

# CSC 401 (803): Introduction to Programming

Winter 2022 :: Thursdays, 5:45 pm – 9:00 pm



## Instructor Info

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Instructor Name: Jay Tang  
[jay.tang@depaul.edu](mailto:jay.tang@depaul.edu)

Office Hours: Thursdays, 4:00pm – 5:30pm  
Location: Online by appointment only\*

*\*The appointments must be scheduled in advance. When you schedule an appointment, I will send you information about how to connect with me during our scheduled appointment.*



## Course Description

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This course is an introduction to programming with a focus on problem solving, structured programming and algorithm design with a gentle introduction to efficiency. Concepts covered include data types, expressions, variables, assignments, conditional and iterative structures, functions, file input/output, exceptions, namespaces, classes, and recursion.

PREREQUISITE(S): None.

This is a first programming course for students who have never had a term of programming or its equivalent. We assume that students have no prior experience with any programming language. We will use the Python language in this course.



## Course Learning Outcomes

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By the end of this course, students will be able to:

- Develop algorithmic solutions for basic computational problems.
- Understand fundamental Python programming structures such as expressions, assignments, decision and iteration structures, functions, and modules.
- Develop and test simple programs in Python.
- Understand how to use the Python Standard Library.
- Design classes and understand the fundamental principles of object-oriented programming (OOP).



## Textbook, Software, & Supplies

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- The required textbook is Introduction to Computing using Python: An Application Development Focus, Second Edition, Ljubomir Perković, John Wiley & Sons, 2015. ISBN 978-1-118-89105-6.

- The website used for this course is Desire2Learn (D2L). To log onto the D2L visit <https://d2l.depaul.edu/>. Class notes, programming assignments, and other course materials will be available through the D2L site. There will also be links to course recordings.
- Python 3.9 will be used for this course.



## About our Course Modality

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First two weeks of the course will be held online. The rest of the course is held in-person. Attendance at the class is not mandatory and not graded. However, it is still strongly recommended that you attend every class.



## COVID-19 Updates

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For the latest news and resources regarding DePaul's response to COVID-19, please visit <https://go.depaul.edu/Fall2020>.



## Grading Policy

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Course assessments include programming assignments, midterm exam and final exam. The course grade will be computed as follows:

Assessment	Percentage
Programming assignments	35 %
Midterm exam	30 %
Final exam	35 %
<b>TOTAL</b>	<b>100%</b>

In order to do well in this class, you must attend the class sessions regularly, participate in class discussions, read the chapters in the book as indicated in the homework assignment, start work on the assignments early, and ask questions early and often. The answers to the programming assignment and the lab and exam questions should be written in a way that is rigorous, clear, and concise.

## Grading Scheme

Grade	Percentage
A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	65-69
D	60-64
F	<60



### Assignment Info

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- Each week you will have a programming assignment. You can consult with your homework partners, the lab assistant, the instructor, and the CDM tutors on the programming assignments, but you may not under any circumstances submit code that you have not helped to write, nor may you consult anyone beyond those specified when completing your assignments. Each programming assignment will have a posted deadline, specified on the assignment. No late assignments are accepted for any reason. Your lowest assignment score will be dropped in the calculation of your course grade.



### Late Work, Make-Ups, and Extra Credit

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- No late assignments are accepted for any reason.
- Make-up exams will not be given. If you wish to petition for a make-up exam, you must notify me in advance and provide documented evidence of the emergency that will cause you to miss the exam. Failure to contact me in advance of the exam date and time will disqualify you from being allowed to take a make-up exam. If a make-up exam is granted, it will be of a form of my choosing.
- There will not be an extra credit assignment. Anyone should be able to do well in this course if they do the work on time and ask for help proactively. If you are concerned about your grade or feeling overwhelmed, talk to me right away and I will do everything I can to help. Do not wait until it is too late to ask for help!



## Tentative Course Schedule

Week	Date	Topic	Chapter(s)
1	January 6, 2022	<ul style="list-style-type: none"> <li>• Introduction to the course</li> <li>• General overview of computer programming</li> <li>• Variables, expressions and assignments</li> <li>• Basic data types (Boolean, int, float, string)</li> <li>• The list container type</li> <li>• Implicit and Explicit type conversion</li> </ul>	1-2
2	January 13, 2022	<ul style="list-style-type: none"> <li>• Python programming</li> <li>• 1-way and 2-way conditional statements</li> <li>• Iteration through sequence objects</li> <li>• Functions and parameter passing</li> </ul>	3
3	January 20, 2022	<ul style="list-style-type: none"> <li>• String processing</li> <li>• File I/O</li> <li>• Exceptions</li> <li>• The Python math module</li> </ul>	4
4	January 27, 2022	<ul style="list-style-type: none"> <li>• Multi-way conditional structures</li> <li>• Loop patterns</li> <li>• Nested loops</li> </ul>	5
5	February 3, 2022	<ul style="list-style-type: none"> <li>• while loops</li> <li>• break, continue statements</li> <li>• The Python random module</li> </ul>	5
6	February 10, 2022	<b>Midterm exam: 6 pm - 8 pm</b>	
7	February 17, 2022	<ul style="list-style-type: none"> <li>• Multi-dimensional lists</li> <li>• Containers cont'd. - Dictionaries, Sets, Tuples</li> <li>• Namespaces and Scope</li> </ul>	6-7
8	February 24, 2022	<ul style="list-style-type: none"> <li>• Object-oriented programming (OOP)</li> <li>• The class keyword</li> <li>• Constructors, Methods, and Fields</li> </ul>	8
9	March 3, 2022	<ul style="list-style-type: none"> <li>• OOP Concepts - Inheritance</li> <li>• OOP Concepts - Polymorphism</li> </ul>	8
10	March 10, 2022	<ul style="list-style-type: none"> <li>• Efficiency (recursive vs iterative Fibonacci)</li> <li>• Running time analysis</li> <li>• Search algorithms</li> </ul>	10
11	March 17, 2022	<b>Final exam: 6 pm - 8 pm</b>	



