)	C = 79 - 70:
100%	Total	D = 69 - 60:
		59 and below = F
		FX (Failure due to non-attendance)

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. The grade of "I" (Incomplete) is conditional. A student receiving an "I" must arrange with the instructor to complete the course work within six months of the end of the incomplete term. After the deadline, the "I" becomes an "F." Upon completion of the coursework, the grade will be entered as I/grade on the student transcript. All "I"s must be changed to grades prior to graduation.

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

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

Instructor's Course-Specific Information (As Needed)

- FLASH DRIVE** A 1GB or larger flash drive is required for on-campus students by the second day of class. We will use this flash drive to store all practice and assignment files. It is **recommended** for online students to use a flash drive for portability and security of their data.
- COURSE WEBSITES** There are two course websites:
 - Students will log into Canvas to access this course. **THIS IS OUR CLASS WEBSITE AND YOU MUST CHECK IT AT LEAST BI-WEEKLY.** You may access Eagle Online many ways:
 - Proceed directly to the EO website to access the course in Canvas:
<http://eagleonline.hccs.edu>

- Alternatively, navigate to <http://hccs.edu/online>, under the Resources area, select **Eagle Online (Canvas) Log in**.
- Lastly, navigate to <http://hccs.edu>, scroll down to College Links (right column at the bottom of the screen), select **Eagle Online (Canvas)**.

ii) Students will log into MyLab Programming to complete assignments. MyLab Programming is a Computer Assisted Learning tool that allows you to submit your solution to a programming problem/exercise online, and at the same time checks if your solution meets the problem's specifications. You may access MyLab through the website at myprogramminglab.com

3. **ADOBE READER SOFTWARE** is REQUIRED. Go to <http://www.adobe.com>. More information is available in the first module of our course.

4. **COMMUNICATION WITH INSTRUCTOR**

The Inbox Email tool within Canvas will be the communication tool to compose and view email(s) to your instructor.

- a. Emails from your instructor will be accessible via Eagle Online Inbox, though you may forward them to your cell phone or other email.
- b. If you send email directly to me outside of our course website (Eagle Online), then you must put in the proper subject line with the CRN, course name, and your full name in the format:

COSC1436C++-CRNXXXXX YourLastname, YourFirstname

NOTE: Emails received without this information in the subject line will be unanswered.

5. **ONLINE STUDENTS:** You must complete the Eagle Online Orientation for this specific course before beginning the course.

6. **POP UP** If a pop-up is blocked, you will need to set your pop-up blocker to allow pages from our Eagle Online and MyLab sites. The technical requirements section of the orientation will discuss how to allow pop-ups from Eagle Online. Do this before beginning the course as many of the early links in the course are pop-ups!

7. **LOGIN CREDENTIALS (USERID/PASSWORD)**

- a. **EAGLE ONLINE** Your Eagle Online login 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. **YOU WILL NEED TO KNOW THIS USER ID AND PASSWORD WHEN YOU COME TO TAKE THE FINAL EXAM!!**
- b. **MYLAB PROGRAMMING** Is another account you will create to work on your course assignments. More info. will be posted in your course module in canvas.

NOTE: Make sure and keep these accounts and passwords handy for when you log in to the applications on different PCs. Many students have the PC automatically log them in and then are unable to log into the applications on other PCs.

8. TECHNICAL SUPPORT

- a. **EAGLE ONLINE** Go to <http://hccs.edu/online> and scroll down to click on Technical Support (tile/link within the page). In the Technical Support page that appears, scroll down to expand Eagle Online Technical Support which contains the three support methods available:
- Student Help link: The recommended way to get help is to complete this form
 - Technical Support number: 713-718-5275, option 3
 - IT Password Reset number: 713-718-8800, option 1
- b. **MYLAB PROGRAMMING** Technical issues with MyLab should be directed to Pearson MyLab Support

<https://www.pearsonmylabandmastering.com/northamerica/myprogramminglab/students/support/index.html>

Course Calendar

Week		Topic	Chapter
1	Aug. 26	Syllabus Introduction to Computers and Programming	Chap. 1: Introduction to Computers and Programming
2	Sep. 2	Variables, Constants, Data Types	Chap. 2: Introduction to C++
3	Sep. 9	Expressions, Input, and Output	Chap. 3: Expressions and Interactivity
4	Sep. 16	Selection	Chap. 4: Making Decisions
5	Sep. 23		Quiz 1: Chap. 2 & 3
6	Sep. 30		Quiz 2: Chap. 4
7	Oct. 7	Iteration and File I/O	Chap. 5: Loops and Files
8	Oct. 14		Quiz 3: Chap. 5
9	Oct. 21		Chap. 6
10	Oct. 28		Quiz 4: Chap. 6 Chap. 7
11	Nov. 4	Functions	Chap. 6
12	Nov. 11		Chap. 7
13	Nov. 18		Chap. 7
14	Nov. 25	Arrays	Chap. 7
Thanksgiving Holidays Nov. 28-29, 2019			
15	Dec. 2	Arrays contd.	Chap. 7
16	Dec. 9	Comprehensive Final Monday, Dec. 9, 2019 from 11am – 1pm	

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

Make-up Exam (or Quiz) Policy

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.

Missed Assignments

All assignments DUE DATE TIMES ARE 11:59pm on the day they are due. No late assignments will be accepted. If you are having problems completing course materials on time (by the "Due Date"), chat with the instructor. If you have over scheduled your life (working 40 hours a week and taking 15-20 credit hours of college instruction), or have computer problems (my computer is broken, and I don't know when it will be fixed), etc., DON'T BE SURPRISED if the instructor suggests you should withdraw from the course. In other words, the instructor will expect materials to be submitted by the "Due Date".

Academic Integrity

Studying together is allowed, however, programs that look the same will be graded but the total points will be divided equally among the participants for the first offence, after that you will be referred to the Dean of Students.

Scholastic Dishonesty will result in a referral to the Dean of Student Services. See the link <http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

Attendance Procedures

1. On-campus students may be withdrawn if the student is absent for more than 12.5% of class. See the Student Handbook for more information.
2. Online students may be withdrawn before the Official Day of Record if they have not logged in or shown enough participation. See the Online Student Handbook for more information.
3. 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.
4. Contact your instructor if you are having a problem.

5. If you decide to quit participating in the course before the Last Day for Administrative or 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 you instructor for details.
6. After the withdrawal deadline, the instructor is not able to withdraw you.
7. You may receive an FX as your grade due to lack of participation if you have not withdrawn yourself.

Student Conduct

Students are expected a have good conduct throughout the course in any form of communications for the online course.

HCC Policies

Here's the link to the HCC Student Handbook <http://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

EGLS³

The EGLS³ (Evaluation for Greater Learning Student Survey System) 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/>

Campus Carry Link

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

<http://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](#) and activate it now. You may also use Canvas Inbox to communicate.

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.

Office of Institutional Equity

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/support-services/disability-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 based on 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/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

Department Chair Contact Information

Ali Nikzad ali.nikzad@hccs.edu (713)718-5546