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# CS 101: Syllabus

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## CS 101 - Fundamentals of Computer Science I

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Fall 2019

Instructors:

Section(s)	Instructor	Office hours
101 (8:00am - 9:15am KEC119)	Robin Snyder <a href="mailto:rsnyder9@ycp.edu">rsnyder9@ycp.edu</a> KEC 115 (815-6547)	T,R 12:30-1:30pm, W,F: 11:30am-1:30pm
102 (10:00am - 11:15am KEC119)	Robin Snyder <a href="mailto:rsnyder9@ycp.edu">rsnyder9@ycp.edu</a> KEC 115 (815-6547)	T,R 12:30-1:30pm, W,F: 11:30am-1:30pm
103 (8:00am - 9:15am KEC123)	Donald Hake <a href="mailto:djhake2@ycp.edu">djhake2@ycp.edu</a> KEC 137 (815-6587)	W,F 9:15-10am, 11:15-Noon (KEC123), W 2:00-4:00, F 2:00-3:00 (KEC137), and by appointment

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## Course description

This course introduces the fundamental techniques of algorithm design and program construction using procedural constructs. Topics will include problem analysis; algorithm design; and implementation and debugging strategies using good programming practices. The course will cover basic data structures including variables, arrays, strings, records, and pointers; and control structures including decisions, iterations, functions, and file I/O. The course will focus on applications from computer science and engineering using C/C++.

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## Prerequisites

None

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## Textbook

Kochan. [Programming in C](#). Sams Publishing, 4th Edition, 2014, ISBN 9780321776419

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## Learning outcomes

The basic objectives of this course are to provide the student with enough programming tools and methods to feel comfortable writing C / C++ / C# programs that solve problems encountered in computer science and engineering. The following topics will tentatively be covered:

- Be able to create, compile, and run C programs using the Gnu C/C++ compiler

- Be able to declare variables of various types and write programs that do basic arithmetic operations
- Understand and apply control structures such as conditionals and loops
- Understand and use arrays
- Understand and be able to write functions
- Understand and be able to define and use structure types
- Understand and be able to use character strings
- Understand and be able to use pointers
- Use top-down design to decompose complex problems into simpler problems

## Policies

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### Grades

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Your course grade will be determined as follows:

- Labs: 10%
- Required CloudCoder exercises: 5%
- Homework (programming assignments): 15% (\*)
- Exams (3 midterms and 1 cumulative final exam, lowest score dropped): 70% (†)

(\*) You must demonstrate significant effort on all homework assignments in order to pass the course. The very important Outcome CO12 (Use top-down design to decompose complex problems into simpler problems) cannot be assessed based on exams alone. This will be demonstrated via homework assignments. Failure to demonstrate this outcome on homework assignments will be grounds for failure even with a high exam average.

(†) You must pass (receive a grade of 70 or higher) on at least one exam, *and* have an average of 60 or higher on your three highest exam grades, in order to receive a passing grade for the course.

### Grading scale

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The grading scale for the course is given below. Please note that this grading scale represents the most stringent criteria the students will have to meet to get a particular grade. Each instructor reserves the right to reduce (i.e. curve) the grade scale based on the final course performance.

Grade	Range
4.0 (A)	$\geq 90$ and $< 100$
3.5 (B+)	$\geq 87$ and $< 90$
3.0 (B)	$\geq 80$ and $< 87$
2.5 (C+)	$\geq 77$ and $< 80$
2.0 (C)	$\geq 70$ and $< 77$
1 (D)	$\geq 60$ and $< 70$
0 (F)	$< 60$

### Course website

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Please check the course web page, <https://ycpcs.github.io/cs101-fall2019/>, regularly for important announcements.

## Reading assignments

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Readings from your text book will be assigned throughout the semester. You will find the readings listed in the [Course Schedule](#). **You are required to read the scheduled material before coming to class.**

## Posting and submission of assignments and labs

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Assignments and (some) labs will be posted as zip files on the course web page, <https://ycpcs.github.io/cs101-fall2019/>.

Assignments will be submitted using the server <https://cs.ycp.edu/marmoset/>. You will receive an email containing the username and password you will use for this server.

