GATEWAY COMMUNITY COLLEGE

2017 Spring Semester

CSC I215 – (1900) – Object Oriented Programming Using C++

Mondays, Wednesday 1:45 p.m. – 3:05 p.m. Room IDT S313

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**Course Outline**

**Course Objectives:**

The object of this course is to introduce you to the fundamental components common to object oriented programming using C++. The subject will be taught on two levels: (1) general lectures will discuss how to design, test, debug, and document several programs during the semester to solve problems utilizing the college computers for resources, and (2) hands-on programming exercises using the C++ programming language in a visual environment to accompany the lecture material.

Upon successful completion of this course, students will be able to:

1. Describe, plan, and build simple applications using the concepts of object oriented programming in the C++ context,
2. Participate in the development of C++ applications as a member of a team,
3. Apply the object paradigm to common situations,
4. Debug and evaluate OOP applications, and
5. Create technical documentation.

**Course Requirements:**

Even though this is a beginning programming course, there are recommended prerequisite course and skill requirements. Please read the recommended prerequisites and skill requirements carefully:

* Basic computing skills required. This includes knowledge of how to use an operating system (e.g., Windows), word processor (such as Word). This also includes how to use a web browser (e.g., Internet Explorer), and a Windows Visual Environment.
* An understanding of web and system related files necessary for this course.
* Computer logic class or other programming language course (not required, but beneficial)

This course provides the student with the fundamentals of programming with a focus on object-oriented techniques. These skills are needed to work effectively in the area of information technology. The ability to understand the relationship between data and the algorithmic manipulation of data is crucial in IT related fields.

This is a hybrid course, which means that there will be required readings, discussions, and assignments posted weekly on Blackboard in addition to textbook readings and programming assignments. The purpose of the materials on Blackboard is to supplement in-class lecture materials. Students are required to complete any online course work before attending in person the portion of the class.

Students should be prepared to answer questions regarding course material posed by the instructor at the beginning of each class meeting.

Students should also have a USB drive or an online e-mail account that can be used for saving incomplete work from class time

A schedule of classes is attached. As can be seen, there will be a mixture of lectures and practical work. The practical work is very important; the best way to learn about a computer is to use one - a lot. Attending class is also important. This course covers material not in the text. The only way to obtain an understanding of it is to attend the class lectures

**Grading:**

Grading will consist of homework Programming Assignments, Midterm Examination, and a Final Examination. The final grade will be comprised of the following:

* Programming Assignments 50%
* Midterm Examination 20%
* Final Examination 20%
* Class Participation 10%

**Required Text**: Gaddis, T. (2015). Starting out with C++: From Control Structures through Objects (8th ed.). Boston, MA: Pearson Education, Inc. ISBN 13: 978-0-13376939-5

**Office hours** are:

Monday 12:45-13:45 at the room IDT S313 (or Adjunct Faculty room, close to Secretary).

Wednesday 12:45-13:45 at the room IDT S313 (or Adjunct Faculty room, close to Secretary).

We will communicate by course-messages tool in Blackboard.

**Course Schedule:**

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| --- | --- | --- | --- |
| Week 1 | Monday 1/,23  Wednesday 1/25 | Course Introduction & Blackboard Vista Introduction to Programming  Introduction to C++ | Chapter 1  Chapter 2 |
| Week 2 | Monday 1/30,  Wednesday 2/1 | Introduction to C++ Cont. | Chapter 2 |
| Week 3 | Monday 2/6  Wednesday 2/8 | Expressions and Interactivity | Chapter 3 |
| Week 4 | Monday 2/13  Wednesday 2/15 | Expressions and Interactivity Review for the Midterm | Chapter 3 |
| Week 5 | Monday 2/**20**  Wednesday 2/22 | President’s Day Recess  Midterm Examination |  |
| Week 6 | Monday 2/27,  Wednesday 3/1 | Finish up on projects from Chapter 1-3  Making Decisions | Chapter 4 |
| Week 7 | Monday 3/6  Wednesday 3/8 | Making Decisions Cont. | Chapter 4 |
| Week 8 | Monday 3/13  Wednesday 3/15 | No classes Spring Recess |  |
| Week 9 | Monday 3/20  Wednesday 3/22 | Looping | Chapter 5 |
| Week 10 | Monday 3/27  Wednesday 3/29 | Looping Cont. | Chapter 5 |
| Week 11 | Monday 4/3  Wednesday 4/5 | Functions | Chapter 6 |
| Week 12 | Monday 4/10  Wednesday 4/12 | Functions Cont. | Chapter 6. |
| Week 13 | Monday 4/17  Wednesday 4/19 | Arrays | Chapter 7 |
| Week 14 | Monday 4/24  Wednesday 4/26 | Arrays Cont. | Chapter 7 |
| Week 15 | Monday 5/1  Wednesday 5/3 | Finish up on projects from Chapter 4-7 |  |
| Week 16 | Monday 5/8  Wednesday 5/10 | Review  Final Exam |  |
|  | Monday 5/15 | Discussions about the Final Exam |  |

### Course Policies:

Late Homework & Class Projects

***Projects must be turned in on time to receive full credit****.*

## Student Conduct in Class Policy

Any acts of classroom disruption that go beyond the normal rights of students to question and discuss with instructors the educational process relative to subject content will not be tolerated, in accordance with Gateway Community College’s Academic Code of Conduct as described in the Gateway Community College’s Student Handbook.

## Incomplete Policy

Students will not be given an incomplete grade in the course without sound reason and documented evidence as described in the Gateway Community College’s Student Handbook. In any case, for a student to receive an incomplete, he or she must be passing and must have completed a significant portion of the course.

## Students with Disabilities

Any student who feels s/he may need special accommodations based on the impact of a documented disability, please contact the office of Student Disability Services at 203-285-2231 in room S-202 to coordinate reasonable accommodations. Students then should contact the professor privately to discuss specific needs.