**CSCD 110, Introduction to Programming, 5 contact hours**

Eastern Washington University

College of Science, Technology, Engineering, & Mathematics

**Course Description**

Students learn fundamental programming concepts, programming environment topics and current technologies in computing. Programming concepts include structure and design using pseudo-code, basic syntax, variables, arithmetic, decisions, repetition, input and output. Programming environment topics include editor use, saving, compiling, running and debugging. Programming projects are required.

**CSCD 110 is a Required Course**

**Location and Meeting times**

9:00 am in CEB 105 Monday Tuesday Wednesday Friday

9:00 am CEB 208 Thursday

**Instructor**

Rob Lemelin [rlemelin@ewu.edu](mailto:rlemelin@ewu.edu) 509-359-6016

**Instructor’s office Hours**

Monday through Thursday from 2:00 pm to 2:50 pm and by appointment

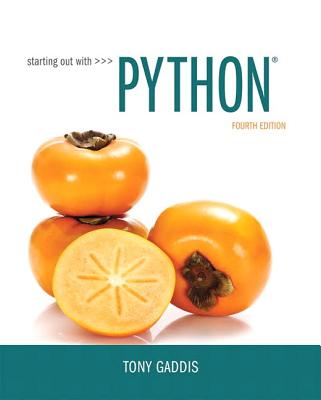
**Instructional Delivery Methods**

lecture and lab

**Communication:** Canvas inbox will be used to communicate.

**Textbook, Title, Author and Year**:

Starting Out with Python, 4th Edition, Tony Gaddis, ISBN-10: 0134444329 • ISBN-13:9780134444321,



**Brief list of topics to be covered**

A successful student will understand the concepts and practices of problem solving, developing algorithms and writing computer programs using an imperative programming language.

**Student Learning Outcomes**

* Program Design
  + Steps in development **(SE1-1)**
  + Introduction to algorithms and pseudo code **(PF2-1)**
  + Data representation in programs **(PF1-1)**
* Pseudocode
  + How to write (simple syntax concepts) **(PL4-2)**
  + Importance of meaningful names
  + Types of variables
  + The three basic control structures
  + Modular design (top-down) **(SE1-3)**
    - Input Process Output (IPO)
    - Main and sub-routines
* Algorithm development
  + Defining the problem **(PF2-1)**
  + Designing a solution **(PF2-1)**
  + Hand checking the solution **(SE6-1)**
  + Basic math (precedence, integer vs. real, modulo arithmetic)
  + Basic I/O **(PF1-2)**
    - User interface basics (intuitive design)
    - Input validation (all input is evil until proven otherwise)
* Selection control structures **(PF1-3)**
  + Basic selection syntax
  + Boolean expressions
    - Simple truth tables
    - Compound Boolean expressions
    - precedence
    - short circuit evaluation
  + Algorithms using selection **(PF2-2)**
    - Min, max of multiple values (not using arrays)
    - Sorting three values
    - Input/data validation
* Repetition Control Structures
  + Basic repetition control (pre-test and post-test, counted) **(PF1-2)**
  + Algorithms **(PF2-2)**
    - Summation
    - Euclid’s gcd
    - Input/data validation
    - Converting from decimal to binary
* Programming Language Specifics
  + revisit concepts introduced in pseudocode in the context of Python
    - Variables and assignment **(PL4-3)**
    - Arithmetic **(PL3-2)**
    - Selection **(PL3-2)**
    - Repetition **(PL3-2)**
    - File I/O **(PL3-2)**
    - Functions: declaring and calling **(PL5-4)**
* Social Context of computing
  + History **(SP1-1)**
  + Impact on society **(SP2-1)**
  + Professionalism and ACM code of ethics

**Assignments:** 6 - 7 Assignments

6 quizzes

2 Tests

Final Exam

**Evaluation:** • Attendance is a part of your class grade. You will be receiving important information and assignments from your instructor during class time, so showing up for class could very well improve your class grade. IMPORTANT, some information will only be given during class, and attendance is taking during lecture days.

