Computer Science Technology

Houston Community College

COSC 1436 Programming Fundamentals I C++
Course Syllabus

Instructor **Note: You will have TWO instructors for this course**	**(1) Samir Saber** **Tel: 713-806-2884** **Email: samir.saber@hccs.edu samirsaber@gmail.com** **Website: http://csnw.net/** **(2) Ancelin (Anci) Shah** **Email: anci.shah@hccs.edu** 　　**(Though, the _Inbox_ link in our Eagle Online Course is the best way to email me)**
Course Reference Number (CRN)	12371
WECM Course Description:	Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy.
Course Prerequisite(s)	Must be at college-level skills in reading and writing, place into MATH 1314 College Algebra or higher.
Course Semester Credit Hours (SCH) (Lecture, Lab) if applicable	4 (3 Lecture, 3 Lab)

Course Location/Times	Distance Education Eagle Online -> https://eagleonline.hccs.edu/	**Total Course Contact Hours**	96

Textbook	You can purchase the book from this course from the bookstore or online. **C++ Programming: Program Design Including Data Structures** 　　**by D.S. Malik** 　　**7th Ed.** 　　**Publisher: Cengage** You have TWO choices: (1) Buy the book for COSC 1436 C++ ONLY online 　　a. Get this one if you are just planning to take COSC1436 (and not the next two courses) (2) OR IF YOU ARE PLANNING to take all three C++ courses (three semesters), you can get the bundle from the bookstore (recommended). The bundle from the bookstore has an excellent price so this is probably the better choice. It also comes with access to online practice exercises.

	a. These books are custom designed for HCC and heavily discounted. **b.** This is the ISBN at the bookstore: ISBN: 9781337745710 Is the book required? Yes. I think the author does a good job at covering the material, but at the same time some of the content is confusing and I try to clear it up as much as I can with slides and notes, etc... I always encourage students to learn from as many (good) sources as possible because you will get different angles and insights and get a much more complete learning experience, but the book is the first place to start.		
Instructional Methods	Distance/Dual Credit	**Type of Instruction**	Online/Dual Credit
Course Length (number of weeks)	16		

Course Requirement, Policy, and Course Calendar

Course Requirements and Expectations	- Read the notes - Go through the labs - Watch the lecture videos - Don't procrastinate – keep it nice and steady and you will be fine (otherwise you will fall behind quickly) - Respect and help your peers - Don't cheat & don't plagiarize! - Be open minded, use this course to expand your IT knowledge and horizon - Have fun!
Make-up Exam Policy	Make-up tests are allowed only due to emergencies (must have valid proof).
Academy Dishonesty	Academic dishonesty is not a substitute for a successful completion of this course in any manner. **Your independent work is accepted and credited accordingly and you must not engage in an activity that will jeopardize this**. Please do no plagiarize for your project - the content will be checked using special software.
Use of Personal Communication devices in class	Not allowed during exams
Instructor Grade Criteria	

Course Grading	
Midterm Exam	*30%*
Final Exam	*30%*
Projects	*25%*
Attendance/Participation	*15%*
Note: these are subject to change.	

Course Calendar

Session	Week	Chapter	Description
Jan 23 – Jan 29	1	Chapter 1	Course introduction / prep An Overview of Computers and Programming Languages First simple program
Jan 30 – Feb 5	2	Chapter 2	Basic Elements of C++ (first half) / Lab work
Feb 6 – Feb 12	3	Chapter 2	Basic Elements of C++ (second half) / Lab work
Feb 13 – Feb 19	4	Chapter 3	Input/Output (first half) / Lab work
Feb 20 – Feb 26	5	Chapter 3	Input/Output (second half) / Lab work
Feb 27 – Mar 5	6	Chapter 4	Control Structures I (Selection) / Lab work
Mar 6 – Mar 12	7	Chapters 1-4	Additional Lab work / practice / Review for Midterm
Mar 6 – Mar 12	7	Chapters 1-4	Midterm Exam (Dates TBA)
Mar 20 – Mar 26	8	Chapter 5	Control Structures II (Repetition) (first half) / Lab work
Mar 27 – Apr 2	9	Chapter 5	Control Structures II (Repetition) (second half) / Lab work
Apr 3 – Apr 9	10	Chapter 6	User-Defined Functions (first half) / Lab work
Apr 10 – Apr 16	11	Chapter 6	User-Defined Functions (second half) / Lab work
Apr 17 – Apr 23	12	Chapter 7	User-Defined Simple Data Types, Namespaces, and the string Type / Lab work
Apr 24 – Apr 30	13	Chapter 8	Arrays and Strings / Lab work
May 1 – May 7	14	Chapters 5-8	Additional labs / Review for final
Final Exam Week Starting on May 8th	15	Chapters 5-8	Final Exam and Projects Due (Dates: ***To Be Announced***)

Information on the project:

For your project you are to create a program with the topic of your choice that incorporates ten concepts that you have learned in this course. I will give extra credit if you are creative. Please do not copy paste code from the Internet and make your own! I will be using a tool that checks for plagiarism so just don't!

