

## Advising Guidelines

### Computational Biology & Bioinformatics (CBB)



Yale University

#### **Introduction**

This document outlines the expectations of students and thesis advisers in our graduate program and serves as a companion to our graduate [program handbook](#). We recommend that all students and thesis advisers read our handbook.

#### **Selecting a Thesis Adviser**

Our handbook provides guidance on finding rotation advisers and conducting lab rotations in the first year of study. In the spring of the first year each student will select a formal thesis adviser. A student may declare two faculty to serve equally as co-advisers if the research project will benefit from the combined expertise of both faculty and both faculty approve. If a student subsequently needs to switch to a new thesis adviser (due to faculty departure from Yale, change in student's research interests, etc.), the student should consult a Director of Graduate Studies far in advance of the change.

#### **The Student and Adviser: Your Shared Responsibilities**

a. *Communication.* The student and adviser share responsibility for establishing and maintaining a respectful advising relationship. You should meet early in the relationship to agree on expectations for how often to meet, how frequently to communicate, and via which mechanisms (email, in person, text, Slack, etc.) to communicate. This can be done even before making the decision to join a lab.

b. *Research.* The student and adviser also share responsibility for carrying forward the thesis project. Initially the adviser will often take the lead in designating the research plan, including identifying potential collaborators, and over time the student will take increasing responsibility for the project. You are both responsible for the design of rigorous and reproducible studies and for ensuring that the research is conducted ethically. Our handbook has more guidance on selecting qualifying exam and thesis committees, but you will work in partnership to select faculty for these committees.

### **The Adviser: Your Responsibilities**

a. *Communication.* As noted above, communication is a key aspect of an advising relationship. It is important to maintain regular communication with your student and to alert your student to anticipated delays in responding (for example, times when you will be away at conferences/meetings).

b. *Research.* You are responsible for overseeing the overall research plan for your student, for securing funding to conduct the research, and for providing the materials and equipment necessary to carry out the work. The adviser should guide the student in troubleshooting technical problems and interpreting data, and provide regular feedback. Finally, the adviser should work to facilitate annual thesis committee meetings and expect to review and sign the annual Dissertation Progress Report each May, beginning after the student passes the Qualifying Exam.

c. *Research findings.* Make sure to detail your rules on authorship early in a student's tenure in your lab. Provide guidance on writing manuscripts, and review drafts in a timely manner. Additionally, provide opportunities for your student to present research at departmental seminars (e.g. research-in-progress talks), as well as at national/international meetings, and to practice these presentations in front of you and/or your lab.

d. *Career and professional development.* Yale offers many resources for students to develop their skills and prepare for careers both within and beyond academia. At the same time, the thesis adviser can profoundly influence a student's development and career trajectory. Meet with your student regularly to discuss career goals, assist with networking within the field, and provide opportunities for your student to develop mentoring, grant writing, and other skills beyond the research. Encourage the use of the Office of Career Strategy resources if your student is interested in careers outside of academics.

e. *Time.* Share the norms for typical hours of operation in your lab, explain that some projects may require deviating from these norms, and note the degree to which you encourage in-person attendance vs. remote research activities. Plan to accommodate your student's academic responsibilities such as coursework, teaching, qualifying exam preparation, required research-in-

progress (RIP) talks, journal club and seminar attendance, etc. Likewise, anticipate that your student will devote time to career and professional development activities outside the lab. Discuss any other obligations, such as family responsibilities or religious observances, that may limit your student's presence in the lab. Also discuss your concerns if your student is devoting too little (or too much) time to research activities.

f. *Letters*. Discuss with your student your willingness to write letters of support for fellowship and job applications. Note how far in advance these letters should be requested.

g. *Health and well-being*. Although students are responsible for maintaining a healthy work-life balance in graduate school, you should promote your student's health and well-being by creating a welcoming and positive lab culture, placing limits on time in the lab, accommodating our graduate program's recommended 2 week vacation policy, and regularly taking note of your student's overall well-being.

h. *Seeking help*. Please contact the DGS, thesis committee, and/or GSAS Dean's office if you have concerns that you are unable to resolve any questions or concerns directly with your student.

