Preparing People to Lead Extraordinary Lives

LOYOLA
UNIVERSITY
CHICAGO

Department of Computer Science
Lake Shore Campus
Doyle Hall

Syllabus - COMP 150
Introduction to Computing
Dr. William L. Honig

Catalog Description

This course provides a broad survey introducing the many layers of the computer science discipline, emphasizing the computer's role and limitations as a tool for describing, organizing, and manipulation information applicable to many disciplines. Topics include binary logic expressed in electronic circuitry, machine architecture, basic programming in the very accessible language Python, data organization, the potential and limitations of machines, and useful tools.

Prerequisites

None

Comp 150 is a core course in the Quantitative Analysis Knowledge Area. It develops these skills: Critical Thinking Skills and Dispositions, Information Literacy, Quantitative Analysis and Research Methods, Technological Literacy.

Special Course Requirements

1. The course may include some programming assignments done with another person or small team ("Pair Programming").
2. For face-to-face classes: you are expected to attend every class in person. Material covered in class will not always be from the text book and may not be available on line. A key part of the class will be your participation and understanding of class room work. You will be at a great disadvantage if you miss a class. No amount of studying the textbook and other materials can provide all the knowledge you'll need for the examinations and assignments.
3. For online classes: you will be required to work on your own and keep up to date with the course schedule. There may be online synchronous sessions for the whole class to be together online at the same time; attendance in these classes is mandatory.
4. During spring and fall semesters, the department provides free tutors for this course; the schedule will be available online and announced in class. Tutors may not be available in summer and J-Terms sessions.
5. The course uses Sakai to organize materials. You will generally submit your assignments using Sakai or get grading information returned in Sakai. Ask for help if you are not familiar with Sakai.

6. The course may use Zoom for online sessions; you can access the course Zoom from Sakai. For more on Zoom see
https://www.luc.edu/itrs/teachingwithtechnology/zoom/

Schedule

See the separate schedule which is an integral part of this syllabus.

Textbooks

Two required text books: the main text and Python text

Main text book: Computer Science Illuminated, 7th edition
Purchase **either** hardcopy text book with Advantage access
https://www.jblearning.com/catalog/productdetails/9781284155617?jblsearch
 or the All Digital Package with eBook (this is cheaper)
https://www.jblearning.com/catalog/productdetails/9781284155655?jblsearch
 Both include online access to a system called Navigate 2 Advantage Access for Computer Science Illuminated which we will use in the class. If you purchase the hardcopy book be sure you get one that includes the access code for this system (**used texts may no longer have a valid code**).

Online Python Text Book: Hands on Python by Loyola's Dr. A. Harrington (free open source) will be the main resource for the Python programming topics in the course. See the download options at https://anh.cs.luc.edu/python/hands-on/3.1/ I recommend you download the pdf version or use the online web pages.

Academic Honesty

Students are expected to have read the statement on academic integrity available http://www.luc.edu/academics/catalog/undergrad/reg_academicintegrity.shtml. This policy applies to the course. The minimum penalty for academic dishonesty is a grade of F for that assignment. Multiple instances or a single severe instance on a major exam or assignment may result in a grade of F for the course. All cases of academic dishonesty will be reported to the department office and the relevant college office where they will be placed in your school record.

Academic dishonesty includes, but is not limited to, working together on assignments that are not group assignments, copying or sharing assignments or exam information with other students except in group assignments, submitting as your own information from current or former students of this course, copying information from anywhere on the web and submitting it as your own work, and submitting anything as your own work which you have not personally created for this course. If you do wish to use materials that are not your own, please check with me ahead of time and cite you source clearly. **When in doubt, ask first!**

Course Objectives and Goals

Upon the successful conclusion of the course, the student will be able to understand the field and foundations of computer science, and be able to demonstrate basic tools of the field, including:

1. Understand the historical context and scientific and technological advances that allowed and encouraged modern computers to exist.
2. Understand how the systems in a computer are built up from basic circuits, machine code, high-level languages, operating system services and user applications.
3. Understand the symbolism of Boolean logic and the graphical representation of truth tables and how they translate into physical circuits.
4. Understand the significance of other number bases to computers, in particular the binary and hexadecimal systems.
5. Understand issues of human and machine intelligence.

Course Grading

Your grade will consist of these components with relative weights as follows (I reserve the right to adjust the percentages in **your favor** if circumstances warrant). See in addition the section on Timely Completion and Academic Honesty.

