CS 105 is an introduction to basic concepts and applications in computer science. This course is an introductory course in computer science directed at non-technical majors. The goal of the course is to gain an understanding of how computing devices function through working with algorithms, data manipulation, and programming languages.

While students will learn how to program in Python 3 (a current, popular programming language), the focus of the course will be on design and implementation techniques, basic algorithmic structures, and logic. After completing this course, students should be able to transition from Python to other programming languages (e.g., Java) without much difficulty.

1. **Course Details**

   When seeking help, the students’ first point of contact should be the TA assigned to their lab section.

   **Lecture (AL1 – F 0900-1045)**

   Professor:
   Albert F. Harris III, Ph.D., Esq.
   aharris@illinois.edu
   4211 Siebel Center
   Office hours: Fri 1300-1430 and by appointment

<table>
<thead>
<tr>
<th>Teaching Assistants</th>
<th>Email</th>
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<tbody>
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2. **Topics Covered**

   - Core Concepts
     - CS Architecture Layers: Hardware and Software
     - Networking/Internet Technology
     - Website and web application fundamentals
   - Data Visualization
   - Data Use and Manipulation
   - Programming
     - Algorithm Basics
     - Functions, Variables, Classes
3. **Languages and Tools**
   - Microsoft Excel
   - HTML
   - CSS
   - Python

4. **Open Lab Reservation**
   CS 105 has open lab time at Wohlers Hall Lab\(^1\), Monday through Thursday from 1700-2100. Students are encouraged to go to open lab and practice to prepare for labs and machine problems and well as the two exams. Students may not make up a missed lab during open lab times. Actual lab assignments must be completed during each student’s assigned lab times.

5. **Required Materials**
   - **Compass** (compass2g.illinois.edu) – Students are automatically enrolled in Compass. Please log in before the first lecture to check your access.
   - **Clicker 2** (“iClicker”) (required) – available at the Illini Union Bookstore
     - You must go on Compass and register your iClicker before class to get attendance credit
   - **MS Excel** (2010 or later) – Save all files in .xlsx format (not .xls).
   - **Python 3.6.2** – Free from [www.python.org](http://www.python.org) (go to downloads), it is important that Python 3 and NOT Python 2 is used for the class.

6. **Exams**
   There is one midterm and one comprehensive final exam. The final exam will be during the University-scheduled time slot during finals week. Conflict exams will be available for students that have a conflict as outlined in the student code: [http://studentcode.illinois.edu/article3_part2_3-202.html](http://studentcode.illinois.edu/article3_part2_3-202.html). Conflict exam sign-ups will start about two weeks before the exam and end one week before the primary exam date.

7. **Attendance and Participation**
   Class attendance is mandatory. There will be questions to be answered via the iClicker throughout each lecture. Every student is expected to answer each question (getting the correct answer is not as important as engaging in the process). Attendance will be taken based on these questions

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\(^1\) [https://techservices.illinois.edu/services/computer-labs/wohlers-hall-computer-lab](https://techservices.illinois.edu/services/computer-labs/wohlers-hall-computer-lab)
being answered. To be counted present, every question must be answered. Each student can miss two (2) lectures without penalty. Students who miss less than three (3) lectures will receive an attendance bonus: their final grade will be increased by 3%. Students missing three (3) lectures will have their final grades reduced by 3%. Students missing four (4) lectures will have their final grades reduced by 10%. Students missing five (5) or more lectures will have their final grades reduced by 20%. Note that to be present in class means arriving on time and staying for the entire period.

Extreme cases, such as medical emergencies or extended illnesses, will be handled on a case-by-case basis and require proper documentation (see below). In case of emergency, please contact the course contact AND the emergency dean. A walkout statement from McKinley is not proper documentation for an absence. In short, it is in your best interest to be in class each class period, students who attend class fare better when the time for final grades arrives. If you know that you will have to miss class at some point, I would encourage you to “save your freebies” to cover the absence. Just like sick days with an employer, going over the number assigned has consequences (i.e., losing your job or making it difficult to succeed in class).

8. **Grading**
   - **20%**: Lab Submissions
     o Each lab will have an associated submission that will be graded. You will be allowed to drop the two (2) lowest lab scores.
   - **40%**: Machine Problems (MPs)
     o These are assignments that are structured to give you more practice with the concepts learned in lecture and lab. Much of learning computer science is practice. Like a foreign language, the more you do it, the easier it is to learn.
   - **15%**: Midterm
   - **25%**: Final

Your final grade is determined based on the above breakdown. Conversion to letter grades will be based on your final course percentage as follows.

