CSCI 141: Computer Programming I

Lecture 0
Introduction, Logistics, Hello World
Today

• What is this course about?
• Why are we here?
• Who is this character?
• Some course logistics
• Let’s write some code already!
What is this course about?

• What is this course about?

• What will you learn?
What is this course about?

From the course catalog:
Basic concepts of computer programming using an object oriented programming language. Topics covered: introduction to the development environment, introduction to algorithms, elements of a programming language, including data types, packages, control structures, procedures and functions, basic input and output, arrays and records, text files, strings, variant records. Algorithm development, problem solving and software engineering are emphasized.
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What is this course about?

Computer Programming:

- data types
- control structures
- functions
- strings
- arrays

These are the “nuts and bolts”: the syntax and semantics of programming languages.
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What is this course about?

Problem Solving and Software Engineering:
- Break down and analyze problems
- Design algorithms that solve problems
- Describe algorithms in pseudocode
- Implement algorithms using clearly written, correct Python code.
- Fix errors and make changes to the code once it’s written.

Computer Programming:
- data types
- control structures
- functions
- strings
- arrays
Why learn to program?

• Why do you want to learn how to program?
Why learn to program?

• Some ideas:

• Get a job with cool perks and a high salary
Why learn to program?

• Some ideas:
  • Get a job with cool perks and a high salary
  • Automate repetitive tasks
Hi there,

Ice cream for the first person who can get me what I want. Count the number of times each person's name occurs with Column A=Person's Name, Column B=# of Occurrences.

READY? GO!

Thanks,

Andrew
Why learn to program?

• Some ideas:

  • Get a job with cool perks and a high salary
  • Automate repetitive tasks
  • Process or analyze data you encounter in your chosen profession
  • Execute your creative vision
  • Understand what's going on inside the computers you use daily
  • Make friends with our future robot overlords
Who is this character?
About Me:

Scott Wehrwein
(call me this!)
Computer Vision: Familiar Examples

In-Camera Face Detection

Autonomous Driving

Text-Guided Image Generation

Image Search
Logistics

The syllabus is [on] the course webpage:

https://facultyweb.cs.wwu.edu/~wehrwes/courses/csci141_23w

This link can also be found on the Syllabus page on Canvas.
Syllabus Highlights

- Flipped structure
- Assessment components
- Labs
- Schedule table
Syllabus Questions?
Your Tasks for Wednesday

• Make sure you have read the syllabus carefully

• Watch the lecture videos

• Complete the Exercises and submit your answers to Canvas before the start of class.

• Look up your in-class team number on Canvas
  • See this link if you don't know how.

• (optional) Join the course Discord server
About You Survey
My Expectations

Q2: How many months of programming experience do you have?

0

Some of you have prior experience, but zero is what I will assume. We'll look at the survey results and talk more about this next time.
Let’s write some code already

• **Python** is our chosen programming language in this course.

• A **programming language** is a language a computer can “understand” and execute (more on what this means next time)

• We’ll use a program called **Thonny** to write our Python code.

• Thonny is an example of an “**Integrated Development Environment**” (IDE): a program that provides all the features you need to write, run, and fix errors in programs.
Without further ado...
Hello, world!
Hello, world!

- hello.py

- Concepts demonstrated:
  - Basic usage of Thonny
  - Comments
  - The `print` function
  - Single and double quoted strings