CS101 Course Syllabus

York College of Pennsylvania

Spring 2025

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This course will be team-taught by Joe Villani and Dean Zeller. Instructors will use the same labs, assignments, exams, grading policies, and schedule of lectures. Our goal is to make this class a wonderful learning experience that is enjoyable and relevant to your future. Please let us know if there are any questions or concerns about the class, and it will be immediately addressed. Be yourself and express your honest ideas.

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Course Requirements

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++.

Course Requirements

Students are responsible for the following course requirements throughout the semester:

Attendance	12 attendance checks at 2.5 points each	30 points	(5% of grade)
Labs	20 labs at 3 points each	60 points	(10% of grade)
Assignments	6 assignments at 25 points each	150 points	(25% of grade)
Exams	3 exams at 120 points each	360 points	(60% of grade)
		600 points	

Grading Caveats

You must demonstrate significant effort on all homework assignments in order to receive a passing grade the course regardless of your overall course average. The very important outcome of using 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 regardless of your overall course average.

List of Topics

The following topics will be covered throughout the semester.

- Proper use of AI in programming education
- Programming documentation
- Using a C compiler
- Variables and datatypes
- Primary logical commands: `if`, `for`, and `while`
- Functions
- Pointers

Attendance

Class time will be used for many relevant activities, including lectures, discussions, presentations, time to ask questions, exams, and evaluations of work. As such, class attendance is required every class day. We will be covering a significant amount of material in the course at a rapid pace, so it is imperative that you keep up by participating in the class meetings.

Labs

Throughout class, students will be assigned labs. These are meant to be relatively quick implementations of basic ideas in programming. To get credit for a lab, have it up and running during class, and the instructor will chck the requirements and record the grade on the gradesheet. Be ready to have a short discussion on how the task was completed. Labs must be fully documented (see Documentation, below).

Assignments

Assignments involve the application of a concept, and are where the "true" learning is done. Students will be supplied a writeup with all requirements and necessary materials. The submission process will involve a report and a demonstration video.

Exams

Three in-class exams will be used to assess knowledge. Exams will be hand-written only, and without access to any electronic devices. Students will be allowed a 3”×5” index card with notes to help remember concepts. Exams will be announced at least two weeks in advance.

Final Exam

In addition to the three required exams, there will be an optional final exam. This exam will be available to replace a previous low exam grade.

Grading Policies

Final Grade

The final grade uses the 4-point scale and is ultimately determined as an objective judgement call by the instructor. For interpretation of the grades, consult the table below.

Grade Interpretation		
A	4.0	All or most of course expectations consistently met, weekly grade never fell below a D.
B+	3.5	Met the majority of course expectations, but work was not of a polished quality to deserve a 4.0.
B	3.0	Solid work completed, but encountered minor problems with assignment submissions, exams, or other factors.
C+	2.5	Made attempts towards all class requirements, but results were lacking in some ways.
C	2.0	Tried to complete work and learned some material in class, but work overall was only the minimum required to pass.
D	1.0	Made minimal effort toward class requirements, but work was insufficient for a C. It is a passing grade, but may not serve as the prerequisite for upper division courses.
F	0.0	Unsatisfactory work overall. Little to no work completed.

Grading Turnaround

It is planned that all instructor grading will be completed over the weekend. Gradeslips will capture an accurate snapshot of grades completed. Alert the instructor if there was a submission not graded for two weeks, as there could have been a break in the submission or grading process.

Incomplete

Grades of incomplete are only available to students who have put forth a good-faith effort to complete the work in a timely manner. To be given an incomplete, a student must provide medical documentation of a mental or physical condition that made them unable to finish the semester successfully. At some point during weeks 6 through 15, the student must have at least 5 weeks with a grade of C or better. This is to prevent students from requesting an incomplete simply because they did not do the work assigned in class.

Late Submissions

- All labs must be completed and demonstrated to the instructor by the published due dates. A lab assigned before the next exam and turned in before the next exam can still receive full credit. After this point, the lab will receive no credit.
- Assignments must be submitted by the due date; resubmissions are encouraged to promote the learning process. Receiving full credit is possible if all feedback is satisfactorily addressed by the student.