Some labs will be done online using CloudCoder: <https://cs.ycp.edu/cloudcoder/>. You will receive an email containing the username and password you will use for CloudCoder.

## Late policy

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Assignments may be submitted up to two days late, with a penalty of 20% per day late. No credit will be given for assignments submitted more than 2 days late.

**Important:** As mentioned above in the **Grades** section, you must make a good faith effort to complete all of the homework assignments in order to receive a passing grade for the course.

## Homework policy

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Homework problems (programming assignments) will be assigned periodically. Discussing programming assignments with other students is acceptable, and encouraged. However, collaboration **must be more than just copying code**; you must **actively contribute to the collaboration**, and you must **write and understand all of the code you include in your program**. Verbatim copying of someone else's code (including electronic transmission or using code from websites) is forbidden under any circumstances. You must actively contribute to the process of understanding and solving the problem posed in the homework assignment.

When you collaborate with another student, you **must** add comments to the code you turn in stating

- who you worked with, and
- what the nature of your collaboration was

For example, if you worked with Alice Smith, you might add a comment as follows:

```
// I worked with Alice Smith. We worked together on
// the loop in the compute_temperatures function.
```

When you collaborate with other student(s), you must make sure that everyone involved in the collaboration properly acknowledges everyone else who collaborated. In the example above, Alice would need to acknowledge working with you.

Violations of the policy, such as failing to cite collaborators or electronic copying of code, will be reported to the Dean of Academic Affairs, and could have consequences including receiving a 0 for the assignment, receiving a 0 for the course, and being expelled from the College.

## Exams

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**Exams will be closed-book, closed-notes.** They will last approximately 60 minutes and will be administered at the beginning of the class period. **Exams will include a programming component.** The last half of the class may be used for instruction and/or laboratory work. A total of five exams will be administered. The lowest scoring exam will be dropped.

## In-class laboratories

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Students will work on labs during most class meetings.

To receive credit for a lab, you must:

- Get a sign-off for completing the lab's design artifact; make sure you have this at the beginning of class on the day we work on the lab
- Get a sign-off on the completed program; full credit if you get this sign off by the end of the *next* class (after the day we work on the lab), 80% of full credit if you get the sign-off **by the last class before the next exam**

## Attendance and participation

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**Do not miss class!** If you do not attend class, show significant effort on the lab assignment by the end of the day, or if you are seen doing non-lab activities before finishing a lab, you will be considered absent. The first absence will result in a 1 percentage point deduction from your final grade. The total percentage point deduction for 2 or greater absences will be calculated using the following formula:

$$2^{(absences - 1)}$$

where *absences* is the number of times you were absent. Therefore, with 5 absences (2.5 weeks), you will have a 16 percentage point deduction, which will automatically drop you 1.5 to 2 letter grades. If you have an emergency and cannot attend your section, you may come to another section with permission from the instructor of that section. Always notify the instructor **before** the class if you have to miss class. It is the student's responsibility to get notes, announcements, and homework assignments from other students or the instructor if a class is missed. An absence will be excused only with written proof of an illness or other emergency.

## Disability accomodation

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If you had an IEP or 504 plan in high school or if you have a disability or health condition that impacts you in the classroom, please contact Linda Miller, Director of Disability Support Services, at 815-1785 or [lmille18@ycp.edu](mailto:lmille18@ycp.edu) to discuss obtaining the accommodations for which you may be eligible. If you already have an accommodation memo and wish to access your accommodations in this class, please see me confidentially to discuss.

## Use of personal technology in the classroom

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While York College recognizes students' need for educational and emergency-related technological devices such as laptops, PDA's, cellular phones, etc., using them unethically or recreationally during

class time is never appropriate. The college recognizes and supports faculty members' authority to regulate in their classrooms student use of all electronic devices.

## **Communication standards**

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York College recognizes the importance of effective communication in all disciplines and careers. Therefore, students are expected to competently analyze, synthesize, organize, and articulate course material in papers, examinations and presentations. In addition, students should know and use communication skills current to their field of study, recognize the need for revision as part of their writing process, and employ standard conventions of English usage in both writing and speaking. Students may be asked to further revise assignments that do not demonstrate effective use of these communication skills.

## **Disclaimer**

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This syllabus is subject to change by the instructors.

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