## Academic Integrity

DePaul University is a learning community that fosters the pursuit of knowledge and the transmission of ideas within a context that emphasizes a sense of responsibility for oneself, for others and for society at large. Violations of academic integrity, in any of their forms, are, therefore, detrimental to the values of DePaul, to the students' own development as responsible members of society, and to the pursuit of knowledge and the transmission of ideas. Violations include but are not limited to the following categories: cheating; plagiarism; fabrication; falsification or sabotage of research data; destruction or misuse of the university's academic resources; alteration or falsification of academic records; and academic misconduct. Conduct that is punishable under the Academic Integrity Policy could result in additional disciplinary

actions by other university officials and possible civil or criminal prosecution. Please refer to your Student Handbook or visit Academic Integrity at DePaul University (<http://academicintegrity.depaul.edu>) for further details.



## DePaul and College-Specific Policies

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### PREFERRED NAME & GENDER PRONOUNS

I value each student's right to be referenced by their gender pronoun and their preferred name. If your name and pronoun in Campus Connect don't reflect what you'd like me to use, please let me know.

Please also note that students may choose to identify within the University community with a preferred first name that differs from their legal name and may also update their gender. The preferred first name will appear in University related systems and documents except where the use of the legal name is necessitated or required by University business or legal need. For more information and instructions on how to do so, please see the Student Preferred Name and Gender Policy at [policies.depaul.edu/policy/policy.aspx?pid=332](http://policies.depaul.edu/policy/policy.aspx?pid=332)

### RESOURCES FOR STUDENTS WITH DISABILITIES

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) by emailing [cSD@depaul.edu](mailto:cSD@depaul.edu) and/or visiting one of the locations below.

#### COVID-19 Virtual Office

During the temporary closure of our physical offices due to Covid-19, Center for Students with Disabilities is accessible for live questions, referrals, and assistance via a virtual office using Zoom. The virtual office will be staffed Monday-Friday from 9:00 a.m. to 5 p.m. (CST).

Virtual Office: [www.tinyurl.com/CSDVirtualOffices](http://www.tinyurl.com/CSDVirtualOffices)

### ONLINE COURSE EVALUATIONS

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in [campusconnect.depaul.edu](http://campusconnect.depaul.edu).

### SEXUAL AND RELATIONSHIP VIOLENCE

Academic relationships are based on communication, trust and respect, and as a DePaul community, we share a commitment to take care of one another. Sometimes, material raised in class may bring up issues for students related to sexual and relationship violence or other trauma. In other instances, students may

reach out to faculty as a potential source of help and support. It is important for students to know that faculty are required to report information reported to them about experiences with sexual or relationship violence to DePaul's Title IX Coordinator. Students should also know that disclosing experiences with sexual or relationship violence in course assignments or discussion does not, in itself, constitute a formal report to the University and will not begin the process of DePaul providing a response.

Those seeking to report an incident of sexual or relationship violence to DePaul should:

- (a) use the attached link to do so [here](https://cm.maxient.com/reportingform.php?DePaulUniv&layout_id=4) ([https://cm.maxient.com/reportingform.php?DePaulUniv&layout\\_id=4](https://cm.maxient.com/reportingform.php?DePaulUniv&layout_id=4) )
- (b) contact the Title IX Coordinator (312-362-8066 or [titleixcoordinator@depaul.edu](mailto:titleixcoordinator@depaul.edu)) or
- (c) contact Public Safety (Lincoln Park: 773-325-7777; Loop: 312-362-8400)

Students seeking to speak confidentially about issues related to sexual and relationship violence should contact a Survivor Support Advocate in the Office of Health Promotion & Wellness for information and resources (773-325-7129 or [hpw@depaul.edu](mailto:hpw@depaul.edu)). More information is available at <http://studentaffairs.depaul.edu/hpw/shvp.html>. Students are encouraged to take advantage of these services and to seek help around sexual and relationship violence for themselves as well as their peers who may be in need of support.

## **ENROLLMENT/WITHDRAWAL AND OTHER ACADEMIC POLICIES**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on registration policies can be found at [DePaul Central](#).

### **WITHDRAWAL**

Students who withdraw from the course do so by using the Campus Connection system ([campusconnect.depaul.edu](http://campusconnect.depaul.edu)). Withdrawals processed via this system are effective the day on which they are made. Simply ceasing to attend, or notifying the instructor, or nonpayment of tuition, does not constitute an official withdrawal from class and will result in academic as well as financial penalty.

### **ADMINISTRATIVE WITHDRAWAL**

Administrative Withdrawal Appeals are submitted to and processed by the Dean of Students Office, and allow students to be retroactively withdrawn from classes for medical, mental health or personal crises even after the term has ended. More information is available on the [Division of Student Affairs](#) website.

### **EXCUSED ABSENCE**

In order to petition for an excused absence, students who miss class due to illness or significant personal circumstances should complete the [Absence Notification form](#) through the [Dean of Students office](#). Students must submit supporting documentation alongside the form. The professor reserves the sole right whether to offer an excused absence and/or academic accommodations for an excused absence.

### **SYLLABUS CHANGES AND ERRORS**

The instructor may make changes and updates to the course syllabus and schedule as needed. Students will be notified of any changes. If you find any broken links, outdated information, or other content that

just seems “off” somehow, please let me know so I can fix it. I really do appreciate students helping me find and fix mistakes or confusing wording in my materials.