CIS-5: Programming Concepts and Methodology : C++

Section: 36623

Instructor: Dustin Capps

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Location

ONLINE (Canvas)

Course Description:
Welcome to **CIS-5: Programming Concepts and Methodology : C++**! This class will serve as an introduction to the discipline of computer science incorporating problem definitions, algorithm development, and structured programming logic for business, scientific and mathematical applications. The C++ language will be used for programming problems.

Course Objectives:
Upon successful completion of the course, students should be able to demonstrate the following activities:

1. Analyze and scope the software solution.

2. Design the interfaces and modules for the problem solution.

3. Implement the code in C++ using an IDE.

4. Test and debug the coded solution.

5. Deploy the solution to the problem.

6. Store the software solution into a repository.

7. Define the algorithm.

8. Flowchart the algorithm.

9. Pseudo-Code the algorithm.

10. Explain the key historical developments in computer hardware, software, and design.

11. Recite the history of key operating system developments.

12. Name the key historical figures in software creation, development, and expound on important applications.

13. Understand the scope of global and local variables.

14. Draw a memory map associated with program code, variables, the heap and stack.

15. Interface the application with the user and file systems.

16. Code projects associated with gaming, business, and scientific application development.

Student Learning Outcomes:
Upon successful compleon of the course, students should be able to demonstrate the following :

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 pseudo-code, 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.

8. 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.

9. Apply the principles of logical and programming concepts to develop solutions for gaming, business, scientific, and mathematical problems.

Important Dates:

Last day to add: **6/23/2024**

Last day to drop with a refund and without a W: **6/23/2024**

Last day to drop with a W: **7/13/2024**

Attendance:

This is an ONLINE class. You are expected to complete the readings, online tutorials, and assignments each week before the due date. The online format provides you with more flexibility but also requires a greater degree of discipline and independent learning. For extra support, you are strongly encouraged to visit the Learning Resource Center (LRC) located on the bottom floor of the Norco Library for free Express Tutoring or a free one-hour individual tutoring appointment. Call Tutorial Services for more information: (951) 372-7143

Late Work Policy:

Late assignments will not be accepted without prior authorization. If you are unable to submit an assignment on time, it is your responsibility to contact me prior to the due date, wherein I will work with you on extending deadlines as necessary.

Grading Criteria:
Your grade in this course is broken down as follows:

Assignment Category	Percent of Grade
Lab Assignments / Participation	25%
Homework / Assignments	50%
Final	25%
Total	**100%**

All work must be submitted in the format specified by the instructor. For digital documents, only two formats will be accepted: Microsoft Word, or PDF. If you wish to use an alternative to Microsoft Word, you must convert your work to PDF format before submitting the file(s). Most programs feature a "Save as PDF" or "Export as PDF" option (Search online for instructions or reach out to me for assistance with your particular application).

Grading Standard:
Of the total points: 100 - 90% is an "A", 89 - 80% is a "B", 79 - 70% is a "C", 69 - 60% is a "D" and less than 60% is an "F".

Changes to the Syllabus:
This syllabus is subject to change. Any changes will be announced in class and posted in the Announcements section on Canvas.

Adding this Class:
Students wanting to add this section will need to be provided with a four digit add/authorization code. If you receive an add authorization code, you are responsible for completing the add process **before** the deadline to add. This deadline can be found in the Schedule of Classes available online. Add codes can be processed through your WebAdvisor account. **If you fail to add the class by the deadline, you are not officially enrolled and college policy prohibits you from continuing to attend class.**

Be aware that your failure to pay fees/fines, to document prerequisites, to clear academic holds, or to navigate personal problems may hinder you from adding this section. Please allow sufficient time to take care of these issues **before the deadline to add**. Adding this course after the published deadline will require documented extenuating circumstances involving severe illness, accident, or death.

The use of an add/authorization code issued to another student violates the Student Code of Conduct and the student will be referred to the Dean of Student Life for disciplinary action. **The unauthorized use of an add code is grounds for removal from the course.**

Dropping this Class:

You may withdraw from this course by using WebAdvisor prior to the drop deadline. The deadline is available on WebAdvisor by selecting "My Class Schedule/Deadlines" after logging in. If there is a hold restricting use of WebAdvisor for this purpose, you may bring a completed ADD/DROP card to the Admissions counter of the college and complete the process there. It is the student's responsibility to drop this class should he/she decide no longer to attend.

