

CSCI 39537
Introduction to Application Programming Interfaces (APIs)
Spring 2022 Term

When: Tu, Th 5:35pm – 6:50pm EST

Where: Online (BlackBoard)

Instructor: Serra Canca

Email: Serra.Canca59@myhunter.cuny.edu

Mode of Instruction: *FO* (Fully Online)

Prerequisite(s): CSCI 23500

Office Hours: Monday 5:30pm – 6:30pm,
and also by appointment.

Office Location: Online (BlackBoard)

We unknowingly use application programming interfaces (APIs) every day—it is commonly utilized by many websites and applications as a “messenger,” so to speak. It can take a request (for example, a Google search), and update, create, delete, or return data to us, the clients of the product. As a software engineer, understanding what an API is, knowing about the different types of APIs that are commonly used—as well as how to call and create one when needed—are considered essential by many. By the end of this class, you will not only walk away with fundamental knowledge of the topic, but will also have awareness of strategies, security, scaling, best design practices, measuring the success of your API, and more. Alongside this, you will have created your very own API in an individual project.

No required reading materials! :)

Instructional Technologies (All free!)

- BlackBoard (Online)
 - Information on BlackBoard Supported Browsers:
https://help.blackboard.com/Learn/Administrator/Hosting/Release_Notes/Browse_r_Support
- GitHub
- MySQL Workbench
- MySQL Server
- Visual Studio
- Postman

Grading and Evaluation

Your grade will consist of three parts: in-class short assignments (40%), open-notebook quizzes (30%), and your final project (30%). In-class activities are due at 11:45pm on the day after class, and you may miss **two** without your grade being affected. Late policy on in-class activities is as follows; if more than 15 minutes late, 15% will be taken off the grade of the activity, and an additional 15% will be taken off at 24 hours after the due date-time. If 48 hours+ late, you will not be allowed to hand in the activity. Your lowest quiz grade will be dropped. Make-up quizzes will be handled on a case-by-case basis.

Course Outline (Subject to change!)

1. Tues, Feb 1st – Intro to APIs
2. Thurs, Feb 3rd – GitHub
3. Tues, Feb 8th – **NO CLASS: CLASSES FOLLOW A FRIDAY SCHEDULE**
4. Thurs, Feb 10th – Visual Studio
5. Tues, Feb 15th – Quiz 1 on Intro to APIs
6. Thurs, Feb 17th – C++ vs. C#
7. Tues, Feb 22nd – Calling an API
8. Thurs, Feb 24th – Quiz 2 on C++ vs. C#
9. Tues, Mar 1st – SQL
10. Thurs, Mar 3rd – Databases & Making a Database
11. Tues, Mar 8th – Quiz 3 on SQL
12. Thurs, Mar 10th – Creating a Skeleton API
13. Tues, Mar 15th – API Idea Presentations – Part 1
14. Thurs, Mar 17th – API Idea Presentations – Part 2
15. Tues, Mar 22nd – API Idea Presentations – Part 3
16. Thurs, Mar 24th – API Idea Presentations – Part 4
17. Tues, Mar 29th – Postman
18. Thurs, Mar 31st – API Design
19. Tues, Apr 5th – Quiz 4 on Postman
20. Thurs, Apr 7th – API Security
21. Tues, Apr 12th – Jeopardy !
22. Thurs, Apr 14th – Clean Code and Documentation
23. Tues, Apr 19th – **NO CLASS: SPRING BREAK**
24. Thurs, Apr 21st – **NO CLASS: SPRING BREAK**
25. Tues, Apr 26th – Quiz 5 on API Design and API Security
26. Thurs, Apr 28th – Extra Help Class
27. Tues, May 3rd – Final Presentations
28. Thurs, May 5th – Final Presentations
29. Tues, May 10th – Final Presentations
30. Thurs, May 12th – Final Presentations
31. Tues, May 17th – Final Quiz

Policies

Hunter College Policy on Academic Integrity

“Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.”

ADA Policy

”In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.”

Hunter College Policy on Sexual Misconduct

“In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

1. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).
2. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice via email and/or BlackBoard.