CSC 321 – Programming Languages

Computer Science Department

California State University, Dominguez Hills

Instructor	Dr. Liudong Zuo (Ph.D.)	Prerequisites	CSC 123
Email	LZUO@csudh.edu	Unit	3
Phone	(310) 243 – 3386	Lecture Time*	5:30PM – 6:45PM on Tu.Th.
Office Location	NSM E109	Lecture Location	NA
Office Hours	1:00 PM – 2:30 PM on Tu. and 2:30 PM – 4:00 PM on Th.	Lecture Delivery Method	Online

Lecture Time*

A unit represents approximately three hours of work per week, including one hour of class time and two hours of additional work outside of class. As this is a 3-unit course, students should anticipate spending an additional six hours per week on the work outside of class, such as reviewing course materials and finishing assignments. If you are unable to commit this amount of time, it may be challenging to succeed in the course.

All course materials will be on Blackboard, and the submissions of all assignments will be through Blackboard.

Course Text

Concepts of Programming Languages (11th Edition)   Amazon   AbeBooks   Free Online Version
Author: Robert Sebesta
Publisher: Pearson
ISBN-10: 013394302X   ISBN-13: 978-0133943023   An older edition is also acceptable

Course Description

This course is a comparative study of programming languages. We will look at the formal description of languages, different types of programming paradigms and some of the most typical characteristics of languages in these paradigms. There will be programming assignments in several languages. The topics covered includes but not limited to: variable names and binding, simple and structured data types, expressions and statements, control flow, procedures, functions, methods, modules, parameter passing, and memory management.

Course Objectives

- Explore the concepts of principal programming paradigms (imperative, object-oriented, functional, logic) and their constructs in different languages.

- Discuss the concepts and constructs of the example programming languages, such as imperative programming (Ada & C), object-oriented programming (java, C++, Ada), functional programming (Scheme) and logic programming (Prolog).

- Analyze the significance of programming languages and the syntax used to describe them.

- Investigate common features shared by most modern programming languages.

Student Learning Outcomes

Upon completion of the course the students will be able to

- Utilize formal methods in language specification and design, such as context-free grammars, regular expressions, parse trees, scanning, and parsing, to improve the overall design and structure of languages.

- Gain a comprehensive understanding of the key challenges in language implementation, including naming, control flow, data types, and subroutines, to make more effective use of the languages students already know.

- Enhance their programming skills and improve the efficiency of their programs by gaining knowledge of the implementation features of different languages and memory management techniques.

- Explore the various programming paradigms, including imperative, object-oriented, functional, and logic, to expand their understanding and problem-solving abilities.

- Improve their critical thinking skills by applying the concepts learned in this course to real-world problems.

Grading and Course Requirements

Component	Weight
Assignments	20%
Programming Projects	30%
Midterm Exam	18%
Final Exam	32%

- **Assignments and Programming Projects**: Detailed instructions will be given in the specific documents. When calculating final overall grade at end of the semester, the lowest scores of assignments and projects will be dropped.

- **Midterm Exam**: There will be one Midterm Exam. Please refer to the table on the last page for the tentative date.

- **Final Exam**: The Final Exam will be cumulative, and will be held according to the university final exam schedule (5:30 PM – 7:30 PM, Thu., May 18, 2023).

Other Policies

- You are required to attend all lecture meetings, and study and review the lecture materials. It is recommended that students create their own course notes instead of relying solely on presentation slides, as this approach is more active and engaging. The most efficient way to understand the course materials is to actively engage with them through reading, practicing, and reviewing over time.

- I strongly recommend not missing any class unless it is absolutely necessary, as making up missed work can be quite time-consuming and challenging.

- Late submission of assignments, projects, etc. and make-up of exams will be allowed only for extraordinary, unforeseen, and unavoidable circumstances that have been discussed with the instructor as soon as they arise and prior to the due date of the deliverable or exam or as soon as reasonably possible. Evidence of these circumstances will be required. Failure to provide evidence or notify the instructor such circumstances in a timely manner forfeits any right to any special accommodations. Students with disabilities should contact the SdRC office before the exams to make arrangements.

- Extra credit opportunities may be provided in the class and will be made available to all students.

- It is strongly encouraged that you ask questions you may have during or after class. However, before seeking assistance, please make an effort to solve the problem on your own. For instance, if you come to me with a question about an assignment and I see that you have not made a good effort to solve it, I may not be able to offer much help.

- Email is the quickest way to contact me for assistance. When sending an email, please use the subject format "CSC 321" followed by key words. For example, "CSC 321 – Assignment 2 – Question 3" or "CSC 321 – Iterative Statements". I strongly suggest checking out the following two websites for tips on crafting effective emails to instructors:

    - How to Write an Email to Your Instructor
    - wikiHow: How to Email a Professor

  I will make every effort to respond to emails within one business day. Therefore, if an assignment is due on the weekend, please send your questions by Thursday to ensure a timely response.

- If you consider this class to be important, such as critical for your graduation or financial aid or scholarship, it is recommended to work hard from the first day. I will not provide any options to change your grade at the end of the semester. Seek help from tutors if necessary. For each topic covered in class, there are numerous online resources that can be used to supplement learning. Additionally, taking initiative to conduct independent research and learn on your own can improve your self-learning abilities.