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
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<tr>
<td>A</td>
<td>93-96.9</td>
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<tr>
<td>A-</td>
<td>90-92.9</td>
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<tr>
<td>B+</td>
<td>87-89.9</td>
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<tr>
<td>B</td>
<td>83-86.9</td>
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<tr>
<td>B-</td>
<td>80-82.9</td>
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<tr>
<td>C+</td>
<td>77-79.9</td>
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<tr>
<td>C</td>
<td>73-76.9</td>
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<tr>
<td>C-</td>
<td>70-72.9</td>
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<tr>
<td>D+</td>
<td>67-69.9</td>
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<tr>
<td>D</td>
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<tr>
<td>D-</td>
<td>60-62.9</td>
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<tr>
<td>F</td>
<td>59.9 and below</td>
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9. **Deadlines, Late Turn-in, and Absentee Policy**

Each assignment will have a deadline associated with it. Lab assignments not turned in by the deadline will receive a zero (0). However, you can drop your two lowest labs.

Late MPs will be graded, however, a full letter grade (10%) will be deducted per day late from the score. Once the score drops below 65%, it will become an automatic zero (0).

A visit confirmation letter from McKinley Health Center (or other health centers) does NOT excuse you from assignments. You must get an absence letter from the Office of Dean of Students. All documentation for absences, including physician notes, must be validated by the Dean of Students.
10. **Lab Policy**

Each student must attend the lab for which they are signed up. Students may not make up a lab by attending a different lab section. Labs are to be done individually. Treat them like mini-quizzes. Do not discuss your labs with your neighbors.

11. **Social Integrity**

Whether in lab, on a message board, or via some other messaging system, everyone is accountable for treating each other with respect. There is zero tolerance for inappropriate content of any kind. If you are unsure if something is inappropriate, please do not post it. If you have a concern about a student or TA, please contact the professor or the course coordinator.

Do not share solutions to course assignments through any means. Unless explicitly stated, your work is expected to be your own.

12. **Academic Integrity**

Academic misconduct of any kind is taken very seriously by the University and the college. All cases of cheating will be reported to the University, your department, and your college. You should understand how academic integrity applies to computer science courses ([https://wiki.illinois.edu/wiki/display/undergradProg/Honor+Code](https://wiki.illinois.edu/wiki/display/undergradProg/Honor+Code)). Note that the sanctions for cheating on a programming assignment includes a loss of all points for the assignment and that the final course grade is lowered by one complete letter grade.

With the exception of any labs or assignments that explicitly state otherwise, your work in this class must be your own. That means:

- Your work must be entirely completed by your own hands. This means that all of the code that you submit that is part of your solution must be typed by you. This excludes any code the TA or professor gives to you as a template or starting point.
- As a result, this means you must **never send your solution** to a friend, even just for them to “look at it.” We consider the act of sending a solution to a friend the same as copying a solution. (Sending a text message with a screenshot of your code is also sending your solution.) Be honest, do not engage in creative cheating or try to find loopholes. The rules will be liberally interpreted to fit the intention of the policy.
- Posting of working/partial solutions to labs, MPs, or any other class assignment or tests is not allowed on any forum.
- The content of exams should NOT be shared under any condition. Even if the exam questions are covered in lecture, there is to be no sharing of any pictures or slides (unless approved by the instructor) that are used to help explain solutions.

Additionally, you are responsible for protecting your own work. In the past, we had cases of copying solutions from other students without their knowledge. To avoid having your work copied without your knowledge:

- Refrain from leaving source code lying around the lab (either in hardcopy or on screens)
- Protect your files!
  - If you are using a friend’s computer, do not leave your work on their computer
  - Save your work in a secure location and remove any copies of your work from their computer (including emptying trash)
- Do not give your passwords to anyone
- Enter your passwords in a way that cannot be seen by others
- Do not leave a login session active on an unattended computer
● Never e-mail or share your work to a friend – even if they only need “help on just one small part”

13. **Academic Accommodations**

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 333-4603, e-mail disability@illinois.edu or go to the [DRES website](#). If you have academic accommodations already in place with DRES, please contact the course coordinator with a copy of your letter so we can ensure accommodations in a timely manner.