

# Syllabus

## CSC 401 – Introduction to Programming

### Fall 2017

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#### Instructor

[Christin Mirabelli](#)

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#### Course meeting time and location – Section 703

- Lewis Center Room 1111. Please note last-minute room changes do take place, so check location on the first day of class.
- Wednesday 5.45p to 9.00p
- The class runs from September 6, 2017 to November 15, 2017

#### Office hours and location

- Wednesday, 4.00 – 5.30p
- CDM, 243 S. Wabash Ave, Room 430

#### Course description

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 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 goals and topics

At the end of this class you 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, modules, strings, lists, dictionaries and recursion.
- Develop and test simple programs in Python.
- Access and utilize the Python Standard Library (API)
- Articulate in writing basic functionalities of Python's fundamental constructs.

## Textbook

Introduction to Computing Using Python, 2<sup>nd</sup> edition (**eBook**), Ljubomir Perkovic, Wiley, 2015.

ISBN (eBook): 978-1-118-89105-6 or ISBN(eBook): 978-1-118-89088-2

Both ISBN's refer to the same E-Book.

We will cover topics from Chapter 1 through Chapter 6, parts of Chapter 7 and parts of Chapter 10. The book is not mandatory but is a good resource, and you can either do eBook or hard copy, based on what you prefer.

## D2L

The web site used for this course is Desire2Learn (D2L) <https://d2l.depaul.edu/>. Log on using your Campus Connect ID and password.

Here you will find:

- Assignments
- Lecture notes
- Examples and all other materials used in the course
- Announcements
- Links to class session recordings

To take full advantage of D2L, it is IMPERATIVE that you have a correct e-mail address on file with Campus Connection. You are responsible for anything and everything posted to D2L and communicated via email.

I will use News announcements on D2L to post information, as well as relevant updates and clarifications, on lectures, assignments and exams.

## Course structure

The course has two main components:

- Class lectures and work
- Homework

In both components you are expected to take an active role in your learning. Class is intended to be an exploration of new concepts with the guidance of your instructor. We will work on exercises that at times you may find frustrating and confusing. Asking questions about the lecture notes, readings and assignments can greatly improve your understanding. Use your instructor and peers as resources.

Homework is intended as an opportunity to solve problems independently. It is strongly recommended that you work on your assignments on your own. You should expect to spend 10 hours a week on this class (some will spend much less and some will spend more). You cannot expect to learn how to program if you do not spend a considerable amount of time doing it. See Assignments and Plagiarism below for more detail.

**We will be doing a lot of programming in this class. I suggest you bring your laptop to class so you can work along as we do examples. The number of outlets in the classroom is limited so make sure your laptop is charged.**

## Assignments

- Each week you will have an assignment that will typically contain a required reading in preparation of the upcoming class and a set of Programming Problems.
- Assignments will be posted on D2L and are due the following Wednesday by class time.
- Assignments **need to be submitted electronically on D2L**. No emailed assignments will be accepted. No exceptions.
- Assignments are intended as INDIVIDUAL exercises. They are meant to be challenging and will integrate/extend what we have learned in the classroom. You are required to work on assignments on your own.
- All programming problems are designed based on material covered in class. If you submit solutions that use material not yet covered in class, you must explain in your program AND your instructor reserves the right to have you explain orally the details of your submitted solution.
- No late assignments are accepted for any reason.
- Think before doing anything that may jeopardize your success in this class: If you can find code written by someone else online, your instructor can as well.

## Exams

There will be a 3 hour cumulative Final Exam on November 15, 2017. Please note that the final exam will take place in the usual classroom at the usual time, unless your instructor announces a change in class and/or on D2L.

Make-up exams will not be given. No exceptions. If **exceptional** circumstances arise, please contact your instructor as soon as possible before the exam to discuss alternatives; failure to do so will result in 0 points for the exam. You will be required to furnish proof of circumstance to be considered. Please make note of exam date.

## Grading

Point scores and letter grades for the course will be computed as follows:

Assessment	Percentage
Assignments	60%
Final Exam	40%

Letter	Percentage
A	$\geq 90\%$
B	$\geq 80\%$
C	$\geq 70\%$
D	$\geq 60\%$
F	$< 60\%$

## Python

All you need running on your laptop/desktop is Python, version 3.4.3 or higher is fine. Python is available as a free online download and it comes with a simple development environment called IDLE

<https://www.python.org/downloads/>

## CDM Tutoring

Free tutoring services are available. More information can be found at [CDM Tutoring](#).

## Communication

All communication will be done in one of three ways:

- Announcements in class. You are responsible for anything and everything I say in class.
- Email from me.
- Announcements on the D2L website.

Email is the primary means of communication between faculty and students enrolled in this course outside of class time. Make sure the email listed under “demographic information” at CampusConnect is correct.

When you send me email, three requirements:

- Please begin subject line with CSC 401
- Ensure full name appears somewhere in the message.
- When asking about code, please send the .py file to me as an email attachment (not copied into the message body). In the body of the email explain the problem you are having and what you have tried.

**I will generally respond to email in evenings, within 24 hours. Emails received close to 8p will likely be answered the following evening. Waiting until the last minute to start homework does not constitute an immediate response from me.**

## Graduate student expectations

While this is an introductory programming course, it is still a grad level course. What does this mean? It means that this is not undergraduate school. You are expected to take ownership and responsibility for your own learning and experiences. You are expected to work hard outside the classroom and ask for help when needed. You are expected to READ the syllabus and understand requirements, expectations and important dates. You are expected to look at your work schedule and learning style and decide if my class is a good fit BEFORE the deadlines for swapping or dropping classes without penalty. If emergencies arise, we will deal with those on a case by case basis. My primary responsibility is to teach you and give you the tools you need to be successful when you finish the course and leave my classroom. My job is not to accommodate every nuance in your schedule, as that is a disservice to you and to other students.