### **The Student: Your Responsibilities**

a. *Communication*. As noted above, communication is a key aspect of an advising relationship. You should maintain regular communication as well as alert your adviser when either personal or academic obligations may cause delays in communication or result in an unanticipated absence.

b. *Research*. You are responsible for driving forward your thesis project, managing your research obligations amidst other academic responsibilities, completing your annual Dissertation Progress Report on time, and scheduling annual thesis committee meetings. You should submit an update to your Thesis Committee members at least 2 weeks in advance of Thesis Committee meetings. Be open to critical feedback from your adviser and thesis committee members. Ask questions if you do not understand the feedback they give you; follow up with a plan to address any issues they raise.

c. *Research findings*. Disseminating research findings is a critical aspect of becoming a scientist. You should work with your adviser to prepare drafts of manuscripts, and seek opportunities to share research findings in departmental seminars and at national or international meetings. You may be expected to apply for funding to attend these meetings (for example, the Conference Travel Fellowship from the Yale Graduate Student Assembly (GSA)). Because scientific writing and public speaking are challenging for both novices and experienced scientists alike, take advantage of workshops and resources provided by the Poorvu Center and the Graduate Writing Lab to develop your writing and presentation skills.

d. *Career and professional development.* Begin mapping out your career plans early in graduate school through an individual development plan, such as via <https://myidp.sciencecareers.org>. You should provide annual updates to your adviser and thesis committee about potential career plans and determine which professional skills you should develop in anticipation of your desired career path. Look for career and professional development opportunities through the Poorvu Center, Office of Career Strategy, and other Yale offices. Identify additional mentors beyond your adviser and thesis committee through networking (e.g., at seminars, conferences and other events).

e. *Time.* You should plan to conduct research according to the expected hours of operation of the lab, meet the academic deadlines of our graduate program, and notify your adviser in advance of academic time commitments and deadlines. A thesis project is a time-intensive, years-long endeavor, and you can anticipate working hard on your project. At the same time, as noted below, time away from the lab is critical for overall health. If you are uncertain about what the lab expectations are, please ask your adviser to clarify them.

f. *Letters.* Discuss with your adviser in advance your need for letters of support for fellowship and/or job applications. Follow your adviser's guidance on when to request these letters.

g. *Health and well-being.* It is important for you to develop a healthy lifestyle. Taking time to eat a healthy diet, exercise, and get adequate rest does not detract from but rather improves academic performance and research productivity. Explore the health and wellness resources available at Yale, such as through [Yale Health](#), the [Payne Whitney Gym](#), and the [Wellness Center](#). Plan at least one day off in every seven, and take vacations according to our graduate program guidelines. Consult with your adviser prior to scheduling time off.

h. *Seeking help.* Your DGS(s), thesis committee members, and/or GSAS Dean's office are available if you encounter issues that you are unable to resolve with your adviser or for which you need additional assistance. Turn to these individuals as well for mentoring to supplement the guidance offered by your adviser and/or fellow lab members. You are also encouraged to be proactive in helping your fellow students if you see them struggling.

Below is additional information for the student and adviser about the roles of the thesis committee and Director of Graduate Studies.

### **Thesis Committee (also referred to as Dissertation Committee)**

A full description of the composition and roles of the committee are described in our handbook. Important responsibilities include the following:

- a. At the student's request, committee members should make themselves available to meet one-on-one to offer research guidance, career advice, and/or assistance in navigating conflicts with the adviser.
- b. Committee members should review the progress report documents provided by the student in advance of each committee meeting.
- c. At the committee meeting, members should provide constructive feedback as well as complete a formal evaluation form.
- d. The committee will determine when all research necessary for writing the dissertation has been completed so that the student may commence the writing process.
- e. Committee members should thoroughly review the written dissertation and provide written comments.
- f. Committee members usually serve as readers of the final version of the dissertation.
- g. Committee members are expected to attend the thesis defense.

### **Director(s) of Graduate Studies**

The DGS(s) oversee the overall academic program, and more information about the DGS' role is noted in our handbook. The DGS(s) have an important role in steering the culture and climate of the program. Responsibilities related to advising include the following:

- a. The DGS approves the student's course schedules, thesis adviser selection, annual thesis committee forms, qualifying exam forms, and departmental recommendation form for degree conferral.
- b. The DGS also tracks overall academic progress and meets with the student to discuss meeting academic milestones.
- c. The DGS provides letters of support on behalf of the program as required by grant and fellowship applications.
- d. At the student's request, the DGS will meet with the student to help resolve problems with the thesis adviser and/or with thesis committee members and may also provide academic and career guidance.

e. As appropriate, the DGS will direct the student to other resources such as GSAS deans, Title IX office, Office of Institutional Equity and Access, Student Accessibility Services, and Yale Health. Many resources are also listed on the CBB website.