

Course Syllabus CIS 5 – Programming Concepts using C++

Norco College

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8/20/24 - 12/10/24

Semester: Fall, 2024

Room: ONLINE

Lab exercises: Available in Canvas

ONLINE Lectures:

11:30 am – 1:30 pm (T-Th)

NOTE: For the entire semester, send all emails to this email, not to the Norco College email.

This is an online class. A computer with Internet access is required. See www.rccd.edu/de

REQUIRED TEXT:

Gaddis, Starting out with C++, From Control Structures Through Objects 10th edition.

The book is required. Older editions are acceptable. The differences in the editions are mostly organizational. Check with the bookstore for the latest edition. If you are a computer science major, it's very important that you have a good C++ textbook. You should do additional reading beyond what is discussed in lectures. Spend extra time. Learn as much as possible in your major!

You can buy a printed textbook in the bookstore or online.

A digital copy is available online from the publisher, Pearson. Click this link:

<https://www.pearson.com/en-us/subject-catalog/p/starting-out-with-c-from-control-structures-to-objects/P200000003320/9780137450626>

Once you purchase the ebook, if you need assistance, click on this link:

<https://www.pearson.com/en-us/higher-education/support.html>

IDE (Integrated Development Environment) - An IDE is software that helps you write C++ programs. You must have an IDE to do homework and lab exercises.

If you have a Windows operating system, I recommend you download Visual Studio, an IDE made by Microsoft. It is a free download.

Download Microsoft Visual Studio compiler (2022) to your home computer. IDE

Click the link for a free download of Visual Studio C++ 2022 Community Edition

<https://visualstudio.microsoft.com/vs/features/cplusplus/>

Note: During the download process, if you are asked, click "Desktop Development"

If you have a Mac or Linux operating system, Visual Studio for C++ does not work. You can download xcode, a free download from Apple. Eclipse and VS Code are also available and free.

OVERVIEW: (4 Units) Introduction to computer science for gaming, business, scientific and mathematical applications using C++. (Same as CSC-5) **PREREQUISITE:** None. **ADVISORY:** CIS-1A. Introduction to the C++ Programming language, data types, elementary input / output, sequence, choices, iteration, strings, arrays, functions, and structure of algorithms.

STUDENT LEARNING OUTCOMES

1. Describe the software development life-cycle.
 2. Describe the principles of structured programming and be able to design, implement and test structured programs.
 3. Explain what an algorithm is and its importance in computer programming.
 4. Summarize the evolution of programming languages illustrating how this history has led to the paradigms available today.
 5. Use pseudocode, flowcharts, and a programming language to implement, test, and debug algorithms for solving problems. Identify the information requirements, synthesize the algorithmic steps needed to transform the data input into the required output information, and organize the output format to facilitate user communication.
 6. Demonstrate different forms of binding, visibility, scoping, and lifetime management.
 7. Create computer programs using the principles of structured programming and demonstrate the use of an IDE with appropriate libraries. Design, implement, test, and debug programs that use fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and functions.
 8. Apply the principles of logical and programming concepts to develop solutions for gaming, business, scientific and mathematical problems.
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GRADING: (The number of assignments and quizzes is approximate.)

Canvas grading: The following homework, quizzes, labs and exams represent percentages of your overall grade. For example, each homework assignment is 7 points, and all homework represent 40% of the overall grade.

(40%)	13 Homework x 7	= 91	90 - 100 = A
(15%)	2 Quizzes	= 35	80 - 89 = B
(17%)	1 Midterm Exam	= 40	70 - 79 = C
(13%)	Computer Lab***	= 30	60 - 69 = D
(15%)	<u>1 Final Exam</u>	= <u>35</u>	0 - 59 = F
Approx. Total Points		= 231	

HOMEWORK ASSIGNMENTS:

Homework consists of C++ programs. A homework program that runs without errors, and is turned in on time, will be assigned 7 points. A program that is substantially complete, but does not run, will be assigned 5 points. Homework will only be accepted up to one week late for a maximum of 5 points. As the course progresses, there is an emphasis on coding style. Homework with poor coding style will be assessed a maximum of 5 points.

Be prepared to spend a few to several hours on homework each week. For those planning to take additional C++ courses, it is very important to learn the basics very well.

SUBMIT ALL HOMEWORK ON CANVAS - In Canvas, click on *Assignments* to access homework assignments. Pay attention to the due dates.

- **To submit homework:** Copy your program into Microsoft Word, or a Notepad text file, or a PDF file and upload it on Canvas. Click on the Upload link.

NOTE: No Google docs and no images accepted.

Homework Assignments – Consists of 3 parts:

1. **Information section** - Put this at the top of each homework assignment.
2. **Source code** -.....The source code is the actual C++ program code.
3. **Output** -.....The output, listed below the code, shows the program runs correctly.

NOTE: At the top of the first page of the homework, include an information header that lists all of the homework parts that are included.

Homework Example:

```
// Included:  HW_1a, 1b
// =====
// Program: HW_1a
// =====
// Programmer: Jim Smith
// Class: CIS 5
// =====
```

INFORMATION HEADER SECTION
(Put this at the top of each program)

Include the lines.

```
#include<iostream>
using namespace std;
int main()
{
    cout << "Hello World!";
}
// =====
```

SOURCE CODE
Code is just below the information header.

```
/* OUTPUT:
Hello World! .....
Press any key to continue. */....
code)
// =====
```

OUTPUT
(Paste the output below the code)

QUIZZES AND EXAMS: See Canvas for dates of exams and quizzes.
They will be available in Assignments.

Computer Lab: In addition to homework, all students are required to complete programming lab exercises. They are provided in Canvas. (Click on Exercises)

Computer Lab: A required component of this CIS 5 class is the computer lab. There are 15 lab exercises worth 2 points each – 30 point total (about 13% of the overall grade).

