Programming Languages

CISC 3160, Brooklyn College

Instructor Info ———————

👤 Professor Katherine Chuang

🕐 Half hour before class starts

✉ Online

☏ http://contact.drkat.dev

@ chuang@sci.brooklyn.cuny.edu

Course Info ———————

🕐 Mon & Wed, 11am-12:40pm

Section MY11

⚓ Zoom

Description ———————

The design, implementation, and evolution of programming languages. Language features and their effects upon translation and run-time environments. Languages studied are chosen for their historical and current significance, programming paradigm, and run-time environment. Syntax and semantic specification; formal grammars.

Grades ———————

20pts	Labs
15pts	Writing
15pts	Quizzes
40pts	Final Exam
10pts	Professionalism

100pts possible total for the course.

Course Objectives

This course presents major features of programming languages, with emphasis on the role of particular language features in writing good software; various programming paradigms embodied in languages, such as procedural, data-flow, functional and object-oriented languages. Upon completing the course, the student will:

- be able to describe characteristics of several language paradigms (procedural, object-oriented, imperative, declarative/logic, functional).
- be able to use formal techniques (such as BNF) to express syntax.
- understand the concept of data binding and its effect upon the semantic level of the language.
- be able to recognize the relationship between the semantic level of the language and its expressivity, efficiency, control mechanisms, and data types.
- be able to apply the conceptual material covered in this course (i.e. binding times, run-time support etc.) to the analysis of specific languages.
- be able to identify the core semantics of data types and control constructs and to recognize the similarity and differences between data and control representations of various languages.
- be able to code small programs that illustrate the core semantics of each of set of languages that represent the paradigms covered in the course.
- be able to discuss the technological, software-engineering, and educational issues that propelled the evolution of programming languages.

Full course schedule to be revealed on or around the first class session.

Readings, Materials, and Resources

Course materials are available online. Students should read the suggested reading material outside of class. Participating in class discussions of the readings would be the most effective way to absorb material.

Technology Requirements: When specialized software is required, it will be freely available online. All students are encouraged to have an account on a hosted version control platform, such as GitHub for submitting assignments.

Students are expected to find specifications documents for various programming languages and other relevant documentation covered in the course.

Grading Scheme

Letter grades will be distributed as follows: 90-100 A; 80-89 B; 70-79 C; 60-69 D; 59 or below F. Final grades are based on lab acticities, writing, and exams. The percentages for each category displayed on the left may change by the time final grades are computed depending on various factors. Students must take the final exam to pass the class. Missing more than 3 quizzes and/or over half of the labs will result in a failing grade for the course. Scores given are final, regrading requests will be ignored.

Late work policy: Assignments turned in early or by the cutoff date are considered on time. No late work is accepted. If you think you need an extension on a particular assignment (e.g., due to severe illness or major personal/family emergencies), contact the instructor as soon as possible before the deadline. Extensions are entirely discretionary and may not be granted. The instructor will need written evidence from your health provider and/or the Center for Student Disability Services for accommodations.

Online Course Policies

Classroom Conduct: Please help create an environment conducive to learning for your classmates. Avoid disruptive behavior during class, please refrain from asking about administrative questions during topic discussions and only ask about administrative matters at designated times (usually at the beginning).

Class Attendance: Attendance is taken at a randomly selected time once during the first week for express purpose of verification of enrollment. Synchronous sessions are held during scheduled course time with expectation of students completing asynchronous activities. Attendance of synchronous sessions will not be used directly in determination of final grades, however engagement helps with passing the class. When you miss a class, you are expected to communicate with one of your class colleagues to obtain all the information you missed. Synchronous sessions will not be recorded. You are responsible for dropping the course.

Class Discussions: Synchronous class sessions are meant for free flowing discussions about course materials and assignments. It is the students' responsibility to prepare questions if they wish to use this time.

Exam Procedures: During exams, you may not refer to any other person or source. If you feel a question is unclear, describe your rationale for answering and submit those notes along with the exam.

Taking Notes: Please try to take notes by writing or typing instead of audio-visual recording. Do not record or tape synchronous class electronically without express written consent of all participants involved. If a student believes that he/she/they is disabled and needs to record or tape classroom activities, please contact the appropriate office to request accommodation.

