



CSC 241 – Introduction to Computer Science I

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Couse Description

An introduction to problem solving, algorithms and structured programming using a higher-level programming language. The course will focus on skills for developing algorithms, and for writing and debugging programs.

Students will learn how and when to use loops, conditionals, and functional abstractions in the context of problems motivated by real world applications. PREREQUISITE(S): MAT 130 or Mathematics Diagnostic Test placement into MAT 140.

Learning Goals

This course is the first of a two-course sequence introducing computer science. The focus of the course is on problem solving, algorithm development, and structured and object-oriented programming using Python and the Python API (application programming interface), all in the context of building computer applications.

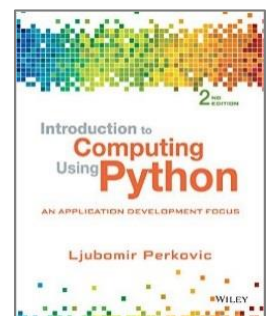
In the first course, we will focus on structured programming and learn how and when to use conditionals, loops, and functional and modular abstractions.

Upon completion of this course, the student will be able to:

- You will understand that a strong focus of computer science is developing software applications.
- You will have stronger problem-solving skills.
- You will know how to develop algorithmic solutions for basic computational problems.
- You will understand fundamental programming structures such as expressions, assignments, decision and iteration structures, functions and modules.
- You will have basic Python programming skills.
- You will be prepared for the second course in the sequence, CSC 242: Introduction to Computer Science II

Textbook Resources

- **Required Course Textbook:**
 - [*Introduction to Computing Using Python, 2nd edition*](#) (eBook), Ljubomir Perkovic, Wiley, 2015.
 - ISBN (eBook): 978-1-118-89105-6 or ISBN (eBook): 978-1-118-89088-2
 - We will be using the “ebook” version if this text, not the print copy.





Grading Policy

Course Grade Evaluation:

Labs 15% Programming Assignments 30% Midterm Exam 25% Final Exam 30%

Grading Scale

A: 100 > total >= 93	B-: 83 > total >= 80	D+: 70 > total >= 67
A-: 93 > total >= 90	C+: 80 > total >= 77	D : 67 > total >= 63
B+: 90 > total >= 87	C : 77 > total >= 73	D-: 63 > total >= 60
B : 87 > total >= 83	C-: 73 > total >= 70	F : 60 > total

Lab Attendance and Exercises

Each week you will have a lab session conducted by our teaching assistant Zhen Qin (ZQIN4@mail.depaul.edu). Your attendance at the lab session and completion of lab exercises is *required* and will count for the portion of the grade indicated above. No late lab submissions are accepted for any reason. Your lowest lab score will be dropped in the calculation of your course grade.

Course Attendance

Students are expected to attend every class session. Be advised that a significant amount of course, assignment and exam information is given in class, and missing that assistance can severely compromise your ability to perform adequately in this course

Materials and Software

All you need running on your laptop/desktop is Python, version 3.6 or higher is fine. You can use your own computer or a lab computer. Python is available as a free download and comes with a simple development environment called IDLE <https://www.python.org/downloads/>.

D2L (Desire2Learn)

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
- Other materials as the need arises

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.



Assignments & Lab Exercises

- Each week you will have a set of lab exercises to work through during the lab session. Exercises must be completed during the lab session. Lab exercises are mini-assignments designed to reinforce new material and to prepare you for the week's assignment.
- Each week you will have an assignment that will typically contain a required reading in preparation of the upcoming class a set of Programming Problems. Assignments are due before the following class meeting.
- Lab exercises and assignments will be posted and submitted electronically on D2L. No emailed assignments will be accepted. No exceptions.
- Assignments and lab exercises are intended as INDIVIDUAL exercises (you are required to work on assignments on your own) unless otherwise specified. They are meant to be challenging and will integrate/extend what we have learned in the classroom.
- All programming assignments 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 lab exercises or assignments are accepted for any reason. Your lowest assignment and lab score will be dropped in the calculation of your course grade.
- Think before doing anything that may jeopardize your success in this class: If you can find code written by someone else online (i.e., plagiarism), your instructor can as well.

Assignments & Lab Exercises

The midterm and final exams will be cumulative. The midterm exam will take place on week 5, the final exam takes place during finals week, week 11. Both exams will be conducted in a lab and will require you to write Python code. You should arrange your schedule to insure you attend both exams. Make-up exams will not be given.

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 your email is listed under "demographic information" at Campus Connect is correct.

When you send me email, please adhere to these three requirements:

- Please begin subject line with CSC 241
- Ensure your 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.