Extra Credit: There will be some extra credit projects during the semester. Some are in the

videos. Others may be assigned in Zoom sessions. Students who watch the videos and attend Zoom sessions will have the opportunity to do the extra credit. Extra credit cannot be made up.

POLICIES AND PROCEDURES:

- **Drop:** It is the **student's responsibility** to withdraw officially from a course.
- **Zoom Meetings: Zoom meetings will be recorded.**
If you miss a live Zoom meeting, they will be available to view repeatedly.
- **Miss a quiz or exam:** A student can take a make-up quiz or exam providing he or she notifies the instructor ahead of time, prior to the quiz / exam date by e-mail.
NO ADVANCE NOTIFICATION, NO MAKE-UP.
- To encourage taking quizzes on time, makeup quizzes and exams are generally more difficult.
- **RCC Standards of Student Conduct:**

All students are responsible for maintaining appropriate conduct while enrolled in classes through the Riverside Community College District (RCCD). In addition to the conduct guidelines and policies stated above, guidelines for student conduct are provided by RCCD, and are available in the college catalog and / or student handbook. Students who violate guidelines are subject to disciplinary action which includes, but is not limited to, removal from class, suspension and expulsion.

All submitted assignments must be the exclusive and original work of each student. While students are encouraged to discuss and help each other with homework, copying another student's work is cheating. If two homework assignments have copied parts, both students will be considered equally culpable. Such excuses as "living in the same house" or "using the same computer" are not valid excuses. All copying is cheating.

Accommodations for Disabilities

Norco College provides services to students with disabilities through the [Disability Resource Center](#) (DRC); located in the Center for Student Success Building. To request academic accommodations due to a disability, please visit the DRC or contact the DRC staff at 372-7070. A DRC staff member will confidentially review your concerns with you to determine any required accommodations. Once your accommodations are approved through DRC, please bring your DRC documentation(s) to me so that we may discuss your accommodations.

Violence on Campus

Norco College does not tolerate any violence or implied violence. A threat of violence includes any behavior that by its very nature could be interpreted by a reasonable person as intent to cause physical harm to self, another individual, or property. Violence or the threat of violence against or by any **student** or employee of the District or any other person is unacceptable **and will not be tolerated**. Should an individual on District property, who is not an employee or student, or a student or employee of the District, demonstrate or threaten violent behavior, s/he may be subject to criminal prosecution (AP 3510 Workplace Violence and Safety).

If you are a victim of any violent, threatening, or harassing conduct, any witness to such conduct, or anyone receiving a report of such conduct shall immediately report the incident to his/her supervisor of College Safety and Police (951- 222-8171) (AP 3510 Workplace Violence and Safety).

Declaring a Program of Study

Declaring your Program of Study in WebAdvisor is important. Norco College contacts students that have

declared a certificate/degree for internships and job opportunities in that specified field. Also, by declaring your certificate/degree goal, you can use the “Academic Review” tool in WebAdvisor which will calculate exactly what classes you still need to take to finish your certificate/degree and graduate. If you have questions about a field of study, please schedule an appointment with a counselor to discuss this important issue.

Student Services

Norco College offers excellent services for all students. These services include help with disability accommodations, financial aid, finding jobs, academic counseling, health services, veteran’s services, tutoring and more. Here is a partial list of resources available to you:

- [Disability Resource Center \(DRC\)](#)
 - (951) 372-7070
 - drc@norcocollege.edu
- [Veterans Services](#)
 - (951) 372-7142
 - veterans.services@norcocollege.edu
- [Student Support Services](#)
 - (951) 372-7149
 - hortencia.cuevas@norcocollege.edu
- [EOPS/CARE \(Extended Opportunity Programs and Services/Cooperative Agencies Resources for Education\)](#)
 - (951) 372-7128
 - eops@norcocollege.edu
- [CalWORKs \(California Work Opportunity and Responsibility for Kids\)](#)
 - (951) 372-7052
 - norcocalworks@norcocollege.edu
- [Learning Resource Center \(LRC\)](#)
 - (951) 739-7896
 - lrc@norcocollege.edu
- [Student Health and Psychological Services](#)
 - (951) 372-7046
 - <https://norco.medicatconnect.com>
- [Student Financial Services](#)
 - (951) 372-7009
 - studentfinancialservices@norcocollege.edu

Special Programs

- [Honors Program](#)
 - (951) 738-7767
- [John F. Kennedy Middle College High School](#)

- (951) 738-2200 ext. 6008
- [Puente](#)
 - (951) 738-7745
- [Study Abroad](#)
 - (951) 222-8385
- [Phoenix Scholars \(Foster Youth\)](#)
 - (951) 738-7743
- [UMOJA](#)
 - (951) 738-7707
- [Engineering Pathways](#)
 - (951) 739-7803
- [Tutorial Services](#)
 - (951) 372-7143
- [ALLY](#)
 - (951) 372-7032
- [Unity Zone](#)
 - (951) 739-7885

**Especially for Online Courses
For Technical Assistance**

Online and hybrid courses are available exclusively in the [Canvas learning management system](#). You can contact **Canvas Support** toll free at **(844) 603-4264** 24 hours a day/7 days a week for support and help with Canvas problems.

You can also click the **Report a Problem** link under the **Help & More** link on the Canvas login screen, or from the Canvas Global Navigation menu. For [WebAdvisor](#) assistance, please contact [Admissions & Records](#) at 951-372-7003.

CHANGES MAY OCCUR:

Changes to homework requirements, or quiz/exam due dates, etc., may be announced in Zoom sessions. If a student misses a live Zoom session, it is his or her responsibility to watch the session soon thereafter in order to keep abreast and stay current.