Introduction to C++

CSC115 - 1st Semester of 2021

Instructor Information

Instructor	Email	Online Office Hours
Instructor Name	Email address	Location, Days, Hours

General Information

Description

This is an **online course** that teaches student to apply fundamental procedural programming concepts to the programming language C++. Programming principles and constructs, such as data types, common control flow structures, basic data structures, and console input/output will be presented.

Course Objectives

The objective of this class is to expose the student to procedural programming using C++ and to increase the depth of students' knowledge about several implementation issues. Knowing C++ will be useful in the students' jobs in IT organizations as developers or managers because it will enable them to code efficiently, communicate effectively, understand, and improve software development practices in their organizations. At the end of the course, the student will be able to:

- Apply elementary techniques involving arithmetic operators and mathematical expressions in C++ programming
- Choose an appropriate data type to represent data
- Write C++ programs that use selection (if, switch, conditional operator)
- Write C++ programs that use loops (while, do while, for)
- Write C++ programs that make use of functions for transfer of control
- Design Structures and use them in programs.
- Design C++ classes (having attributes and methods), instantiating, and using them in the programs.
- Write C++ programs that use arrays, including sorting and searching arrays
- Solve programming problems using C++

Course Structure

This course will be delivered entirely online through Blackboard. You will use your KSU account to login to the course from Blackboard page. If you are facing any technical problems, please contact KSU technical support. You can also use Blackboard application (for iOS or Android).

In Blackboard, you will attend online classes and lab virtual meetings through the Virtual Classroom, access course material and resources, participate in activities such as posting to discussion forums, and you will submit your assignments and quizzes.

Course Requirements

Technical Requirements

- Computer and internet connection
- Microphone and headphones
- …… (what software?)

Digital Literacy Skills Requirements

- Knowing how to use Blackboard virtual classes.
- Knowing how to send emails through Blackboard.
- Knowing how to submit assignments and take quizzes in Blackboard.
- Knowing how to use digital libraries.
- Knowing how to write the source of information properly.

Prerequisite Knowledge

……

Course Materials

Required Materials

C++ How to Program
4th Edition
by Harvey M. Deitel , Paul J. Deitel

Suggested Textbook

Problem Solving With C++: Object of Programming
Walter Savitch
3rd Edition
Addison-Wesley, 2001
ISBN: 0-201-70390-4

Other Textbooks

Visual C++ 6 For Dummies
By: Michael Hyman
A reference for C++ beginners Provides a quick crash course on Visual C++'s development environment
Code examples: poor

Course Schedule

Lecture	Topic	Virtual Class	Lab Virtual Meeting
Lecture 1	Introduction to Computers & Programming	Yes	Yes
Lecture 2	C++ Basics	Yes	Yes
Lecture 3	Control (Selection) Structures	Yes	Yes
Lecture 4	Control (Repetitive) Structures	Yes	Yes
Lecture 5	Repetitive Structures (Cont.)	Yes	Yes

Lecture	Topic	Virtual Class	Lab Virtual Meeting
Lecture 6	C++ Operators	Yes	Yes
Lecture 7	C++ Functions	Yes	Yes
Lecture 8	Data Abstraction Using C++ Structures & Classes	Yes	Yes
Lecture 9	C++ Classes & Objects	Yes	Yes
Lecture 10	Constructors & Successor Functions	Yes	Yes
Lecture 11	Data Structures Using C++ Arrays	Yes	Yes
Lecture 12	Arrays (Cont.)	Yes	Yes

Exam & Project Schedule

Due Date	Exam / Project
Date / Week#	Midterm
Week 13	Project Submission
Week 13	Project Presentation

Course Policies

Attendance Policy

This course is delivered completely online; you will not attend classes on campus. Instead, you must attend the online classes and lab sessions through Blackboard Virtual Classroom. The attendance policy follows the guidelines stated in KSU Regulations.

Note: Not attending virtual classes for %25 of total course hours will result banning you from entering the final exam.

Grading Policy

Subject	Grade
Project & Presentation	15%
Midterm	20%
Homework & Class Activities	5%
Lab Work & Activities	10%
Final Exam	50%

Netiquette Guidelines

Netiquette is a set of rules for behaving properly online. Your instructor and fellow students wish to foster a safe online learning environment. All opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse.

You are encouraged to comment, question, or critique an idea but you are not to attack an individual. Working as a community of learners, we can build a polite and respectful course community.

The following netiquette tips will enhance the learning experience for everyone in the course:

- Do not dominate any discussion.
- Give other students the opportunity to join in the discussion.
- Do not use offensive language. Present ideas appropriately.
- Be cautious in using Internet language. For example, do not capitalize all letters since this suggests shouting.
- Popular emoticons such as 😊 or :/ can be helpful to convey your tone but do not overdo or overuse them.
- Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation.
- Never make fun of someone's abilities.
- Share tips with other students.
- Keep an "open-mind" and be willing to express even your minority opinion. Minority opinions have to be respected.
- Think and edit before you push the "Send" button.
- Do not hesitate to ask for feedback.
- Using humor is acceptable

Academic Integrity

As a student in this course (and at KSU) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom. Maintaining academic honesty and integrity are fundamental.

Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

Additional Information and Resources

Important Note

This syllabus is subject to change with prior notice through course announcements or through email.