Course Performance Requirements

Course grades are *solely* based upon the student's academic performance. This means a student's grade is based *only* upon their performance on the Midterm Exam, Lab Exercises, Assignments, and Final Exam. No other factors will be considered. *THIS POLICY WILL BE STRICTLY ENFORCED. If you are not comfortable with this policy, please drop the class now.*

The dates/deadlines assigned to the various assignments and exams in this course are firm, and will not be changed. There are too many students in the course to tailor the schedule to each student's desires. There will be no make-up exams nor unadvertised extra credit assignments - please don't ask. *If you are not comfortable with this policy, please drop the class now.*

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at <http://academicintegrity.depaul.edu/>.

All students will be required to sign and return an Academic Integrity pledge at the start of the quarter. This pledge must be signed and returned in the first class meeting. Students who do not do this will be dropped from the course. Students that violate this agreement are violating the Academic Integrity policy of DePaul University. See the section on Academic Integrity below for more information about that policy and penalties for violating it.

Cheating is any action that violates university norms or instructor's guidelines for the preparation and submission of assignments. This includes, but is not limited to, unauthorized access to examination materials prior to the examination itself; use or possession of unauthorized materials during the examination or quiz; having someone take an examination in one's place; copying anything from another student; unauthorized assistance to another student; or acceptance of such assistance.

Plagiarism involves the presentation of the work of another as one's own. Plagiarism includes, but is not limited to the following: the direct copying of any source, such as written and verbal material, computer files, audio disks, video programs or musical scores, whether published or unpublished, in whole or part, without proper acknowledgment that it is someone else's; copying of any source in whole or part with only minor changes in wording or syntax, even with acknowledgment; submitting as one's own work a report, examination paper, computer file, lab report or other assignment that has been prepared by someone else (including research papers purchased from any other person or agency); the paraphrasing of another's work or ideas without proper acknowledgment; working so closely with another person so as to produce identical code.

The use of others' web/publication content (text, graphics, code) is regarded as plagiarism if credit is not given (see the above description of plagiarism). When you directly quote someone's work, you must put it in quotation marks. Without such quotations and reference, it is regarded as an act of plagiarism (see the above description of plagiarism). Using materials that the student prepared for other purposes (e.g., for another course or for his/her work) needs the course instructor's prior permission.

A charge of cheating and/or plagiarism is always a serious matter. It can result in an automatic F in the course and possible expulsion. All assignment submissions to D2L are subjected to automated plagiarism analysis tools.



Schedule of Topics

NOTE: Topic order and appearance are subject to change based upon actual class performance and instructor discretion.

Week 1 (9/11)

- Python interpreter
- Variables, expressions and assignments
- Basic data types (numbers, strings, lists, boolean)
- Implicit/Explicit type conversion
- Math module
- *Reading: Chapters 1 & 2*
- *Assignment 1*

Week 2 (9/18)

- Basic control flow
- One and two-way conditional statements
- For Each iteration through list, string, range
- Functions and parameter passing
- *Reading: Chapter 3*
- *Assignment 2*

Week 3 (9/25)

- List processing
- String processing
- Formatted output
- *Reading: Chapter 4 (4.1 - 4.2)*
- *Assignment 3*

Week 4 (10/2)

- Reading/writing files
- Formatted output
- *Reading: Chapter 4 (4.3)*
- *Assignment 4*

Week 5 (10/9)

- **MIDTERM EXAM**

Week 6 (10/16)

- Errors & Exceptions
- If/elif/else
- *Reading: Chapter 4 (4.4 – end-of-chapter)*
- *Reading: Chapter 5 (5.1)*
- *Assignment 5*

Week 7 (10/23)

- Iteration patterns
 - For each/Iteration loop
 - Indexed loop
 - Accumulator loop
 - Nested loops
- Two-dimensional lists
- *Reading: Chapter 5 (5.1 - 5.3)*
- *Assignment 6*

Week 8 (10/30)

- While loops
 - Basic while loop
 - Infinite loop
 - Loop and a half
 - Modifying loop control: break, continue, pass
- *Reading: Chapter 5 (5.4 to end-of-chapter)*
- *Assignment 7*

Week 9 (11/6)

- Dictionaries
- Sets
- Character Encoding & Strings
- Random module
- *Reading: Chapter 6*
- *Assignment 8*

Week 10 (11/13)

- Namespaces
- Global vs Local scope
- Exceptions and Flow Control
- *Reading: Chapter 7*
- *Final Exam Review*

Final Exam: 11/20

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email.



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 Teaching Evaluation

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](#).