Assignment Report (15 points)

It is not sufficient to simply turn in a program as an assignment. Students must learn the value and the ease of organizing a full report of their work. Once students get the hang of it, writing a complete report is not difficult if a template is provided. Students are encouraged to improve their programs and report by making changes based on the feedback of their submission to receive additional credit by resubmitting the assignment.

Video Demonstration (10 points)

To illustrate that students can explain the work submitted, video demonstrations are completed. The video component is where the student truly demonstrates that the project was completed correctly. Videos should be about 5 minutes in length and follow a certain pattern of presentation. Students are responsible for the visuals, audio, and readability of content. Students are responsible for everything within the video, including mistakes, so they are to watch the videos to make sure they are of sufficient quality and contain the correct information. Students are encouraged to improve their video demonstration by making changes based on the feedback of their submission to receive additional credit by resubmitting the assignment.

Videos should be 4-6 minutes in length and follow a specific order.

a) Introduction (30 seconds)
   Introduce the speaker, and summarize what the video contains.
b) Code Demonstration (90-180 seconds)
   Scroll through the documented code and briefly explain what each part will do.
c) Execution Demonstration (90-180 seconds)
   Execute the code several times. Demonstrate everything required in the assignment writeup.
d) Conclusion (30 seconds)
   Reiterate what the video has been about. The video may end with a non-offensive joke or meme to entertain the viewer.

Artificial Intelligence

This course is specifically designed to incorporate current Artificial Intelligence technologies into the learning process. Students are free to use any AI tools available to get the results needed. Assignments will be written to have students demonstrate through video screencapture that they understand the work completed. Part of the learning process is to satisfactorily demonstrate the knowledge gained. The following guidelines will be used in designing the course curriculum:

1. Students must remember that the goal of the class is to learn content, not complete a task. AI should be used only as a method to learn content, and not used just to get the project done.
2. All students may use AI to help with any assignment. Any such use must be documented in the program documentation section.
3. Students may not use AI on labs or exams. Struggling to work on the labs and debugging is an important aspect of learning.
4. It is not a requirement to use AI in this class. Students are free to complete all coursework without using AI in any form. Alternate instructions will be available for students making this request. This option is available for any students having doubts or anxieties about using AI directly.
5. Exams will be hand-written only, without access to the internet. Make sure all material is learned correctly and can be replicated without the use of AI.
6. Students will give presentations to demonstrate their work. These may be video screen captures, one-on-one demos, or full class presentations. You will need to be able to explain your work without the use of the internet nor AI.

Course Policies

All course policies were written by the course instructor.

Overall Behavior

This class follows the York College regulations on student behavior and conduct. It is expected that students behave maturely, professionally, and will be respectful to the instructor and fellow students. Please do not be disruptive to the teacher or to the other students. The instructor reserves the right to remove any disruptive students from class.

Use of Appropriate Language

Please use language appropriate for everyone, realizing that other people in the classroom may be within earshot of the conversation. This applies to all forms of communication (verbal, online, written on board, etc…).

Face-to-Face Communication

Please make every attempt to communicate with your instructor face-to-face. In-person communication is, by far, the most effective method, and has the least amount of opportunity for miscommunication or misunderstanding. While simple tasks may be completed over phone, text, or email, anything complicated or potentially ambiguous should be left until it can be handled face-to-face. The course instructor will have regular office hours to encourage in-person communication.

Academic Misconduct with Programming

It is critical that each student completes their own work and properly acknowledges the work of others. Computer science and programming present a difficult situation for the academic world. Naturally, students need to learn programming on their own, and not simply copy it from the Internet or another source. However, in the industry it is perfectly reasonable, and sometimes required, to make use of work other people previously completed. Recent advancements in artificial intelligence have made the automatic generation of papers and programs to be readily possible with just a general description. Computer scientists must learn aspects of programming from many different directions. Thus, when writing code, it is imperative to differentiate between original code (written by the student) and code written by other sources. Students can designate the difference through documentation that contains all information necessary to check the original source material. It is assumed that any work that does not contain the special documentation is claimed to be original work by the student.

No Zoom Requests

Attendance through Zoom is not acceptable and will not be counted or prepared for. Students are to attend class and office hours in person.

