

CMP 131

Fundamentals of Programming (Python)

CCM Catalog Course Description:

This is a fundamental course in problem solving and programming. This course introduces concepts such as how to solve problems by designing and implementing algorithms using a popular programming language. Topics include: pseudocode, algorithms, variables, constants, using decisions and loop structures to construct effective code, using built-in functions, creating functions and modules, and simple debugging techniques for detecting errors. Use of real-world problems in Web Development, Cybersecurity and Data Science are explored. No prior programming experience is required.

Course Learning Objectives:

The following outcomes are from the County College of Morris Master Syllabus for CMP131. At the conclusion of this course, you should be able to:

- Demonstrate how to define and use local and global variables in program design.
- Create a program that incorporates functions, modules, selection, and loop control structures.
- Create a user-friendly Graphical User Interface (GUI).
- Practice programming by performing tasks, involving encryption, data science and/or web development.
- Design an appropriate program to solve the problem given, using programming design techniques.
- Interpret and develop pseudocode and algorithms.

Spring 2022 CMP 131 Sec 20231

Credits: 3.0

Monday 3:30-5:25pm

Tuesday 3:30-4:55pm

Prerequisite(s): MAT-007 or equivalent

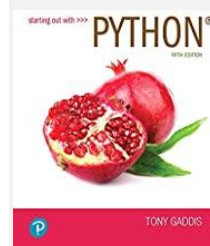
Professor Colleen Carmeli

E-Mail: CCarmeli@ccm.edu

Office Hours: Weekly as noted in Blackboard

Web Location: Blackboard

Required Textbook(s):



Starting Out with Python, 5th Edition by Tony Gaddis

eBook Access card can be purchased/rented at:

<https://bookstore.ccm.edu/college>

Other Materials:

- Basic text editor (e.g. Notepad)

Software:

Python IDE (Integrated Development Environment)

- IDLE: <https://www.python.org/>
- Anaconda: <https://www.anaconda.com/>
- jGrasp (<https://www.jgrasp.org>)

Requirements to be successful:

1. Commitment to attend our weekly in-class sessions.
2. Ability to allocate time to mastery of the material.
3. Commitment to login to the course at least once a week to check for announcements, check the calendar, post, read and respond to messages in the discussion area, and submit assignments.
4. Commitment to complete all assignments on time.
5. Ability to work independently.
6. Ability to seek help when needed.
7. Ability to ask questions in class and on the discussion board.
8. Checking your CCM email frequently for notifications.

Attendance Policy:

- Attendance is **MANDATORY** and will be taken at every class meeting, and counts toward the Class Participation grade.
- If you need to miss a class please let me know via email. You are responsible for the work covered in class and any assignments due.
- Excessive unexcused absences will result in dropping your final grade to the next lower letter grade! For example, if your final grade is a B+, more than 2 absences will lower it to a C+.

All Email communication between students and faculty should be accomplished using CCM Faculty and CCM Student Email accounts. All CCM Faculty Email Addresses are listed in the Directory at the bottom of the CCM Web Site Home page at <http://www.ccm.edu>. Students can access their CCM Email accounts by clicking on the Student Email link at the center of the CCM Web Site Home page. Students, check your CCM Email regularly.

COVID-19:

See the CCM web page for the College's full COVID-19 Return to Campus Plan, to include vaccination, weekly testing, and masking requirements.

A list of students who are not in compliance with the COVID-19 policies are sent to the instructor weekly on Sundays. Any students identified as not being in compliance are NOT PERMITTED to attend class on-campus.

CCM Academic Policies:

CCM Academic Policies may be viewed on the college web site at: <http://www.ccm.edu/academics/policies.aspx> or in the CCM College Catalog. All students enrolled at the County College of Morris are required to read the CCM Policy Statements.

Academic Integrity:

The academic integrity policy is in effect at all times in this course. I expect that all papers, exams, quizzes, and laboratory assignments submitted by each student reflects his/her own work, and that he/she did not give or receive unauthorized aid in any of this work. Students may not collaborate in the preparation of assignments, papers, laboratory assignments, or examinations.

Examples of unacceptable forms of dishonesty include sharing code files, cheating, copying, plagiarism, unauthorized collaboration, submitting someone else's work as one's own; dishonesty through the use of technology such as sharing disks, files or programs; access to, modification of, or transfer of electronic data, system software or computing facilities.

Failure to abide by these expectations will result in a grade of 0 on an exam or assignment, or failure in the course and a formal complaint of academic dishonesty filed against the student with the Dean of Student Development. Students should ask questions of the instructor if they want to clarify exactly what may constitute academic dishonesty in this course.

ADA STATEMENT:

The college maintains compliance with the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) of 1990; 2008 (revised). Students who seek reasonable accommodations for physical, emotional, medical, sensory or learning difficulties must self-identify and register with the Disability Services Office. Students who need classroom accommodations are encouraged to meet with faculty members on an individual basis to discuss their specific needs. To register or learn about services, students may contact the Disability Services Office; 973-328-5284.

All students must remain masked in classrooms, the library, and indoors whenever social distancing is not possible. All students must have and display an ID card with the new college logo to be permitted on campus. For further details contact dsd@ccm.edu.

