INFO-2350 Introduction to Computer Science
Course Syllabus Fall 2025

"Responsibility for learning belongs to the student, regardless of age" Robert Martin

Contents

Your Instructor

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"There are no stupid questions. Ask questions whenever something isn't completely clear. You can't remember what you don't understand."

Tolerate chaos, uncertainty, and vagueness. "Figuring it out" is part of learning.

Class Information

Class Location: Scottsbluff Campus, Room D1

Time: Tue & Thu, 11:00-12:15 pm

Catalog Description

This course is a study of computer programming, problem solving methods, and accepted software engineering practices using a high-level programming language such as Python, Java, or C++. Topics include the fundamentals of procedural and object-oriented programming, shared code development, version control systems, and current software engineering practices. This course prepares the student for further study in Computer Science.

3.0 semester hours

(3/45/0/0/0/0) See Figure 1

Course Objectives

Using this course as an instructional medium, the instructor will:

1. Define and explain common programming syntax, terms, and concepts.
2. Explain and demonstrate how to design, develop, and compile programs.

3. Demonstrate and model how to solve programming problems based on case studies.
4. Model self-directed and lifelong learning.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

1. Recognize and define common programming syntax, terms, and concepts. [GE 1, 2]
2. Create and compile example tutorial programs. [GE 2]
3. Demonstrate the concepts of object-oriented programming, problem solving, and debugging by creating functional Java applications based on case studies. [GE 2]
4. Self-direct their learning while gaining an ongoing interest in learning more about programming. [GE 5]

Instructional Materials

All instructional materials, readings, and tutorials are in the Blackboard course. Purchasing a book is not required for this class.

OER (Open Educational Resources) are freely accessible, openly licensed text, media, and other digital assets that are useful for teaching, learning, and assessing as well as for research purposes. This is a concept that allows for open-source sharing of educational materials for no cost.

There is a wealth of free educational material available for programming.

Some of the materials used in this course are adapted from OER (Open Educational Resources) resources. The OER materials used in this course are adapted under Creative Commons license https://creativecommons.org/licenses/by-nc-sa/3.0/us.

Programming Languages

To prepare you for the current software development environment and transfer to a 4-year school, we will be working with these programming languages.

- Python, Java, C++, SQL

These languages are typically at the top of this list.

PYPL PopularitY of Programming Language

Interleaved Learning

This is an example diagram of the interleaved instructional approach used in this class. To interleave something is to arrange it in alternate layers. Interleaving as a learning method means learning more than one subject or skill and switching between them.

	Python	Java	C++
⋮	⋮	⋮	⋮
Topic 3	Week 3	Week 5	Week 8
Topic 2	Week 2	Week 4	Week 7
Topic 1	Week 1	Week 3	Week 6

Course Schedule

Course content may vary from this outline to meet the needs of this group.

Week	Activities	Assignments
Week 1 08/18 - 08/24	Introduction to Course Introduction to Blackboard Install Python Install JDK	Getting Started Activities in Blackboard Professional Communication Introduction Discussion Python Chapter 2 Getting Started Activities Python Circe's Circle Calculator Java Chapter 2 Getting Started
Week 2 08/25 - 08/31	Python Chapter 3 Decisions Java Chapter 2 Getting Started	Python Chapter 3 Decisions Activities (Thursday) Python Scarlett's Speed Converter Python Penny's Pizza Planet Payroll System Java Favorite Song Week 2 Quiz

Week 3 09/01 - 09/07	Python Chapter 3 Decisions Java Chapter 2 Getting Started	Python Chapter 4 Loops Activities (Thursday) Python Essentials 1 Edube PCEP Tutorials Computer Science Sololearn Tutorials Java Circe's Circle Calculator Java Chapter 3 Decisions Week 3 Quiz
Week 4 09/08 - 09/14	Python Chapter 4 Loops Java Chapter 3 Decisions Think Aloud Tutorial	Python Chapter 5 Functions Activities (Thursday) Python Essentials 1 Edube PCEP Tutorials Computer Science Sololearn Tutorials Java Formatting Output Tutorial (Thursday) Java Guillermos Guessing Game GitHub Markdown Tutorial Week 4 Quiz
Week 5 09/15 - 09/21	Python Chapter 4 Loops Java Chapter 3 Decisions	Python Essentials 1 Edube PCEP Tutorials Computer Science Sololearn Tutorials Python Frank's Factorial Factory Java Chico's Change Counter Java Roshambo Git Your GitHub Profile On Week 5 Quiz

