

CSC 1110: Computer Science Essentials

Last updated January 2025

Course Title: Computer Science Essentials

Course Number and Section: CSC 1110

Fall 2026

Instructor: Kellie Dieutto

Contact Information

Email: kdieutto@lsu.edu

Office Hours: By appointment

Course Description

Introduction to computing systems, programming, and data basics; explores networks, cybersecurity, and societal impacts of computing through practical problem-solving.

Course Objectives

Upon successful completion of this course, students will be able to:

- Explain the components and troubleshooting of computing systems.
- Describe network connectivity and basic cybersecurity practices.
- Collect, store, and visualize data effectively.
- Design and implement algorithms and programs to solve problems.
- Evaluate the ethical, legal, and societal impacts of computing.
- Apply computational thinking to real-world applications.
- Acquire the knowledge, skills, and confidence necessary to pass a standard entry-level certification exam, such as the Python Institute's PCEP-30.

Modality

In-person: 3 hrs. lecture

Required Materials

- All required materials and resources will be shared via Moodle.

Grading Scale & Policies

LSU letter grades will be assigned according to this table. Your end of semester numerical grades are rounded up to whole numbers (for example, 94.49 = 94, 94.50 = 95)

A+	98-100
A	94-97
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	77-79
C	71-76
C-	68-70
D+	65-67
D	62-64
D-	58-61
F	57 and below

Final grades will be computed from the following activities:

Homework Assignments/Labs	60%
Quizzes and Midterm	20%
Final Exam	20%

Description of Graded Activities

Homework Assignments/Labs

Students will complete weekly assignments to reinforce course concepts through hands-on coding labs and research-based tasks. Coding labs will cover programming fundamentals (e.g., data types, control structures, functions, data structures), computing systems, networks, cybersecurity, and data analysis, preparing students for the PCEP-30 certification. Research assignments will explore computing's real-world applications, such as career opportunities in technology, its role in various fields, societal impacts (e.g., privacy, automation), and digital citizenship. All submissions are due via Moodle by the assigned deadlines.

Quizzes and Midterm

Periodic assessments will evaluate understanding of key concepts through a mix of multiple-choice questions, short-answer responses, and coding exercises. Topics will span computing systems, programming, data, networks, cybersecurity, and societal/ethical impacts, ensuring a comprehensive grasp of course material.

Final Exam

The final exam will assess all course objectives, mirroring the PCEP-30 format to test Python programming proficiency (e.g., writing/debugging code, using control structures) while including questions on broader concepts like cybersecurity, data visualization, and

societal impacts. While the PCEP certification is optional, the exam serves as a comprehensive measure of readiness for entry-level industry standards.

15-Week Course Outline

Week	Topic
1	Introduction to Computing Systems
2	Hardware, Software, and Troubleshooting
3	Variables, Data Types, and Algorithms
4	Control Structures (Conditionals, Loops)
5	Program Development and Debugging
6	Functions and Modularity
7	Midterm & Data Collection and Storage
8	Data Structures (Lists, Dictionaries)
9	Data Visualization and Trends
10	Networks and Connectivity
11	Cybersecurity Practices
12	Societal, Ethical, and Legal Impacts of Computing
13	Introduction to Object-Oriented Programming
14	Project Week: Integrated Application
15	Review All Topics

Course Communication Policy

Communication between the instructor and students is essential for success in this course. Please review the following guidelines:

- Email: All course-related inquiries should be sent to kdieutto@lsu.edu Please use your LSU email address when contacting the instructor.
- Response Time: Emails will typically be answered within 24 hours on weekdays and within 48 hours on weekends. Please plan accordingly and do not wait until the last minute to ask questions.
- Moodle Announcements: Important updates, assignments, and reminders will be posted on Moodle. Students are responsible for checking Moodle regularly.
- Students are encouraged to communicate proactively and reach out with any concerns related to course material, assignments, or grading.

Class Attendance Policy

Regular attendance and active participation are essential for success in this course. Students are expected to attend all scheduled classes, engage in discussions, and complete all coursework on time.

Excused Absences

Absences may be excused in accordance with LSU Policy Statement 22 (PS-22): [PS-22 Student Absence from Class](#)

Excused absences include, but are not limited to:

- University-sponsored events (athletics, academic competitions, etc.)
- Illness or medical emergencies (with appropriate documentation)
- Religious observances
- Family emergencies

Students must notify the instructor in advance and provide appropriate documentation where required. It is the student's responsibility to communicate promptly regarding absences and make arrangements to complete any missed work.