Assignments will be turned in through canvas.ewu.edu. Please follow naming instructions for each individual assignment.

After your assignments are graded they will be posted on Canvas. It is **your** responsibility to double check and make sure that they have been correctly posted. Failure to double check could result in the loss of points for your labs. It would be wise to keep your assignments until you have checked to make sure they have been posted. **Using the instructor’s office hour to have corrections made or personal questions answered, is the best practice**.

Tests will be used to verify that you have done work requested outside class.

Assignments turned in late are in jeopardy of not being graded at all. There will be no late projects allowed on the final project. Late tests will not be allowed except in extreme circumstances.

<https://sites.ewu.edu/policies/policies-and-procedures/ap-303-23-classroom-attendance/>

Numerical percentage is calculated by dividing total points by total points possible. Conversion to grade point system is as follows:

92-100%: A

89-91%: A-

86-88%: B+

83-85%: B

79-82%: B-

76-78%: C+

73-75%: C

69-72%: C-

66-68%: D+

63-65%: D

62-64%: D-

< 62%: F

Class participation and extra credit can positively influence your final grade.

**Technical Requirements**

Canvas will be used as the learning management system. Support services in IT: <https://access.ewu.edu/it/students>

**Academic Integrity**

Academic Integrity is the corner stone of the university. Any student who attempts to gain an unfair advantage over other students by violating the Academic Integrity policy may be reported to the university and may receive a sanction up to and including XF for the course, suspension, or expulsion from the university. This policy is on the EWU web site.<https://sites.ewu.edu/policies/policies-and-procedures/wac-172-90-student-academic-integrity-3/>

**Emergency Information**

Campus-wide emergency response procedures can be found here: <https://access.ewu.edu/police/comprehensive-emergency-management-plan/emergency-response>. In the event of the following dial 911: Life/property in immediate danger, smoke or fire, crimes in progress, rescue or emergency medical assistance is needed.

**ADA Statement**

Example for Disability Accommodations: Your ability to succeed in this class is important to me. If you already have an accommodation plan through Disability Support Services (DSS) and would like to use your approved accommodations in this class, please let me know as soon as possible. If you do not have an accommodation plan but have a temporary health condition or permanent disability that may require an accommodation, please contact DSS at dss@ewu.edu or 509-359-6871. You can also visit their website at <https://inside.ewu.edu/dss/>.

**Equal Opportunity Statement**

Eastern Washington University does not discriminate on the basis of race, color, creed, religion, national origin, sex, pregnancy, sexual orientation, gender identity/expression, genetic information, age, marital status, families with children, protected veteran or military status, HIV or hepatitis C, status as a mother breastfeeding her child, or the presence of any sensory, mental, or physical disability or the use of a trained guide dog or service animal by a person with a disability, as provided for and to the extent required by state and federal laws.

**Religious Accommodations:**

If you would like to request an accommodation for reasons of faith or conscience, please refer to EWU’s policy on Holidays and Religious Accommodations available at <https://inside.ewu.edu/policies/>. Accommodations must be requested within the first two weeks of this course using the Holidays and Religious Accommodations Request form available at <https://inside.ewu.edu/student-life/resources/holidays-and-religious-accommodations-request/>.

**Affirmative Action Statement**

Eastern Washington University adheres to affirmative action policies to increase the number and retention of students and employees from historically underrepresented groups.

**Title IX and Mandatory Reporting**

Eastern Washington University recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct will NOT be tolerated at EWU. If you have been subjected to sexual misconduct, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct I must report the matter to the Title IX Coordinator. Should you want to report to a confidential source you may contact the following:

* Sexual Assault Family Trauma (SAFeT) – 509-624-7273 – 24 hours
* YWCA Domestic Violence Crisis Line – 509-326-2255 – 24 hours
* Suicide and Mental Health – 509-838-4428 – 24 hours
* Employee Assistance Program (EAP) – 360-407-9490 (employees)
* Counseling and Psychological Services (CAPS) – 509-359-2366 (students)