- Classes will take place on the scheduled dates and in the designated room. To minimize distractions and maintain a respectful learning environment, all electronic devices must be turned off or put on silent mode during class. Surfing the internet, food or drinks are not permitted in the classroom.

Grading Scale

Score Range	Grade		Score Range	Grade		Score Range	Grade
≥ 94	A		[75, 80)	B–		[55, 60)	D+
[90, 94)	A–		[70, 75)	C+		[50, 55)	D
[85, 90)	B+		[65, 70)	C		[0, 50)	F
[80, 85)	B		[60, 65)	C–		NA	

Required Computer Software/Hardware Capabilities

- Computer

  You should have access to a reliable computer for this course. If you are on campus and do not have a laptop, you can check out a laptop from the IT User Services Help Desk via Technology Checkout Program. In addition, the Toro Student Computer Lab offers on campus access to workstations with a wide variety of commonly used software.

  Visit the CSUDH Online Courses Technical Requirements page for more information on technology requirements.

- Email

  All email communications from this course will go through your Toromail, the CSUDH student email system.

- Internet and Campus Wireless Network

  If you are on campus, connect your laptop and mobile device to the internet using the eduroam campus wireless network.

- Technical Help and Any Other Questions

    - Login Issues

      For login issues related to Blackboard, Toromail and MyCSUDH, contact the IT Help Desk at 310-243-2500, option 1. You can also create an online service ticket for login support.

      The IT Help Desk also offers walk-in support. Visit the first floor of the library (north), C-108, for in-person help.

    - Password Resets

      CSUDH offers an easy, self-service password reset service. For additional assistance, contact IT Help Desk.

    - Blackboard Issues

      For issues or questions with Blackboard, contact the CSUDH Blackboard Support line at 310-243-2500, option 2. You can also create an online service ticket for Blackboard support.

    - Any Other Questions

      If you have any other questions or need technical help, please visit Division of Information Technology page.

Computer Literacy Skills Expectations

Students are required to have the following basic computer literacy skills in order to succeed in this course, especially considering this is an online course:

- Have regular access to computers and internet access for the term of this course.

- Be familiar with using email as a communication tool and check your campus email account at least every other day.

- Be able to access online course materials, and open the materials and finish the required problems using applications, such as Eclipse or other Java IDEs, PowerPoint reader, Word reader and PDF reader.

- Do research on their own to solve problems in the class.

Academic Integrity

Academic integrity is of paramount importance in this course, as well as all other courses offered at CSUDH. We maintain a strict policy of zero tolerance towards any form of academic dishonesty. To ensure that you are fully aware of our policies, please review the document "Academic_Integrity_and_Honesty_Pledge.pdf" on Blackboard thoroughly.

To confirm your understanding and agreement with this policy, you must sign and submit the the above file through Blackboard by the end of this week. Failure to do so will be considered as non-compliance with our academic integrity policy, and will result in being dropped from the course.

Americans with Disabilities Act

Access to publications, instructional material, computer software, hardware and electronic information, as well as access to the campus are critical for the educational and career achievement of all persons. CSUDH adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with temporary and permanent disabilities. If you have a disability that may adversely affect your work in this class, I encourage you to register with Student disAbility Resource Center (SdRC) at Welch Hall, Room D-180 and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until you register with the SdRC. For information, call (310) 243-3660 or Email dss@csudh.edu or go to: `https://www.csudh.edu/sdrc/`

Netiquette

Just as respectful conversational techniques are expected in an on campus classroom, proper netiquette is important when taking an online class. Please remember that using the written word as we do in an online class can be difficult since we don't have facial expressions or body language to aid us in understanding what you are saying. Good online resources for you to check out are: `http://www.albion.com/netiquette/`

Behavioral Standards and Instructor's Rights

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. The instructor may require a student responsible for disruptive behavior to leave class pending discussion and resolution of the problem and may also report a disruptive student to the Student Affairs Office (WH A-410, 310-243-3784) for disciplinary action.

Knowing Your Responsibilities

CSUDH provides the student with a wide variety of academic assistance and support, but it is up to the student to know when they need help and to seek it out. It is their responsibility to keep informed and to obey the rules, regulations and policies which control their academic standing and life as a CSUDH student. Meeting deadlines, completing prerequisites and satisfying the degree and certificates requirements, as found in the curriculum guides in this catalog, are all part of the duties as a student. Consult this catalog, the college and school announcements and the schedule of classes for the information needed.

Tentative Course Outline and Schedule

Please refer to the following table for the tentative course outline and schedule. Note that the dates in the table are tentative, the actual topics covered on certain dates might be different and will be depending on the class progress.

Week	Coverage
1	Chapter 1 – Preliminaries & Chapter 2 – Evolution of the Major Programming Languages
2	Chapter 3 – Describing Syntax and Semantics
3	Chapter 4 – Lexical and Syntax Analysis
4	Chapter 5 – Names, Bindings, and Scopes
5	Chapter 6 – Data Types
6	Chapter 7 – Expressions and Assignment Statements
7	Chapter 8 – Statement-Level Control Structures
8	Midterm Exam Review & Midterm Exam
9	Chapter 9 – Subprograms
10	Chapter 10 – Implementing Subprograms
11 – 12	Chapter 12 – Support for Object-Oriented Programming
13	Chapter 15 – Functional Programming Languages
14	Chapter 16 – Logic Programming Languages
15	Final Exam Review