

Job Title	Lab Instructor
PVN ID	VR-1712-002267
Category	Instruction and Social Service
Location	OFFICE OF VC FOR RESEARCH
Department	CISDD
Status	Part Time
Hourly Rate	\$27.50
Hour(s) a Week	5.50
Closing Date	Jun 28, 2018 (Or Until Filled)

General Description

Lab Instructors Needed for Spring Semester CUNY TECH PREP Program

Assignment reviews, technical interviewer, coding project guidance, salary: \$2420

About CUNY Tech Prep (CTP)

[CUNY Tech Prep](#) is a yearlong program that provides exceptional computer science majors from 11 CUNY senior colleges with industry-informed full stack web application development training and professional development coaching.

Participants attend once-a-week fall semester classes covering topics in full stack web application development in JavaScript and participants work in small teams on projects. In addition, students work on technical job interview preparation through one-on-one mock interviews focusing on their Data Structures, Algorithms, and System Design knowledge. The 2017-18 program will equip approximately 110 undergraduate students with in-demand technical and professional skills and connections to paid technical internships or technical full-time employment. CUNY Tech Prep (CTP) is developed and delivered with the [NYC Tech Talent Pipeline](#) (NYTTP) and the [CUNY Institute for Software Design and Development](#)(CISDD). The NYTTP is a \$10 million industry partnership designed to support the growth of the City's tech sector and deliver quality jobs for New Yorkers and quality talent for New York's businesses.

Job Description:

CUNY Tech Prep is looking for several Lab instructors with computer programming experience to (a) grade programming assignments, (b) provide guidance and code reviews of team web dev projects, and (c) offer mock technical interviews as needed.

One type of ideal candidate would have strong knowledge of data structures and algorithms grounded in actual implementation. Lab Instructors with this skill set would focus much less on (a) and (b) and **more on teaching small groups of students review & reinforcement modules on topics like time complexity / Big O, arrays and strings, linked lists, stacks and queues, heaps, hash tables, sorting, searching and trees, etc.**

Overall, CTP is seeking candidates who have industry/start-up experience in developing full stack applications (preferably in JavaScript), familiarity with software engineering best practices, and understanding of the technical interview process for software engineering jobs.

The Lab Instructor will guide **a single** weekly three-hour section of up to 25 students through development projects (a mix of individual and team-based) and in-class coding assignments. The Lab Instructor will offer design and coding advice, perform code-reviews, and reinforce the technical and professional “soft” skills required for both interviews and employment. To answer student questions and provide technical mentoring, CTP requires tech staff to hold in-person and virtual office hours for 2+ hrs/wk. Other responsibilities will include assessing and tracking student progress and handling light administrative duties.

Minimum compensation is \$2420 based on a 16-week spring semester and 5.5 hours per week.

Sections will meet on weekday evenings (likely Tuesday through Friday, 6 p.m. – 9 p.m.) and on Friday afternoon (likely 12 p.m. to 3 p.m.) in the Penn Station and/or Grand Central area.

Applicants *must specify what days and times they are available* so CTP can match you with one class section.

Please let us know if you wish to help run more than one section.

Other Duties

Core Responsibilities

- Support a ~16-week (1 semester; end of January to late May) project-based curriculum that teaches advanced computer science students full-stack web application development in JavaScript
- Attend weekly class meetings for assigned section; review materials provided by instructor prior to class meetings.
- Meet with students and assigned teams weekly for project mentoring, technical tutoring, and the facilitation of in-class assignments and project tasks
- Lead a weekly data structure and algorithm review course, depending on the candidate's qualifications
- Occasionally pair programming with students to debug projects and perform code reviews
- Hold office hours for students in-person and virtually
- Troubleshoot to keep students on-track and engaged and escalating concerns about student progress and needs to Instructors and program staff in a timely manner
- Assess and report individual student progress and technical competencies, project status, class attendance, etc. via shared tools on a regular basis
- Assist staff with technical events and workshops held throughout the semester

Qualifications

- Computer programming proficiency **required**
- Demonstrated skills in JavaScript (**both** frontend and backend **preferred**)
- Understanding of data structures and algorithms and experience implementing them in Java or C/C++ (**strong, demonstrated knowledge preferred**)
- Knowledge of full stack web application design, development, and industry best practices (application design, testing, securing applications, deployment, coding style guidelines, data modeling)
- Implementation-level knowledge of one or more web frameworks (JavaScript-based preferred): Node.js + Express.js, Ruby on Rails, Django, Flask, Play Framework, etc.
- Knowledge of React preferred
- Prior teaching and/or industry experience is preferred