The project is due: <mark>To Be Announced</mark>

Examples of topics:

- A store selling items
- A survey
- A game

Examples of concepts you've learned:

- Input
- Output
- Various data types

- Loops
- Functions
- Enumeration types
- Arrays

Have fun with this! For your submission, please email me either: Your .cpp file (source code), your project folder (zipped), or a Word document with your code - all three are ok with me. My email is samir.saber@hccs.edu as you know.

You will find a video with examples of previous students' projects on Eagle Online.

Learning Objective, Students Learning Outcome, and Program Spec

Note: This section of the syllabus provides the general course learning objectives, the expected students learning outcome, the course scope in terms of the department program, and the instrument used to evaluate the course. If you have any question, contact the instructor or the department for answers.

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<td>HCC Grading Scale</td>
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Grade	GPA Points
A = 100- 90	4 points per semester hour
B = 89 - 80:	3 points per semester hour
C = 79 - 70:	2 points per semester hour
D = 69 - 60:	1 points per semester hour
59 and below = F	0 points per semester hour
IP (In Progress)	0 points per semester hour
W(Withdrawn)	0 points per semester hour
I (Incomplete)	0 points per semester hour
AUD (Audit)	0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses. To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.

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<td>EGLS3 -- Evaluation for Greater Learning Student Survey System</td>
<td>At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.</td>
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<td>Course Student Learning Outcomes (SLO):</td>
<td>1. Develop essential operating systems skills including how to use, setup, configure, troubleshoot and maintain a current microcomputer operating system
2. Use and configure essential office applications and Help other technology users, develop training and maintenance plans and to translate new technical knowledge so that others can use it
3. Install, Configure, and Administer Linux/UNIX and other systems</td>
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	4. Document work log, write clearly and appropriately in an Information Technology context, respect user's data, including backup and security
Learning Objectives	1. Develop essential operating systems skills including how to use, setup, configure, troubleshoot and maintain a current microcomputer operating system 2. Use and configure essential office applications and Help other technology users, develop training and maintenance plans and to translate new technical knowledge so that others can use it 3. Install, Configure, and Administer Linux/UNIX and other systems 4. Document work log, write clearly and appropriately in an Information Technology context, respect user's data, including backup and security
Student Assignments	Refer to the Course Calendar
Student Assessment(s)	Use basic UNIX commands; No assessments selected for this outcome Apply terminal emulation; No assessments selected for this outcome Use a system editor; No assessments selected for this outcome Manage individual user accounts and files; No assessments selected for this outcome
Program/Discipline Requirements:	Instructors will use syllabus that will satisfy CurricuUNET requirements and improve on-going assessment of student-centered learning and teaching.
Academic Discipline/CTE Program Learning Outcomes	1. Develop essential operating systems skills including how to use, setup, configure, troubleshoot and maintain a current microcomputer operating system 2. Use and configure essential office applications and Help other technology users, develop training and maintenance plans and to translate new technical knowledge so that others can use it 3. Install, Configure, and Administer Linux/UNIX and other systems 4. Document work log, write clearly and appropriately in an Information Technology context, respect user's data, including backup and security
SCANS and/or Core Curriculum	Use basic UNIX commands; Apply terminal emulation; Use a system editor; Manage individual user account and files.
HCC Policy Statement	
Access Student Services Policies on their Web site:	http://www.hccs.edu/district/students/student-handbook/
Distance Education and/or Continuing Education Policies	
Access DE Policies on their Web site:	http://de.hccs.edu/media/houston-community-college/distance-education/student-services/pdf/2015-HCC-DE-Student-Handbook-(Revised-5_28_15)_will.pdf
Title IX of the Education Amendments of 1972	Title IX of the Education Amendments of 1972 requires that institutions have policies and procedures that protect students' right with regard to sex/gender discrimination. Information regarding these rights are on the HCC website under Student-Anti-discrimination. Students who are pregnant and require accommodations should contact any

	of the ADA Counselors for assistance. It is important that every student understand and conforms to respectful behavior while at HCC. Sexual misconduct is not condoned and will be addressed promptly. Know your rights and how to avoid these difficult situations. Log in www.edurisksolutions.org. Sign in using your HCC student email account, then go to the button at the top right that says Login and enter your student number.
Meningitis immunization	Texas Senate Bill 1107 passed in May 2011, requires that new HCC students and former HCC students returning after an absence of at least one fall or spring semester who are under the age of 30 to present a physician-signed certificate showing that they have been vaccinated against bacterial meningitis. Since spring 2016, students have had to satisfy the requirement prior to enrollment.