1. Assignments – Programming and Non-Programming (45%). Programming assignments in Python as assigned. Programs will be graded on correctness of operation and style (design, understandability). No points for programs that do not compile (incorrectly written statements that Python rejects without trying to run them). Non-programming assignments, and in class assignments, if any, covering any topics in the course. These assignments generally will not require compiling or running a program, but they may include writing simple Python statements.
2. Quizzes and Exams (45%). In class quizzes, generally unannounced. Quiz will typically be on the current topic and short. A pop quiz may be given in class at any time without prior notice; it may cover any topic in the course to date. This approach serves to encourage you to keep up-to-date on study assignments. There will be no "make-up" quizzes or exams unless you have made prior arrangements to be excused from class that day.
3. Participation (10%). All students are expected to attend all class sessions in person for the full time period. The participation grade will be based upon attendance and contributions to discussions in class, attendance and full, enthusiastic involvement in the hands on computer work, and your regular and specific discussion board contributions and commentary. Attendance will be taken in class.

Your total points will be converted to a number in the range of 0 to 100 based on the percentages above for each type of assignment. You can see your current grade online at any time. **Please review your grades regularly; appeals welcome in the two weeks after grades are posted**; following that grades are final. I reserve the right to adjust this grading scale in your favor if it is warranted.

93+= A	90+ = A-	
87+= B+	82+ = B	79+ = B-
74+= C+	68+= C	62+ = C-

56+ = D+   50+ = D

Below 50 = F

If for any reason you do miss a class session, it is your responsibility to determine what you missed, locate any handouts, determine any changes in assignments, course plans, or schedules, etc. It is not my obligation to help you make up for missing class.

I will not always be covering items from the books in class; additional materials will be added and additional guidance will be given. Information and activities in class that are not in the book will be on exams, quizzes, and helpful for your assignments and programming projects.

Please do not ask for "extra credit" to improve your grade as this is neither practical in the course nor fair to your fellow students. I will be happy to discuss your performance in the course with you at any time, including discussing possible grade based on performance to date and ways to improve your performance during the remainder of the course.

Timely Completion

The student is expected to complete all assignments, readings, and projects on time. In computer systems in the "real world", there is always strong emphasis on getting projects done on time. Use class to develop your own skills at timely completion. Personal and team programming projects and other assignments will be due as described at time of assignment. See the class schedule for advanced planning.

Late assignment submission is strongly discouraged.
1. Each student will be allowed up to **TWO** (2) late assignments of their choice. Think of this as having two "Late OK" passes. These passes may be used for programming and non programming assignments (not for quizzes or exams). Late Passes allow you to turn in the assignment up to 48 hours after the due date. Late passes are used by noting your intent to use one in Sakai **before** the due date and then submitting the assignment in a special late pass assignment in Sakai.
2. No assignments will be accepted after the due date unless you are using one of your late passes. You must indicate you are using your late pass in before the original due date and turn in the assignment within 48 hours of the original date. Once your Late Passes are used no more assignments will be accepted after the due date.
3. Assignments are generally submitted in Sakai You will not be able to submit assignments after the due date and time. Please plan ahead and be sure you complete the submission of the assignment on time.

You are welcome to ask questions on all assignments and course work, seek additional information on the assignments, and offer observations on the assignments to me either in or outside of class. To discourage procrastination, no questions on the assignment will be answers on the date the assignment is due – please plan your work ahead and do not wait for the last minute to begin work!

Office Hours, Discussion Board, and Help

See my web page at http://cs.luc.edu/whonig/. There will be both traditional office hours and online interactions with me and other students in the discussion boards. If these times

do not work for you, please let me know so adjustments can be made. Additional times are available by appointment.

There will be organized discussion sessions to encourage exchange of ideas and for interactions between students. These discussions will be online. Participation in the discussion boards for the class will count as part of your class participation grade. The purpose of these boards is for students to exchange questions and ideas. Help other students and share your insights. Asking things like "What's the answer to homework number 3?" is not allowed (obviously). However, you are encouraged to ask for help on details and things that stump you. For example, "Anyone know how to find the average of a variable length list of numbers? I need to do that as part of my programming project 4". Students are expected to both post questions and answer those of others in the discussion board. As a guide, you should be posting valuable new items and answering others helpfully at least three to four times a week to earn full participation points.

Continuous Improvement

I believe in a personal quality process of continuous improvement. Anything can be improved by applying the quality process of "Plan, Do, Check, Act" (PDCA). To improve the course and the learning of these computer science concepts, I welcome your feedback, comments, suggestions, and complaints at any time.

In support of this PDCA process, I may ask you to participate in surveys during the course. These surveys will measure student impressions of the course; when time permits I will share the results with the class. Your inputs on these surveys are anonymous and in no way affect your grade.

Version 8.0 (Nov 2019) Updates for online information, textbook, grading