Topics Covered:

Topics	Readings
Introduction to Computers and Programming	Chapter 1
Pseudocode and Algorithms	Online resources
Program design techniques	Online resources
Input, Processing, and Output	Chapter 2
Decision Structures and Boolean Logic	Chapter 3
Repetition Structures	Chapter 4
Functions	Chapter 5
Files and Exceptions	Chapter 6
Lists and Tuples	Chapter 7
More About Strings	Chapter 8
Dictionaries and Sets	Chapter 9

Instructor's Classroom Conduct Policies:

Turn off cell phones during class

- No web surfing, texting, using social media, or emailing during class or lab time
- Academic Integrity at all times
- Do not use cellphones while class is in session
- Please remove hats and hoods

Class Participation:

Students are expected to participate and engage in class discussions, both live and in the Blackboard discussion forums. Questions and dialogue are encouraged to enhance the learning environment.

Monitors are to be turned off during in-person lectures and discussions. Lab time should be used for classwork only. Classroom monitoring software will be used.

Students joining class virtually must turn webcams on during class meetings.

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Grading Criteria:

- There are 3 exams given in class.
- Homework assignments, including labs and projects, will be assigned in Blackboard and are due as noted.
- **Late assignments are only accepted WITH PRIOR APPROVAL. See the Late Work Policy on the next page.**
- Class participation is expected both in class and online. Note that attendance at counts toward your Class Participation grade.

Activity	% of Grade
Class Participation	10%
Homework	30%
Labs/Projects	30%
Exams	30%
TOTAL	100%

You are expected to submit work on time. Since there are many topics to master you must stay on top of your workload. Plan ahead to submit assignments on their due date, or early.

Assignments are posted in Blackboard with due dates. Save your work frequently! Keep copies of all your work on your USB drive.

For projects and labs, upload and submit only the .py file (no other file types accepted). Make sure to document your code and include your name. **Submitted work should run cleanly with no errors** – make sure to test your work for all possible outcomes before you submit it.

CLASS COMMUNICATION:

All communication among participants should be done with respect. We will also remember that communication when written should reflect college level work, not informal texting.

Ideas and interaction are encouraged, and required if we are to stay ahead of the technological curve. In order to participate, you must be part of the conversation.

How to ask. For private conversation with the professor, use CCM email or speak to me in person. For questions about the course, dates, assignments, or general bafflement, ask in class. Often others will have the same question, so asking is appreciated.

Instructor's Syllabus Statement

This syllabus is subject to change due to student interests, special needs, cancellations, or instructor's decision.

What should you expect from the professor?

- Knowledge of the material
- Assignments that reinforce what we are learning
- Preparation for each topic
- Clearly stated requirements
- Response to email/discussions within 48 hours (usually sooner)

Class documents will be posted on Blackboard as needed.

Please let me know if you have difficulties with Blackboard access.

Finally, Welcome!
Enjoy the adventure!

Course Grades:

Numeric grades are assigned in Blackboard and converted to a final letter grade at the end of the semester as follows:

Final Grade	Letter
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
70-76	C
60-69	D
Below 60	F

Honor Code

- **All assignments are to be completed by each student individually unless otherwise noted.**
- Every assignment is reviewed for originality. **DO NOT COPY OR ACCEPT CODE FROM OTHER SOURCES – this includes:**
 - Other students
 - Online forums
 - Tutors
- If you receive help from a tutoring source (official tutor or friend who knows how to code for a graded assignment you must indicate the source in a comment in your program. Tutors can only explain concepts – they are not to write the code for you.
- **Code copied from another student, shared with another student, or taken from an online source is a violation of the Academic Integrity policy** (noted on page 2) and will result in a **grade of 0 for the assignment and referral to the Dean.**

TITAN Alert System:

Titan Alert is the emergency alert system used by CCM to send email, text messages and/or voice phone messages to students, faculty, and staff in the event of an emergency or weather-related closing. If you have not already updated your information in Rave, the new Titan Alert service for the college, please take the time to do so to ensure you continue to receive CCM emergency notifications. To update your information:

Go to www.getrave.com/login/ccm/
Use your CCM email as your username
Use the initial password you received in the email from Rave or the password you have set up for that account. You also can use the "Forgot your password" link.

Delayed openings and cancellations are also announced on the website and via the emergency closing number, 973-328-5580.

Disability Accommodations:

In accordance with the policies underlying Section 504 of the Rehabilitation Act of 1973, the American with Disabilities Act (ADA) of 1990, the ADA Amended Acts (ADAA) of 2008 and County College of Morris policy, no qualified individual with a disability shall, solely on the basis of that disability, be excluded from participation to County College of Morris programs or activities. Students may seek reasonable accommodations for their documented disability by self-identifying and registering with the Office of Accessibility Services. Students who are approved through Accessibility Services for classroom accommodations are encouraged to meet with faculty members on an individual basis to discuss their specific needs.

973-328-5284 or
disabilityservices@ccm.edu

Course Content Calendar

The Course Content Calendar is tentative and subject to change at the instructor's discretion. Homework and Project Assignments will be posted with due dates in Blackboard.

Date	Topics Covered	Reading Assignments
Week 1	Introduction to Computers and Programming	Ch 1
Week 2	Introduction Pseudocode/Algorithms	Supplemental Resources
Week 3, 4	Input, Processing, and Output	Ch. 2
Week 5, 6	Decision Structures and Boolean Logic	Ch. 3
Week 7	Exam 1: Ch. 1-3 Repetition Structures	Ch. 4
Week 8	Repetition Structures (cont.)	
Week 9, 10	Functions	Ch. 5
Week 11	Files and Exceptions	Ch. 6
Week 12	Exam 2: Ch. 4-6 Lists and Tuples	Ch. 7
Week 13	More About Strings	Ch. 8
Week 14	Dictionaries and Sets	Ch. 9
Week 15	Exam 3: Ch. 7-9	