Electronic Communication

Please use class chat for general discussions or questions with the class, including clarifying questions, related to the assignments, course content, group coordination, etc.

Emails to the instructor should only be sent for individual issues such as individual grading queries. Please include CISC 3160 in the subject line when sending email to chuang@sci.brooklyn.cuny.edu. It would be helpful to include your emplid.

Office hours

Office hours are available for students who need further clarification of concepts, who have made solid attempts on the homework assignments and require further assistance understanding how to approach such problems.

A note on self care

Please take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep, and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available by the college and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

University Resources

WEB linux server

To obtain your linux login, email Raymond Patitucci rpatitucci@brooklyn.cuny.edu and include your 8 digit emplId and name. He will email you your linux username and password.

Office 365 or BlackBoard Assistance

Contact the ITS helpdesk at 718.951.4357 or helpdesk@brooklyn.cuny.edu

Brooklyn College Learning Center

The Learning Center assistance to students such as writing workshops and other academic help (brooklyn.cuny.edu/learning).

Brooklyn College Health Clinic

The health clinic available free to students. To connect, call 718.951.5580, email BChealthclinic@gmail.com, or their website (brooklyn.cuny.edu/healthclinic)

Personal Counseling

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, please seek support. Personal Counseling center can be reached at 718.951.5363, email BCPersonalCounseling@gmail.com, and their website (brooklyn.cuny.edu/personalcounseling)

Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help.

Student Clubs

Clubs are great places to network to find out more about internship and job opportunities available. Some are listed on the department website http://www.sci.brooklyn.cuny.edu/

- CS Club bccompsci.club
- WiCS bcwomenincompsci.wordpress.com

University Policies

Important Dates

Friday, Jan. 29	First day of Spring 2021 semester
Thursday, Feb. 4	Last day to add a course
Monday, May 17	Last day to withdraw from a course with a "W" grade
Tuesday, May 18	Reading Day
Wednesday, May 19	Final Examinations Begin
Tuesday, May 25	Final Examinations End / End of Fall Semester

Academic Integrity

The faculty and administration of Brooklyn College support an environment free from cheating and plagiarism. Each student is responsible for being aware of what constitutes cheating and plagiarism and for avoiding both. The complete text of the CUNY Academic Integrity Policy and the Brooklyn College procedure for policy implementation can be found at www.brooklyn.cuny.edu/bc/policies. If a faculty member suspects a violation of academic integrity and, upon investigation, confirms that violation, or if the student admits the violation, the faculty member MUST report the violation. Students should be aware that faculty may use plagiarism detection software.

Disabilities

The Center for Student Disability Services (CSDS) is currently working remotely. In order to receive disability-related academic accommodations students must first be registered with CSDS. Students who have a documented disability or suspect they may have a disability are invited to schedule an interview by calling (718) 951-5538 or by emailing testingcsds@brooklyn.cuny.edu. If you have already registered with CSDS, email Josephine.Patterson@brooklyn.cuny.edu or testingcsds@brooklyn.cuny.edu to ensure the accommodation email is sent to your professor.

Student Bereavement Policy

Students who experience the death of a loved one must contact the Division of Student Affairs, 2113 Boylan Hall, if they wish to implement either the Standard Bereavement Procedure or the Leave of Absence Bereavement Procedure (see below). The Division of Student Affairs has the right to request a document that verifies the death (e.g., a funeral program or death notice).

Typically, this death involves that of a family member, in parallel to the bereavement policy for faculty and staff. However, it is up to the discretion of the Division of Student Affairs to determine if a death outside of the immediate family warrants implementation of the student bereavement policy.

http://www.brooklyn.cuny.edu/web/about/initiatives/policies/bereavement.php

Religious Observances

State law regarding non-attendance because of religious beliefs (p. 66 in the Undergraduate Bulletin or p. 40 of the Graduate Bulletin). The New York State Education Law provides that no student shall be expelled or refused admission to an institution of higher education because he or she is unable to attend classes or participate in examinations or study or work requirements on any particular day or days because of religious beliefs. Students who are unable to attend classes on a particular day or days because of religious beliefs will be excused from any examination or study or work requirements. Faculty must make good-faith efforts to provide students absent from class because of religious beliefs equivalent opportunities to make up for the work missed; no additional fees may be charged for this consideration.