



## Course Number, Title and Credits

**CSCU 301** - Introduction to Programming - 3 credits

## Bulletin Course Description

This course will introduce you to the basic components of programming; as well as, introducing students to applications of programming skills. This course is designed to introduce the fundamentals of designing, coding, and documenting programs using basic data structures. Online only. 3 credits.

## Mission of the School of Business and Professional Studies

The mission of the School of Business and Professional Studies is to provide adult learners with a relevant, flexible and quality education that inspires innovation and global leadership.

## Program Mission

The program mission is housed at the school level and information is entered at the school level template.

## Learning Outcomes and Assessment

Learning Outcomes are statements that specify what learners will know, understand, or be able to demonstrate at the end of a learning experience.

Types of Learning Outcomes include:

- Course Learning Outcome – Result of finishing a course.
- Program Learning Outcome – Result of finishing a program.
- Institutional Learning Outcome – Result of finishing a degree at an institution, reflecting the core learning values and experiences of all graduates.

A Signature Assignment is an assignment used to measure a student's mastery of a program or institutional learning outcome. If a course you are taking includes a Signature Assignment, it will be clearly marked (\*\*SIGNATURE ASSIGNMENT\*\*).

[Click here](#) for information on the Program Learning Outcomes (PLOs), the Institutional Learning Outcomes (ILOs), and the Curriculum Map related to this course.

## Essential Equipment

All students must have reliable access to a working computer with Internet access throughout each week of the class. Each student will need to be able to access and work in the University's online Learning Management System, Blackboard. For more information about personal computer requirements [click here](#).

## Course Learning Outcomes

By the end of the course you should be able to:

1. Perform basic programming functions in Python.
2. Utilize basic data structures in developing programs.
3. Utilize basic control structures in developing programs.
4. Demonstrate the use of Python abstraction mechanisms.

## Required Textbooks

**None**

All student textbooks are available at the University of Massachusetts Global Bookstore:

<https://www.bkstr.com/umassglobalstore>

## Major Study Units

1. Introduction to Python
2. Working with Data
3. Input and Output
4. Data Structures

5. Control Structures
6. Exceptions
7. Functions and Classes
8. Modules & Packages

## Instructional Strategies

This course requires that each student take personal responsibility for completing all required readings and assignments independently, as well as actively participating in discussions and collaborative team activities each week as assigned throughout the 8-week term. Instructional strategies through Blackboard may include threaded discussions, journals, wikis, blogs, readings, videos, links to web research and resources, and the use of audio/video synchronous and asynchronous multimedia tools.

## Methods of Evaluation for Determining Grades

### Assignment Detail for Fully Online Course:

Assignments for Fully Online Course - Refer to Rubric(s) in Course Information in Blackboard	Possible Points
Discussion Posts (16 @10 pts. each)	160
Weekly Assignments 7 @100 pts. each)	700
Final Project	140
	Total:1000

### Class by Class Outline for Fully Online Course:

Week	Topics	Assignments
Week 1	Introduction to Python	<ul style="list-style-type: none"> <li>• Week 1 Discussions 1 &amp; 2</li> <li>• Assignment 1: Hello World</li> </ul>
Week 2	Working with Data	<ul style="list-style-type: none"> <li>• Week 2 Discussions 1 &amp; 2</li> </ul>

		<ul style="list-style-type: none"> <li>• Assignment 2: Quadratic Formula and Lorem Ipsum</li> </ul>
Week 3	Input and Output	<ul style="list-style-type: none"> <li>• Week 3 Discussions 1 &amp; 2</li> <li>• Assignment 3: Writing and Reading CSV Files</li> </ul>
Week 4	Data Structures	<ul style="list-style-type: none"> <li>• Week 4 Discussions 1 &amp; 2</li> <li>• Assignment 4: Converting CSV to JSON</li> </ul>
Week 5	Control structures	<ul style="list-style-type: none"> <li>• Week 5 Discussions 1 &amp; 2</li> <li>• Assignment 5: Shapefile Processing</li> </ul>
Week 6	Exceptions	<ul style="list-style-type: none"> <li>• Week 6 Discussions 1 &amp; 2</li> <li>• Assignment 6: Calculator</li> </ul>
Week 7	Functions and Classes	<ul style="list-style-type: none"> <li>• Week 7 Discussions 1 &amp; 2</li> <li>• Assignment 7: DMV Records</li> </ul>

Week 8	Modules & Packages	<ul style="list-style-type: none"> <li>• Week 8 Discussions 1 &amp; 2</li> <li>• Final Project: DMV Database</li> </ul>
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## Methods of Evaluation for Determining Grades

### Assignment Detail for Blended Course:

Assignments for Blended Course - Refer to Rubric(s) in Course Information in Blackboard	Possible Points
Discussion Posts (16 @10 pts. each)	160
Weekly Assignments 7 @100 pts. each)	700
Final Project	140
	Total:1000