Getting Help

Students are taught to be self-reliant. Part of this trait is to know when to ask for help, and how to get the greatest benefit. When requesting for help in the industry, programmers must understand that while others are generally willing to help, they have their own schedules to keep. It is considered polite to make certain the problem has been well-investigated beforehand, so as to not waste time. Be ready to discuss the problem, what has been tried in the past, and the previous efforts to solve the problem. This applies to seeking help from tutors as well.

Virtual Meeting Days (previously known as "Snow Days")

The concept of a "snow-day" is being altered within the educational norm. At York College, snow-days are being replaced with "virtual meeting days," where instruction and requirements should occur online during classtime instead of in class. Having said this, the instructor will never hold required Zoom meetings in lieu of class. If there is an unexpected snow-day, check Canvas and email for any announcements or alternate requirements, but there will not be a Zoom meeting during class time, as the Internet may not even be available for students without power. Students are free to use the canceled class-time as they see fit for a potential emergency situation.

Student Concerns

For any concerns about the class, it is requested that student contact the professor directly to address the problem. In most cases, a mutually satisfactory solution can be reached. Students unsatisfied with the solution presented by the professor can take the case to the department chair, Dr. Kala Meah, who will address the issue further.

Privacy and FERPA

FERPA is the Family Educational Rights and Privacy Act, a federal law that protects the privacy of student education records. To summarize, grades and personal information for a student are completely confidential between the instructor and the student. There are no other parties that have access to student information, including parents, employers, or acquaintances. Students may complete a FERPA form to allow specific people access to their records. Note that this form only allows access to stored information, but does not allow for direct interaction. Even with a FERPA form, any discussion of grades can only happen between instructor and student.

Modifications to Syllabus

The instructor reserves the right to modify the syllabus and assessment criteria in response to student needs, developments, and unforeseen events.

Program Documentation

This section applies only to assignments involving the use of a programming language.

Writing proper documentation is a vital skill for programmers, and yet most computer science courses do not include a grade or requirements for it. As such, this class used the following documentation requirements:

- Every program file must have properly formatted block documentation at the top of the file, as shown in the example below. This is to identify the code, problem, author, credits, and other information.
- Every program function or method must have properly formatted block documentation (indented), to indicate the function's purpose, parameters, and return value. Other information may be provided. The documentation should be consistently indented, and appear directly above the method.
- Code must be properly indented, with each new level consistently tabbed.
- Variable names should be descriptive and meaningful. Single-letter variables are acceptable only when the meaning is clear (such as `i`, `x` or `n`). Do not try to abbreviate variable names, as the meaning becomes confusing and ambiguous.
- The border character must form a complete box that is easy to read and separate from the code. The specific character used (*) may be changed.

Program Documentation Example

Include this documentation at the top of every file contained within a project. Items within [brackets] should be replaced with the required content.

```
/*************************************************************
*                         [Name of program]                  *
*                                                            *
*   PROGRAMMER:    [programmer name]                         *
*   COURSE:        [course number and name]                  *
*   DATE:          [date submitted]                          *
*   REQUIREMENT:   Assignment [number]                       *
*                                                            *
*   DESCRIPTION:                                             *
*   [include a paragraph describing contents of file]        *
*                                                            *
*   COPYRIGHT: This code is copyright (C) 2025 [programmer name]  *
*                                                            *
*   CREDITS:                                                 *
*   [include a list of sources used, including ChatGPT]      *
*                                                            *
*************************************************************/
```

Function Documentation Example

Include this documentation for every function contained within a program. The placement of the documentation should be directly over the function in the code.

```
/*************************************************
*   FUNCTION:      [method name]                   *
*   DESCRIPTION:   [brief description of method]   *
*   PARAMETERS:    [list parameters]               *
*   RETURN VALUE:  [describe the return value, if any]  *
*************************************************/
```

College Policies

All college policies were written by the appropriate campus department supervisor or representative.

Academic Misconduct

Academic dishonesty will not be tolerated at York College. Academic dishonesty refers to actions such as, but not limited to, cheating, plagiarism, fabrication of research, falsification of academic documents, etc., and includes all situations where students make use of the work of others and claim such work as their own.

Academic Integrity Policy

The YCP Academic Integrity Polity is summarized below. For the full policy, go to the Academic Standards section of the current Course Catalog (https://www.ycp.edu/about-us/offices-and-departments/registrar/catalogs/).