## Participation policy

Students are expected to attend every class.

## Academic Integrity

The course will be subject to the academic integrity policy passed by our faculty. More information can be found at <http://academicintegrity.depaul.edu>.

## Plagiarism

The university and school policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials, consult the instructor.

## Course Calendar

This following is a rough schedule and is subject to change as necessary during the quarter.

Week		Detail	Book
1 (Wed 9/6)	Python interpreter, expressions, data types HW1 due 9/13	<ul style="list-style-type: none"> <li>Variables, expressions and assignments</li> <li>Basic data types (number types, strings, lists, Boolean)</li> <li>Implicit/Explicit type conversion</li> <li>Math module</li> </ul>	Chaps 1, 2
Wed Sep 13		<b><i>Last day to add (or swap) classes</i></b>	
2 (Wed 9/13)	Python programs, control flow, functions HW2 due 9/20	<ul style="list-style-type: none"> <li>One and two-way conditional statements</li> <li>Iteration through list, string, range</li> <li>Interactive input/output</li> <li>Functions and parameter passing</li> </ul>	Chapter 3
Tue Sep 19		<b><i>Last day to drop classes with no penalty</i></b>	
3 (Wed 9/20)	String processing, file I/O, exceptions HW3 due 9/27	<ul style="list-style-type: none"> <li>More on strings</li> <li>Reading/writing file</li> <li>Formatted output</li> <li>Errors, exceptions</li> </ul>	Chapter 4
4 (Wed 9/27)	Multi-way conditions, loop patterns, multi-dimensional data type HW4 due 10/4	<ul style="list-style-type: none"> <li>If/elif/else</li> <li>Iteration patterns (iteration loop, indexed loop, accumulator loop)</li> <li>Nested loop</li> <li>2-D lists</li> <li>Introduce while loop</li> </ul>	Chapter 5
5 (Wed 10/4)	More loop patterns, specialized statements, more built-in containers HW5 due 10/11	<ul style="list-style-type: none"> <li>Sequence loop</li> <li>While loop (loop and half pattern)</li> <li>Break, continue, pass statements</li> <li>Dictionaries, tuples, sets</li> <li>Random module</li> </ul>	Chaps 5,6
6 (Wed 10/11)	Functions review, namespaces, exception handling HW6 due 10/18	<ul style="list-style-type: none"> <li>Namespaces, scoping rules, global versus local variables</li> <li>Program stack</li> <li>Exceptions control flow</li> </ul>	Chapter 7
7 (Wed 10/18)	Recursion HW7 due 10/25	<ul style="list-style-type: none"> <li>Basic examples</li> <li>Divide &amp; Conquer</li> </ul>	Chapter 10
Tue Oct 24		<b><i>Last day to withdraw from classes</i></b>	
8 (Wed 10/25)	Recursion HW8 due 11/1	<ul style="list-style-type: none"> <li>Efficiency (recursive versus iterative Fibonacci)</li> <li>Running time analysis, binary search</li> </ul>	Chapter 10
9 (Wed 11/1)	Review homework, course evaluations	<ul style="list-style-type: none"> <li>In-class review HW8</li> <li>Open questions</li> </ul>	Chaps 1- 10
10 (Wed 11/8)	Review for final, course evaluations	<ul style="list-style-type: none"> <li>Final packet questions and answers</li> </ul>	
11 (Wed 11/15)	<b>Final exam (no office hours)</b>		

## 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) at either location:

- Loop Campus – Lewis Center #1420 – (312) 362-8002
- Lincoln Park Campus – Student Center #370 – (773) 325-1677

## Online course evaluations

Instructor and course evaluations allow students to provide valuable feedback regarding the instructor and the course. They are a requirement of the course and key in continuing to provide you with the highest quality of teaching. The results are more useful when there is a greater level of participation. As students, you are in a unique position to view the instructor over time. Your comments, about what works and what does not, enable the instructor to build on the elements of the course that are strong and improve those that are weak.

As you experience this course and material, think about how your learning is impacted. Your honest opinions about your experience in and commitment to the course and learning may help improve some components of the course for the next group of students. The evaluation of the instructor and course provides you an opportunity to make your voice heard on an important issue – the quality of teaching at DePaul. Do not miss this opportunity to provide feedback!

## Incomplete

An incomplete grade is given only for an exceptional reason such as, for example, a death in the family or a serious illness. Any such reason must be documented. Any incomplete request must be made at least two weeks before the final and approved by the Dean of the College of Computing and Digital Media. Any consequences resulting from a poor grade for the course will not be considered as valid reasons for such a request.

## Withdrawal and Retroactive Withdrawal

Information on the withdrawal policy can be found at [Withdrawal Policy](#).

Information on the retroactive withdrawal policy can be found at [Retroactive Withdrawal Policy](#).

## Supplementary Materials and Software

During the course you have the option to utilize CODELAB, an online automated code-writing tutoring system. Access to Codelab is \$25. Instructions on how to access Codelab will be posted on D2L. You can check out the Codelab site at <http://www.turingscraft.com/>

<https://www.codecademy.com/learn/python>

<http://learnpython.org/>