### Class by Class Outline for Blended Course:

Week	Topics	Assignments
Week 1	Introduction to Python	<ul style="list-style-type: none"> <li>• Week 1 Discussions 1 &amp; 2</li> <li>• Assignment 1: Hello World</li> </ul>
Week 2	Working with Data	<ul style="list-style-type: none"> <li>• Week 2 Discussions 1 &amp; 2</li> <li>• Assignment 2: Quadratic Formula and Lorem Ipsum</li> </ul>
Week 3	Input and Output	<ul style="list-style-type: none"> <li>• Week 3 Discussions 1 &amp; 2</li> <li>• Assignment 3: Writing and Reading CSV Files</li> </ul>

Week 4	Data Structures	<ul style="list-style-type: none"> <li>• Week 4 Discussions 1 &amp; 2</li> <li>• Assignment 4: Converting CSV to JSON</li> </ul>
Week 5	Control structures	<ul style="list-style-type: none"> <li>• Week 5 Discussions 1 &amp; 2</li> <li>• Assignment 5: Shapefile Processing</li> </ul>
Week 6	Exceptions	<ul style="list-style-type: none"> <li>• Week 6 Discussions 1 &amp; 2</li> <li>• Assignment 6: Calculator</li> </ul>
Week 7	Functions and Classes	<ul style="list-style-type: none"> <li>• Week 7 Discussions 1 &amp; 2</li> <li>• Assignment 7: DMV Records</li> </ul>
Week 8	Modules & Packages	<ul style="list-style-type: none"> <li>• Week 8 Discussions 1 &amp; 2</li> <li>• Final Project: DMV Database</li> </ul>

## Student Performance Requirements

**Grades are determined on a straight-scale basis using the following scales.**

<b>The following grading scale applies to all undergraduate coursework:</b>					
A	94.0% and above	A-	90.0% - 93.9%	B+	88.0% - 89.9%
B	83.0% - 87.9%	B-	80.0% - 82.9%	C+	78.0% - 79.9%
C	73.0% - 77.9%	C-	70.0% - 72.9%	D+	68.0% - 69.9%

<b>The following grading scale applies to all undergraduate coursework:</b>					
D	63.0% - 67.9%	D-	60.0% - 62.9%	F	59.9% and below

<b>The following grading scale applies to all graduate coursework:</b>					
A	94.0% and above	A-	90.0% - 93.9%	B+	88.0% - 89.9%
B	83.0% - 87.9%	B-	80.0% - 82.9%	C+	78.0% - 79.9%
C	73.0% - 77.9%	F	72.9% or below		

## Attendance and Other Class Policies

Requirements for student attendance and participation will be defined by each instructor based on the following policy:

- Monday of the first week of the session is the first day of class.
- Regular attendance/engagement is expected for student success. Online engagement is evident through posting to a discussion board, blog, completing assignments including journal entries, or taking quizzes and exams. If regular attendance/engagement are not evident, the student's grade may be adversely affected. If a student misses more than one week of engagement in an online class, the student may, at the discretion of the instructor, fail the course.
- Students in courses with required synchronous class sessions are expected to remain for the full duration. If a student misses more than one required synchronous online class, the student may, at the discretion of the instructor, fail the course.
- Students must submit an academically-related assignment through the Learning Management System (LMS) before the end of Week 2 (i.e., a quiz, test, course content-related Discussion Board post, or other course content-related assignment). Introduction posts do not count as an academically-related assignment. If a student does not submit an academically-related assignment, the student will be administratively dropped from the course. Students administratively dropped for non-attendance/participation will not be reinstated in the course. In infrequent cases, students in certain classes may be exempt from the requirement to submit an academically-related assignment before the end of Week 2; students may consult with their instructor for further information.
- Students should consider withdrawing from a course if they will be unable to participate each week. Instructors may, but are not obligated to, accommodate students under extraordinary circumstances, but the student must request accommodation and provide requested supporting documentation.
- Schools and programs may have different attendance policies. Refer to school and program specific information for additional attendance policies.

## University Academic Writing Standards

Specific writing standards differ from discipline to discipline, and learning to write persuasively in any genre is a complex process, both individual and social, that takes place over time with continued practice and guidance. Nonetheless, UMass Global has identified some common assumptions and practices that apply to most academic writing done at the university level. These generally understood elements are articulated here to help students see how they can best express their ideas effectively, regardless of their discipline or any particular writing assignment.

Venues for writing include the widespread use of e-mail, electronic chat spaces and interactive blackboards. UMass Global is committed to guaranteeing that students can expect all electronic communication to meet Federal and State regulations concerning harassment or other “hate” speech. Individual integrity and social decency require common courtesies and a mutual understanding that writing—in all its educational configurations—is an attempt to share information, knowledge, opinions, and insights in fruitful ways.

Academic writing (as commonly understood in the university) always aims at correct *Standard English* grammar, punctuation, and spelling.

The following details are meant to give students accurate, useful, and practical assistance for writing across the curriculum of the University of Massachusetts Global.