Academic Continuity Plan

In the event of a campus-wide closure, this course may transition to an alternative form of instruction. I will notify you by [e-mail, Moodle announcement] as soon as possible of the format our course will take. For example, the class may be held via Zoom and recorded for those unable to attend, or I will provide a lesson online that you can do asynchronously, or we may cover content at a different pace or schedule. If the emergency closure impacts scheduled tests, I will make alternative arrangements as soon as possible. If alternative formats are not available due to widespread loss of power and/or internet or other extenuating circumstances, the University may schedule makeup days per [Policy Statement 117](#).

Expectations

LSU's general policy states that for each credit hour, you (the student) should plan to spend at least two hours working on course related activities outside of class. Since this course is for three credit hours, you should expect to spend a minimum of six hours outside of class each week working on assignments for this course. [Visit the LSU catalog](#) for more information regarding general information for courses.

LSU Code of Student Conduct

The LSU Code of Student Conduct explains student rights, excused absences, and what is expected of student behavior. Students are expected to understand this code as described [here](#). Any violations of the LSU Student Code will be duly reported to the Dean of Students.

Disability Services

The University is committed to making reasonable efforts to assist individuals with disabilities in their efforts to avail themselves of services and programs offered by the University. To this end, Louisiana State University will provide reasonable accommodations for persons with documented qualifying disabilities. If you have a disability and feel you need accommodations in this course, you must present a letter to me from Disability Services in 124 Johnston Hall, indicating the existence of a disability and the suggested accommodations. Their phone number is 225-578-5919 and website is www.lsu.edu/disability

Academic Success

The primary ingredients of your academic success are attending class, managing your time efficiently, taking good notes, and developing good critical thinking and

communication abilities. LSU has a number of excellent resources that will assist you in developing these skills. The place to begin is the [Center for Academic Success](#) (CAS). The CAS offers guidance on what learning strategies are best suited to your talents, tutoring in the basic subjects, and workshops on a variety of topics, from note taking to time management. [Communication across the Curriculum](#) assist students in developing the communication skills necessary for academic and professional success. Finally, with respect to professional success, the [LSU Olinde Career Center](#) can assist you in choosing a major and a profession that best suits your talents and passions and help you develop a four year career plan to ensure success when you graduate from LSU.

Nondiscrimination, Sexual Harassment, & Title IX

LSU provides equal opportunity for all qualified persons in admission to, participation in, or employment in the programs and activities which the university operates without regard to race, creed, color, marital status, sexual orientation, gender identity, gender expression, religion, sex, national origin, age, mental or physical disability, or veteran's status. LSU has implemented a procedure to address complaints for those who believe they have been subjected to discrimination and/or harassment in violation of this policy. Please know that your instructors are here to support you and listen to your experience. We also want you to know that we are mandatory reporters and must report what we know to the Office of Civil Rights and Title IX. All LSU employees, with few exceptions, are required to report instances of sex- or gender-based harassment and discrimination, including sexual misconduct and power-based violence (e.g., sexual assault, stalking, dating violence, domestic violence, sexual exploitation, retaliation, etc.) for which they may not be the victim, but of which they are aware. The Office of Civil Rights & Title IX is the LSU office responsible for investigating complaints regarding any type of discrimination, sexual harassment, or power-based violence. The Office of Civil Rights & Title IX is located in 118 Himes Hall and the phone number is (225) 578-9000. If you are aware of an individual who has been victimized, you are encouraged to contact the Office of Civil Rights & Title IX or file an online report by visiting [LSU's Domestic & Sexual Violence Support and Reporting](#) website and clicking the [Report an Incident](#) box. If you have been assaulted, harassed, or a victim of violence, we encourage you to contact the Office of Civil Rights & Title IX. Please reach out for help immediately. Some excellent resources available to Baton Rouge residents include:

- STAR (Sexual Trauma Awareness and Response; 24/7 hotline: (855) 435-STAR (7827)
- IRIS Domestic Violence Center; 24/7 hotline: (800) 541-9706
- The Lighthouse Program; (225) 578-5718
- VIA LINK; (800) 273-TALK (8255) [national line but answered from New Orleans]

National resources include:

- RAINN (Rape, Abuse & Incest National Network); 24/7 hotline: (800) 656-4673
- National Sexual Violence Resource Center

For additional information, visit www.lsu.edu/civil-rights the [Office of Civil Rights & Title IX](#) and review [PM-73](#) (Prohibiting Power-based Violence, including Sex- and Gender-based Harassment and Discrimination, and Sexual Misconduct).