CPS141 – Introduction to Programming using Python

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Course Overview

This course is an introduction to programming using the Python programming language. This course is a direct transfer to SI 106 in the School of Information at the University of Michigan. It is intended for students with no prior programming experience.

Learning Outcomes

Upon successful completion of this course, you will be able to:

1. Understand the control structures of computer languages including sequential, selection, and iteration.
2. Apply python syntax that corresponds to these control structures.
3. Develop python programs of intermediate complexity.
4. Develop basic algorithmic thinking.

Course Objectives

Upon successful completion of this course, you will be able to:

1. Use basic data types in python including sequences and dictionaries
2. Use python syntax that corresponds to selection and iteration.
3. Use REST APIs to access data from the Internet.
4. Process JSON data.
5. Develop basic projects in informatics and other applications.

Required Materials

None – All required materials for this course are included in your tuition.

Technical Requirements

Computer with Internet Access. Programs are developed in Jupyter Notebook provided by Washtenaw Community College. The course uses an online textbook at the Runestone Academy.

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Time Commitment

To meet the due dates on the schedule, expect to spend a minimum of **10** hours per week for this **four (4)** credit course.

Using the Videos

Each Unit in Blackboard has multiple videos. You are required to view them all since the Problem Sets, Exams, and Projects use material from the Runestone Academy textbook and the videos. Some videos contain material not included in the Runestone textbook.

Grading

Your final grade is determined by your performance on problem sets, the mid-term and final project, and the mid-term and final exams. A problem set consists of one Jupyter Notebook file that contains multiple programming problems. Instructions for each problem are contained in the Notebook file. The number of problems varies but as the topics become more complex (relatively) the number of problems is reduced. The mid-term and final projects are comprehensive assignments that use the skills learned to-date. The exams consist of two parts: a concepts exam and a skills exam. A concepts exam consists mostly of 25-50 fill-in-the blank questions with some multiple-choice and true/false questions. A skills exam is usually one or two short problems that must be implement in python.

- Grades are posted in Blackboard under *My Grades*.
- Grading is typically completed within a week of the assignment due date.

Problem Sets consist of multiple problems that need to be solved using Python. .

Graded Items	Points Each	Number	Points Total
Problem Sets	20	12	240
Mid-term project	40	1	40
Mid-term Exam(s)	100	2	200
Final Project	80	1	80
Final Exam(s)	100	2	200
		Total	**760***

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*The number of Problem Sets and exams is subject to change.

Grading Scale							
A	93 – 100%	B	83 – 85%	C	73 – 75%	D	63 – 65%
A-	90 – 92%	B-	80 – 82%	C-	70 – 72%	D-	60 – 62%
B+	86 – 89%	C+	76 – 79%	D+	66 – 69%	F	59% and below

Grading Rubric for Problem Sets

This rubric applies only to programs submitted as assignments:

1. Programs that meet all the specifications in the Problem Sets instructions and execute correctly without error receive full credit.
2. Programs that meet some of the specifications in the Problem Sets instructions and produce some but not all the results specified will receive half credit.
3. Programs that throw errors or don't work will receive zero credit.
4. Program(s) submitted as Problem Sets solution(s) that are identical in form and content, as determine by the instructor, to that of program(s) by another or other student(s) will receive negative credit calculated as three times the point value of the Problem Set.

Late Assignments

Students are expected to submit their assignments or exams by the due date. However, there is a one-week grace period for assignments. No assignments will be accepted after the grace period expires. Projects and exams have a hard deadline date as outlined in the schedule.

Email Communication

- You must email from your WCC account. This is necessary to comply with federal privacy regulations. I will not respond to emails from any other account.
- Provide a clear subject line including the course ID CPS141.
- Always include your first and last name in the email message.
- Clearly identify the problem. Including screenshots and problematic code is very helpful and reduces the time to resolution.
- **Send your Jupyter notebook** as an attachment.

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WCC policy stipulates that an instructor should respond to emails within 48 hours. I will usually respond to emails within 24 hours on the weekdays and 48 hours on weekends and Holidays. You should make a habit of checking your WCC email on a regular basis for any emails I may send.

Course Policies

- If you are in an on-campus or virtual classroom section, you are expected to read the assigned chapter and view the corresponding videos prior to attending the classroom session. This maximizes the opportunity for learning during the session. The instructor may ask questions derived from the topics presented in the assigned chapter.
- *All assignments and exams are due on their scheduled date* (see the schedule). You have a grace period of one week to submit the problem set. If you fail to submit after the grace period, you will receive a 0 for that problem set**.** There are no grace periods for exams or projects.
- *No extension to the due date is available***.** This means that if an assignment or exam is not submitted by the due date or by the time the grace period expires that assignment or exam will not be accepted for credit regardless of circumstances.
- *No opportunity for extra credit work is available*.
- The only acceptable method for submitting an assignment is Blackboard. The instructor does not accept assignments sent through email.
- Activities such as the number or type of assignments or exams may change without prior notice to the student.
- In any email communication, you must identify the course by the course id CPS141 in the Subject line. Further, you must identify the specific assignment or exam by using the title of the assignment or exam.
- The student must take responsibility for withdrawal from the class in the event a withdrawal is necessary. The instructor will submit a withdrawal grade provided the student emails the instructor at least one month before the end of the semester requesting a withdrawal. Requests after that date will not be granted and the student will receive a grade for all work completed.
- At all times the student must be respectful of the instructor and other students and not engage in any activity that is disruptive to the learning of other students in the class.
- The failure of your computer or Internet access does not result in any exception to any policy. If you are in an online or virtual classroom section, you must have a reliable Internet connection.

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My Commitment to you:

- I will make every effort to grade weekly so that you have a contemporaneous grade as the semester progresses.
- I will answer your emails within 24 hours or less during the week and 48 hours or less on the weekend.
- Upon request, I will meet with you privately online if you are experiencing any difficulty with the topics covered or with any assignment. This is limited to one hour per week and contingent upon you being current on all assignments and tests.

ADA Policy

In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to "reasonable accommodations." If any accommodations are needed for this course, please inform me and make an appointment with a counselor in the Learning Support Services. The counselor will verify the disability and arrange accommodations.

Academic Honesty

The student is expected to conduct themselves in an honest and forthright manner in any academic activity. Cheating in any form corrupts the learning process and threatens the educational endeavors of fellow students. Hence, the student assumes responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity is that the student's submitted work, examinations, reports and projects must be their original work. Representing another student's work as one's own is a violation of this principle and results in the action described below.

Any evidence suggesting academic dishonesty results in a *failing grade* for the course and a referral to the Dean of Business and Computer Technology for disciplinary action as outlined in the Student Handbook which may result in *expulsion from WCC*.

Note: General advice and interaction is encouraged. It is also permissible to explain to another student how to accomplish a particular task. However, each student must develop their own solution to examinations, assigned homework, and laboratory exercises. Students may not work together on graded assignments or examinations.