Students can assume that successful collegiate writing will generally:

- Delineate the relationships among writer, purpose, and audience by means of a clear focus (thesis statements, hypotheses or instructor-posed questions are examples of such focusing methods, but are by no means the only ones) and a topic that’s managed and developed appropriately for the specific task.
- Display a familiarity with and understanding of the particular discourse styles of the discipline and/or particular assignment.
- Demonstrate the analytical skills of the writer rather than just repeating what others have said by summarizing or paraphrasing
- Substantiate abstractions, judgments, and assertions with evidence specifically applicable for the occasion whether illustrations, quotations, or relevant data.
- Draw upon contextualized research whenever necessary, properly acknowledging the explicit work or intellectual property of others.
- Require more than one carefully proofread and documented draft, typed or computer printed unless otherwise specified.

## Documentation



Any material not original to the student must be cited according to the American Psychological Association (APA) documentation format. Deliberate use of information or material from outside sources without proper citation is considered plagiarism and can be grounds for disciplinary action. See the explanation of Academic Integrity below.

## Academic Integrity

The University of Massachusetts Global is an academic community based on the principles of honesty, trust, fairness, respect, and responsibility. Academic integrity is a core University value, which ensures respect for the academic reputation of the University, its students, faculty and staff, and the degrees it confers. The University expects that students will conduct themselves in an honest and ethical manner and respect the intellectual work of others.

Submitting to faculty work completed by the use of any artificial intelligence tool without permission and/or when prohibited by class policy. When faculty require the use of technology, including artificial intelligence, as a part of an assignment for the course, there is no violation. Students are reminded to consult syllabi, assignment sheets/rubrics, program documents and their faculty. Use of artificial intelligence, when permitted, must be correctly cited in the assignment.

The [UMass Global online library](#) provides resources to support research, proper citation styles, and the safe and responsible use of generative artificial intelligence or Gen AI.

- The [Academic Integrity and Plagiarism Avoidance](#) page provides guidance to help students better understand academic integrity and includes tips on how to avoid plagiarism.
- The [Citing Sources](#) page offers guidance on how to properly cite using APA, MLA, and Chicago styles.
- The [Artificial Intelligence Resource Guide for Students](#) provides advice for understanding and appropriately using generative artificial intelligence tools such as ChatGPT and Bard.

## UMass Global's Office of Accessible Education

Students who require disability-related services or accommodations to access their educational experience can register with the Office of Accessible Education (OAE). The Office of Accessible Education (OAE) is committed to ensuring equal educational access and opportunity for all members of our academic community. Students will be provided equitable and reasonable accommodations and services that are in compliance with [Section 504 of the Federal Rehabilitation Act of 1973](#) and the [Americans with Disabilities Act of 1990 \(ADA\)/Americans with Disabilities Act Amendments Act of 2008 \(ADAA\)](#). Registration with OAE is on a voluntary, self-identifying basis. Please visit the [Office of Accessible Education \(OAE\) website](#) for more information about how to register for services, eligibility requirements, and information about potential academic accommodations and services.

Our university is committed to ensuring equal access for all students. Let us know about any accessibility barriers you encounter using any of our online systems or websites by submitting a [Feedback or Accessibility Concern Submission Form](#). We'll do our best to improve things and get you the information you need.

## UMass Global's CARES Team

The [CARES team](#) is a campus-wide team of appointed staff and faculty responsible for identifying, assessing, and responding to concerns and/or disruptive behaviors by students, faculty/staff, and community members who struggle academically, emotionally, or psychologically, or who present a risk to the health or safety of the university or its members.

Individuals may refer themselves or other community members of concern by emailing [cares@umassglobal.edu](mailto:cares@umassglobal.edu) or by filling out a referral form [here](#). The CARES Team provides short term assessment, intervention, support, and recommendations of resources to those referred and engaged in the process.

## UMass Global's Title IX Statement

The University of Massachusetts Global strives to maintain and foster a climate that promotes respect and human dignity. Sexual misconduct and relationship violence in any form is antithetical to the university's mission and core values, violates university policies, and may also violate federal and state law. The office of Title IX is primarily concerned for students' safety and well-being and is tasked with investigating all reports of sexual misconduct experienced by our community members. Title IX prohibits sex-based and gender-based discrimination and harassment, which includes discrimination based on pregnancy and/or pregnancy-related complications, parental status, and marital status. Students expecting or experiencing pregnancy-related complications, that may require educational accommodations, should contact the University's Title IX Coordinator and/or the Office of Accessible Education.

The University and Title IX's prohibition of sex discrimination also covers sexual harassment, sexual violence, and any other form of sexual misconduct. We offer options and resources to all students affected by these issues and are committed to providing a fair, thorough, and prompt investigation and adjudication process. If you or someone you know has been impacted by sexual assault, dating, and domestic violence, stalking, or sexual exploitation, please visit the [University's Title IX Resource Page](#) to access additional resources and information.

UMass Global's staff and faculty are tasked with reporting any possible sex or gender-based discrimination or Title IX violations to the University's Title IX Coordinator at [civilrightscomplaints@umassglobal.edu](mailto:civilrightscomplaints@umassglobal.edu).

[Click on this Link to our University Title IX Policy.](#)