Academic Integrity:

Norco College is committed to maintaining academic integrity throughout the college community. Academic dishonesty is a serious offense that can diminish the quality of scholarship, the academic environment, the academic reputation and the quality of a Norco College degree. The Student Handbook states:

In cases of academic dishonesty by a student, a faculty member may

1) Reduce the score on test(s) or assignment(s);

2) Reduce the grade in the course;

3) Fail the student in the course if the weight of the test(s) or assignment(s) warrants course failure;

4) Recommend suspension from the course (see further details in Student Handbook).

Academic dishonesty includes but is not limited to:

a) Plagiarism – the intentional presentation of words, ideas or work of others as one's own. This includes but is not limited to: copying homework, using a work or portion of a work written or created by another but not crediting the source and using one's own work completed in a previous class for credit in another class without permission. The usual consequence of academic dishonesty is failure of the course and referral of the case to the appropriate dean for additional disciplinary action. Students may discuss assignments but are expected to complete all work independently.

b) Cheating During Examinations – includes, but is not limited to, unauthorized electronic assistance or devices, copying from another, looking at another student's exam and opening books when not authorized.
Any of these practices could result in charges of academic dishonesty.

Adjustments for Individuals with Disabilities

Norco College provides services to students with disabilities through the **Disability Resource Center** (DRC). To request academic adjustments due to a disability, please email the DRC office at drc@norcocollege.edu, or call the DRC staff at (951) 732-8433. A DRC staff member will confidentially review your concerns with you to determine any required adjustments. Once your adjustments are approved through DRC, please request your Letter to Instructor from the DRC so that we may discuss your adjustments.

If you have any questions, please do not hesitate to ask! Also, here is our DRC FACULTY RESOURCE website.

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.

Writing and Reading Support!

The Writing and Reading Center (WRC) is located in LIB110, right next to the Learning Resource Center. Staffed with peer writing tutors and English professors, the WRC is where students can get help with writing or reading assignments for ANY class! We can help you understand a difficult textbook, article, or story, and assist with your writing assignments from beginning to end. Whether you need help understanding a writing prompt, creating an outline or other organizational plan for your assignment, conducting research, formatting a paper, reviewing grammar and mechanics, or revising a draft, we are

here for you, and there is no appointment necessary! We also have online peer writing tutors available! Click here for hours of operation and more information!

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)

    o (951) 372-7070

    o drc@norcocollege.edu

- Veterans Services

    o (951) 372-7142

    o veterans.services@norcocollege.edu

- Student Support Services

    o (951) 372-7149

    o hortencia.cuevas@norcocollege.edu

- EOPS/CARE (Extended Opportunity Programs and Services/Cooperative Agencies Resources for Education)

    o (951) 372-7128

    o eops@norcocollege.edu

- CalWORKs (California Work Opportunity and Responsibility for Kids)

    o (951) 372-7052

    o norcocalworks@norcocollege.edu

- Learning Resource Center (LRC)

    o (951) 739-7896

    o lrc@norcocollege.edu

- Student Health and Psychological Services

    o (951) 372-7046

- o Rccd.medicatconnect.com

- [Student Financial Services](#)

  - o (951) 372-7009

  - o studentfinancialservices@norcocollege.eduSpecial Programs

- [Honors Program](#)

  - o (951) 738-7767

- [John F. Kennedy Middle College High School](#)

  - o (951) 738-2200 ext. 6008

- [Puente](#)

  - o (951) 738-7745

- [Study Abroad](#)

  - o (951) 222-8385

- [Phoenix Scholars (Foster Youth)](#)

  - o (951)738-7743

- [UMOJA](#)

  - o (951) 738-7707

- [Engineering Pathways](#)

  - o (951) 739-7803

- [Tutorial Services](#)

  - o (951) 372-7143

- [ALLY](#)

  - o (951) 372-7032

- [Unity Zone](#)

  - o (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.

Academic honesty is as highly valued at the Online campus, as it is at Norco College's face-to-face classes. A student must always submit work that represents his or her original words or ideas. If any words or ideas are used that do not represent the student's original words or ideas, then the student must cite all relevant sources. The student should also make it clear the extent to which such sources are used. Words or ideas that require citations include, but are not limited to, all hardcopy or electronic publications, whether copyrighted or not, and all verbal or visual communication when the content of such communication clearly originates from an identifiable source. At the Online campus, all submissions to any public meeting or private mailbox fall within the scope of works and ideas that require citations if used by someone other than the original author. Academic dishonesty in an Online learning environment could involve the following:

- Having a tutor or friend complete a portion of your assignments

- Having a reviewer make extensive revisions to an assignment

- Copying work submitted by another student to an online venue

- Using information from on-line information services without proper citation