Collaboration Policy: CS166 and CS162

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This document outlines the CS166 and CS162 policies regarding collaboration and the acceptable use of skills taught in this course. Please read this policy carefully, as it likely differs from policies in previous Computer Science courses you have taken. By submitting any assignment in this course, you acknowledge that you have read this document carefully, understand all of its concepts, and agree to its contents. Please consult with the course staff if you have any questions about this policy.

The *Collaboration Policy* applies to all aspects of the course unless otherwise specified. **If you violate this policy, you may be subject to course penalties and/or referred to the Academic Code Committee for further University disciplinary action.**

1 General Rules

This section describes general rules for collaboration which, by default, apply in all course situations unless otherwise stated. (Sections 2, 3, and 4 expand on these rules for specific types of course assignments.)

Unless otherwise stated in this document, all of your work in this course must be completed independently, and you may not collaborate with anyone or refer to any resources provided outside of the course. You are also responsible for following Brown's *Academic Code* at all times.

That said, you may *always* consult the following resources: the course staff, course website, lecture / section slides and handouts, the official textbook, homework solutions from the *current* semester posted by the course staff, and any notes or assignment handins for CS166 you've written throughout the semester.

2 Midterms

Any form of collaboration on midterms is strictly prohibited, unless otherwise stated. To be explicit, the only things you may consult during a midterm are the resources detailed in the final paragraph of Section 1. In particular, this means you may not consult other students or *any* outside resources (such as other websites, library resources, or materials from other courses you have taken) during midterms.

3 Projects

Whenever you're actively interacting with project systems, you must do so entirely independently. "Actively interacting" includes having the project systems (binary, website, etc.) within sight or interacting with them, exploring system source code, writing your deliverables (solutions, writeup, exploit code, video, etc.), and so on. You also may not share your deliverables with others, and you may not read others' deliverables.

That said, as long as no student has any project materials open, *we permit (and encourage) discussion of the projects with other students currently in CS166.* However, whenever you are discussing projects with other students, all students involved should not have *any* project systems or code open during the discussion.

Additionally, you should treat project-based discussions like going to TA hours—that is, focus on high-level hints, prodding questions, and occasional debugging help on narrowly scoped technical issues, but don't give away full answers.[1]

[1] As additional motivation to primarily only use project discussions like TA hours: we design many of our midterm questions around the mental mindset and process students take when coming up with the sorts of insights you need on the projects and the *intuition* they build as a result. Thus, students find that they do much better on the midterms when they use project discussions for hints instead of full answers. If you come away from a project discussion with another student with full answers or major insights, then you'll have immediately lost out on the opportunity to build this "security mindset" intuition. Conversely, you can significantly harm another student's learning by telling them directly how to solve a project, find an exploit, etc.

You should also follow these additional rules when working on projects:

- You may consult outside sources for projects, but you must cite those sources. You may only rely on outside sources for concepts and minor technical details about the languages, frameworks, or systems involved in the assignment, not for solutions to actual problems or specific attacks—all analysis must be your own. You should never copy code from an outside source, and you should not look for programs that may automatically solve projects for you.
- The final deliverables for projects in CS166 generally consist of multiple components that each have their own `README`. At the top of *all* of your `README` files, you should write a *collaboration statement* that states who (in terms of CS logins) you discussed that particlular component with and who contributed major intellectual insights to your understanding of the problem.
  - *Example*: "Collaboration Statement: `olangley` gave me a hint to look at the decryption protocol more closely; `zkirsche` helped me debug a byte representation issue in my Python exploit script. I also referred to `https://stackoverflow.com/q/606191` to determine how to do some byte conversions in my exploit script."
  - *Example:* "Collaboration Statement: I worked independently and did not consult any external resources on this part (the Ivy component) of the project."

4 Homeworks

You're permitted to (and encouraged to) discuss any aspect of the homework problems with other students currently in CS166. In this course, the homework problems generally will require you to approach problems from different angles and are designed to encourage discussion amongst students.

However, *you must write your homework solutions entirely independently. You may not share your solutions with anyone (or read solutions written by others).* You should not write your solutions while working with other students, and when you're writing your solutions, you should ensure that you independently understand and can reproduce your answers without referring to notes from collaboration sessions and consulting with other students. (Homework Clinics are not exempt from this policy. You should not write your solutions while working at Clinic. Your time at Clinic is meant to provide you with an understanding of the problem—you should then demonstrate that understanding by doing your write-up individually.)

You should also follow these additional rules when working on homeworks:

- You may consult outside sources for homework problems, but you must cite those sources. You may only rely on outside sources for concepts, not for solutions to actual problems or specific attacks—all analysis must be your own.
- At the beginning of your answer to every homework problem (not individual parts to a problem), you should write a *collaboration statement* that states who (in terms of CS logins) you discussed the problem with and who contributed major intellectual insights to your understanding of the problem.
  - *Example:* "Collaboration Statement: Discussed with `zespirit` and `wschor`; `wschor` came up with the insight on part (a) that the protocol has a security gap between steps 1 and 2; we jointly developed the authentication mechanism in part (b). We did not consult any external resources."
  - *Example:* "Collaboration Statement: I worked independently and did not consult any external resources on this problem."

5 Lectures, Sections, Readings

You may discuss material covered in lecture and sections (and any associated readings) and high level concepts with anyone, including the course staff, students in the course, and others.

6 Solutions

You must ensure that your solutions will not be visible to other students. If you use GitHub or another source control system to store your solutions electronically, you must ensure your account is configured so your solutions are not publicly visible. If you use GitHub, it offers free private repositories that allow you to keep your solutions private; please use one. Leaving course projects in a place where they are visible to other students (such as in world-readable folders on the department filesystem or on GitHub) constitutes a *Collaboration Policy* violation, and can result in penalties even if they are discovered after the course.

On occasion, we will post solutions to the written assignments. Sharing these solutions with others outside of the course constitutes a major *Collaboration Policy* violation.

7 Piazza

CS166 and CS162 will be using Piazza to facilitate intra-course communication. All questions on Piazza must be posted *privately* by default. We reserve the right to make questions public if we think they would be beneficial to the class.

8 Ethical and Legal Issues

Some of the techniques covered in this course for educational purposes are unethical and/or illegal to use and apply in contexts beyond the course itself. Breaking into, misusing, or harming computer systems or networks is illegal and punishable by law if done without the explicit authorization of the owner. Attacking technical systems (whether owned by Brown or by others), except as specifically assigned in this course, is a violation of Brown's Computer Policy and may lead to disciplinary action. If you have any questions about what kind of conduct is legal and/or ethical, please contact the instructor and/or the TA staff first.

9 Summary Table

For convenience, the following table summarizes the CS166 and CS162 *Collaboration Policy*. It is not exhaustive, so refer to the above text for specific policies.

	CS166/162 Staff	**Current 166/162 Students**	**Outside Sources**
Homeworks	May discuss any aspect.	May discuss any aspect. However, you must write up your final solution independently.	May consult if cited. Analysis must be your own—don't look up solutions to specific problems.
Projects	May discuss any aspect.	May discuss as long as all project materials / code are closed and out-of-sight during discussions. Project discussions should only focus on high-level hints, prodding questions, and occasional debugging help of narrow technical issues—don't give away major insights. All deliverables must be created independently.	May consult if cited. Analysis must be your own—don't look up solutions to specific problems or take code from others.
Midterms	May discuss any aspect, though help may be limited.	May not consult.	May not consult.
Lecture, Sections, Readings	May discuss any aspect.	May discuss any aspect.	May consult outside sources and discuss with others.