Week 6 09/22 - 09/28	Python Chapter 5 Functions Java Chapter 4 Loops Think Aloud Tutorial	Python Chapter 6 Lists Activities (Thursday) Python Calypso's Cylinder Calculator Functions Python Essentials 1 Edube PCEP Tutorials Computer Science Sololearn Tutorials Python Turtle Java Chapter 4 Loops (Thursday) Java Roshambo and the Dial of Destiny (add a Loop)
Week 7 09/29 - 10/05	Python Chapter 5 Functions Java Chapter 4 Loops C++ Install Compiler	Python Essentials 1 Edube PCEP Tutorials Computer Science Sololearn Tutorials Python Mickey's Multiple Unit Converter Java Pizza Planet Install C++ Compiler Week 7 Guild Project Kickoff Week 7 Quiz
Week 8 10/06 – 10/12	Python Chapter 6 Lists, Tuples, and Dictionaries Getting Started with C++ Fall Break	Python Chapter 6 Dictionaries Activities Python List Comprehensions Computer Science Sololearn Tutorials C++ Chapter 2 Getting Started GitHub KanBan Project Board Tutorial Week 8 Guild Project

Week 9 10/13 - 10/19 Fall Break	Python Chapter 6 Lists, Tuples, and Dictionaries Java Chapter 5 Methods Getting Started with C++ Think Aloud Tutorial	Python Chapter 7 OOP Activities Computer Science Sololearn Tutorials Java Circe's Circle Calculator Methods C++ Randy's Rectangle Calculator Week 9 Quiz
Week 10 10/20 - 10/26	Python Chapter 7 OOP Java Chapter 5 Methods C++ Chapter 3 Decisions	Python Essentials 1 Edube PCEP Tutorials Computer Science Sololearn Tutorials Python Circe's Circle Calculator OOP Java Mickey's Multiple Unit Converter C++ Chapter 3 Decisions 1. Python SQLite Music Library Week 10 Guild Project
Week 11 10/27 - 11/02	Python Chapter 7 OOP Java Chapter 6 Arrays and ArrayLists C++ Chapter 3 Decisions Think Aloud Tutorial	Python Essentials 1 Edube PCEP Tutorials Computer Science Sololearn Tutorials Python PolyAngle OOP Java Chapter 6 Arrays and ArrayLists C++ Time Travel with the Doctor UML Diagram Tutorial 2. Python SQLite Music Library Week 11 Guild Project Week 11 Quiz

Week 12 11/03 - 11/09	Python Chapter 8 Strings Java Chapter 6 Arrays and ArrayLists C++ Chapter 4 Loops	Python Chapter 8 Strings (Thursday) Computer Science Sololearn Tutorials Java Sandhills Car Care C++ Chapter 4 Loops 3. Python SQLite Music Library Week 12 Guild Project
Week 13 11/10 - 11/16	Python Chapter 8 Strings Java Chapter 7 OOP C++ Chapter 4 Loops Think Aloud Tutorial	Python Chapter 9 GUI Computer Science Sololearn Tutorials Java Chapter 7 OOP C++ Chapter 5 Functions 4. Python SQLite Music Library Week 13 Guild Project Week 13 Quiz
Week 14 11/17 11/23 Thanks giving	Python Chapter 9 GUI Java Chapter 7 OOP C++ Chapter 5 Functions	Python MPG GUI Computer Science Sololearn Tutorials Java Polyangle 5. Python SQLite Music Library CPP Mickeys Multiple Unit Converter
Week 15 11/24 - 11/30	Python Chapter 9 GUI Java Chapter 7 OOP C++ Chapter 5 Functions Think Aloud Tutorial	Python PolyAngle Tkinter Defensive Programming Java Scout's Sandwich Shop 6. Python SQLite Music Library Week 15 Guild Project

Week 16 12/01 - 12/07	Python Chapter 9 GUI Java Chapter 7 OOP C++ Chapter 5 Functions Lessons Learned Discussion	Java Meow Facts Web API Tutorial C++ Chapter 6 Arrays and Vectors C++ PolyAngle 7. Python SQLite Music Library Week 16 Guild Project Presentations
Finals 12/08 - 12/12		Guild Final Project

Academic Integrity

The academic integrity policy for this course includes the Institutional Academic Integrity Policy listed at the end of this document.

1. Do your own work.
2. You can ask for help if you get stuck. It is OK to have a study buddy to help with problems or issues. It is not OK to turn in the same assignment as someone else.
3. If you use someone else's work for a small quote or reference, cite the source.
4. Use your own words.
5. Do your own work. We are here to learn. You can't learn without doing the work.

Artificial Intelligence (AI)

1. AI (ChatGPT, etc.) is a tool, just like a pencil, a computer, or Google. All work submitted must be your own. You may not submit any work generated by an AI program as your own.
2. You will be working with AI in the workplace. Certain homework assignments will involve the use of AI technologies. Give credit to the source you use. The aim of these assignments is to familiarize you with practical AI applications.

Minor Violations: First offense: Grade of 0 for the assignment.

Major Violations: Second offense: Grade of F for the class.

Do your own work.

Assignment Creativity

If your assignment submission meets the requirements of the tutorial or assignment, you are free to embellish the resulting work as much as you wish before submission.

WNCC Master Syllabus Contents

This link contains the common WNCC Syllabus policies.