York College of Pennsylvania, as an institution of higher education, serves to promote and sustain the creation, acquisition, and dissemination of knowledge. In order to fulfill this purpose, an environment of integrity, dependability and honesty must be maintained by all members of the York College community. Without a foundation based on intellectual honesty and integrity, the very ability to uphold the academic endeavors that York College strives to pursue is inhibited.

Academic integrity involves two fundamental expectations:

- Anything you turn in as your own work is, in fact, your own work and your own words, completed without assistance, unless your instructor has given explicit permission otherwise.
- Anything you turn in is truthful. Lab data were generated in the lab (and not made up), hours worked for an internship or coop were actually worked, etc.

The Academic Integrity Policy includes a non-exhaustive list of activities that are prohibited. Some of the commonly encountered prohibited activities include:

- Plagiarism (passing someone else's words or ideas off as one's own without proper attribution).
- Getting assistance from other students on non-collaborative assignments. You are permitted (and encouraged) to get assistance from your instructor and the Academic Success Center.
- Sharing papers, exams, homework assignments, etc. with other students (even if it wasn't your intent to cheat).
- Ghostwriting (getting someone else to write a paper, whether it is a friend, an essay mill, or a generative AI tool).
- Using unauthorized assistance on exams (e.g., cheat sheets, websites, publisher test banks, other students).
- Buying/sourcing assignment answers from other people (whether it is other students, a website like Chegg, or other online sources).
- Turning in papers/assignments completed in other classes.

This is not a complete list of prohibited activities. Check out the policy in the catalog for a more comprehensive list. The onus is on you, the student, to verify that any exceptions are allowed in that class by that instructor.

Instructors have full discretion to assign a sanction up to and including a grade of 0 in the class for violations of the policy. Violations will be reported to the Associate Provost of Student Success as outlined in the policy. You cannot withdraw from a class if you have been charged with an academic integrity violation.

If at any point you are unsure whether something is allowed under the academic integrity policy, please ask your instructor!

Inclusivity Statement

York College of Pennsylvania aims to provide access to high-quality education. To reach our mission, we value bringing different voices together to share their strengths. In this diverse environment, when we create a sense of belonging and equity, we enrich the learning experience and better serve our local and global communities.

As such, York College:

- Welcomes and recognizes diversity in all of its forms and expressions.
- Encourages civil conversations across our campus to promote understanding.
- Stands up against prejudice and injustice in our college community.
- Advocates for the well-being and dignity of our community members.
- Enables marginalized identities to be their authentic selves.

Communication Standards

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.

Students who want any assistance with oral, written, and/or visual communication are highly encouraged to contact the Writing Center. The Writing Center is located on the ground floor of the Humanities Building 019.

Technical Policy: Use of Personal Technology in the Classroom

While York College recognizes students' need for educational and emergency-related technological devices such as laptops, mobile devices, 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.

Student Accessibility Services Statement

York College and Student Accessibility Services (SAS) is dedicated to providing an inclusive campus environment and quality learning experience that is equally accessible to all students. York College will provide reasonable accommodations and support services to any eligible student with a disability. The goal of Student Accessibility Services is to help students access education, demonstrate their knowledge, and meet their academic potential.

Students can request accommodations by completing and submitting the SAS online application, along with documentation related to their disability. The application, documentation requirements, and additional information can be found at www.ycp.edu/sas. The student will then be invited to meet with SAS staff to discuss appropriate accommodations and plan a strategy for student success. York College encourages any student that feels they may qualify for accommodations to contact Student Accessibility Services to set up an appointment.

Disability Support Services (Adopted 2015)

In accordance with the provisions of Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, York College and its faculty are obliged to make reasonable classroom and physical accommodations for students with disabilities. If you are a student with a disability in need of classroom

accommodations and have not already registered with Julie Rasmuson, Student Accessibility Services, please contact her at 815-1443 or jrasmuson@ycp.edu to discuss policies and procedures related to disability services and to establish the accommodations for which you are eligible.

The Accommodation Memo: Students with disabilities are responsible for providing the Director of Student Accessibility Services (SAS) with proper documentation to determine eligibility for accommodations, and meeting with the Director of SAS to obtain their accommodation memo. The student is then responsible for showing the memo to each of their professors where accommodations are needed and discussing any questions or concerns.

Additional information for faculty and students regarding Accessibility Services and Accommodations is available at: Student Accessibility Support Services