SI204 Introduction to Computer Science

Course Policy, Spring AY2025

Coordinator: Prof. Seung Geol Choi, x3-6819, choi@usna.edu

Course Description: This course provides an introduction to algorithmic development, problem solving and software design. In particular, students develop the ability to solve problems using the procedural programming paradigm and the C++ language. These principles and concepts provide foundational knowledge and experience upon which later computing courses will build. This is the first course for computer science and information technology majors.

Credits: 3-2-4

Learning Objectives:

1. Solve problems using the procedural programming paradigm.
2. Design, develop, debug, and document computer programs using structured programming techniques. (supports Student Outcome 1).
3. Select and implement the most appropriate data structure for a solution and justify your selection.
4. Assess whether a particular scenario constitutes copyright infringement or plagiarism. (supports Student Outcome 4).

Student Outcomes: Graduates of the program will have an ability to:

1. Analysis. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Implementation. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communication. Communicate effectively in a variety of professional contexts.
4. Ethics. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Teamwork. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.

CS-6. Theory. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Textbook(s): none

Syllabus:

- Input and output with the C++ programming language
- If statements
- While loops and for loops
- Functions
- Pointers and arrays
- Strings
- Recursion
- Structs
- Linked lists
- Using the C programming language

Extra Instruction: Extra instruction (EI) is strongly encouraged and should be scheduled by email with the instructor. EI is not a substitute lecture; students should come prepared with specific questions or problems.

Collaboration: The guidance in the Honor Concept of the Brigade of Midshipmen and the Computer Science Department Honor Policy must be followed at all times. See `www.usna.edu/CS/resources/honor.php`. Specific instructions for this course:

- Homework and Labs: Collaborative conversations with regard to solving written problems, of syntax and strategies for accomplishing homework or lab (i.e. non-project!) programming assignments are allowed, however design and implementation must be the work of the individual student handing in the final product. Thus, the actual pencil-to-paper or fingers-to-keyboard work must be your own. Copying a file or parts of a file from anyone as a basis for your own submission is prohibited. Midshipmen must clearly state on their assignment whom they collaborated with or received help from, and this includes help received from an instructor in EI or from an MGSP mid.

  Note: Although labs are treated as "routine" in this class, so that collaboration is allowed to the same extent as for homework, other courses in the department will treat them differently! So do not assume this is standard!

- Written Exams: All written exams will be closed book.
- Practicum Exams: Practicum exams will be given during a lab period. You may only use your paper-based notes, your own code stored on your CS Department home directory, the official class notes from the web, or your textbook for the practicum. On all exams, quizzes, and practicums you may not receive help from anyone.
- Projects: All projects MUST be submitted in order to pass this class. You must do your own work in designing, implementing, and testing your projects without assistance from anyone except for your instructor or, if properly documented, the other SI204 instructors for this semester, and the current SI204 MGSP leaders. The Department Policy Concerning Programming Projects provides detailed guidance.

All collaboration and outside sources should always be cited. The same rules apply for giving and receiving assistance. If you are unsure whether a certain kind of assistance or collaboration is permitted, you should assume it is not, work individually, and seek clarification from your instructor.

Generative AI: Use of generative Artificial Intelligence (AI) to complete any part of assignments or exams in this course is prohibited. Use of AI without explicit written authorization from your professor in this course is a violation of the Naval Academy's Honor Concept. Midshipmen are responsible for identifying if any programs they use when completing an assignment are considered generative AI. If in doubt, ask your professor.

Classroom Conduct: The section leader will record attendance and bring the class to attention at the beginning and end of each class. If the instructor is late more than 5 minutes, the section leader will keep the class in place and report to the Computer Science department office. If the instructor is absent, the section leader will direct the class. Drinks are permitted, but they must be in reclosable containers. Food, alcohol, smoking, smokeless tobacco products, and electronic cigarettes are all prohibited. Cell phones must be silent during class.

Late Policy: Penalties for late submission of graded work may vary among courses or from semester to semester, but they will be the same for all sections of a given course. For *this* course:

- Late homeworks are not accepted. (Homework submission for excused absences should be resolved with your instructor.)
- Late labs are not accepted.
- Projects may be submitted late, with the following subtractive penalties (1 minute late=1 day late):
  - 1 day early (finished all parts): +5%
  - 1 day late: -10%

Grading:

	6 weeks	12 weeks	16 weeks	Final
Homework	15%	9%	9%	6%
Labs	23%	16%	16%	14%
Project 1	0 %	10%	6%	6%
Project 2	0 %	13%	8%	8%
Project 3	0 %	0%	9%	9%
Midterm exams	45%	35%	35%	20%
Practicum	17%	17%	17%	17%
Final exam	0%	0%	0%	20%
Total	100%	100%	100%	100%

Student performance will be translated to the following letter grades:
A, A-, B+, B, B-, C+, C, C-, D+, D, F.

Submitted: Prof. Seung Geol Choi