

## Choosing a Committee in Chemistry at Caltech

One of the first steps toward being recommended for candidacy for the Ph.D. in chemistry is to begin assembling your committee. Your committee should be considered as a resource for the remainder of your time at Caltech.

### What does this document contain?

This is a simple guide to choosing your committee members in advance of your Ph.D. candidacy exam, developed by the Caltech Chemistry Graduate Studies Committee (CGSC).

### In this guide, you will find:

- an overview of the composition and function of a committee
- advice on what you might consider when choosing members of your committee

### The candidacy committee

The candidacy committee is a group of three or more faculty in chemistry that will conduct your candidacy exam. The candidacy committee consists of your thesis advisor(s) and two or more additional faculty members, at least two of the members must be chemistry faculty. In the third year, you will form your thesis committee, which must have at least four faculty members and typically includes your entire candidacy committee. You will meet with them annually to discuss your progress toward completing a doctorate degree.

**Assembling your candidacy committee takes place in the fall term of the second year, during which you list your top three choices for both in-field and out-of-field committee members.** Your choices are submitted via a form administered by the Graduate Coordinator, who then assigns your committee members to match your preferences as much as possible. The final decisions for the make-up of your committee are made based on demand as well as the number of students a faculty advises from within your cohort. Before submitting your form, it is advised you discuss potential committee members with your thesis advisor.

**What does it mean for a committee member to be in-field or out-of-field?** The extent to which professors are in-field or out-of-field is highly dependent on your research. An **in-field** faculty member might be someone with whom you or a group member could potentially collaborate. Alternatively, they may also be a faculty member who instructs a course you consider in-field. You can also seek recommendations from your thesis advisor. Your **out-of-field** committee member is someone with whom you can't foresee you or anyone in your group collaborating, nor would you likely enroll in their courses for reasons other than personal interest. Ideally, they will also be knowledgeable in some concepts that you employ in your own research, albeit from a different perspective.

**If you have multiple advisors, your committee will have more than three faculty members:** your advisors, an in-field member, and an out-of-field member.

**You can choose non-chemistry faculty to be on your committee, but at least two committee members must be CCE faculty.** Since the purpose of the committee is to be a resource for the remainder of your thesis work, you should elect members who can provide advice on your research area and career prospects

as much as possible. Sometimes, your advisor might be faculty in another division. In other cases, you might be doing research in a multidisciplinary field that would benefit from guidance from outside of chemistry. If a non-advisor committee member is non-CCE faculty, they are automatically considered the out-of-field faculty member – regardless of how closely their work relates to your own – since ultimately you are earning a Ph.D. in *chemistry*.

**You do not have to contact faculty who will potentially be part of your candidacy committee.** Since there is no guarantee that your top preferences for your candidacy committee will be assigned to you at all, it is not necessary to contact faculty. Generally, faculty are placed on a number of committees proportional to the number of students they accept into their group for a given cohort, and so they already expect to be placed on committees as part of their faculty responsibilities.

### The thesis committee

The thesis committee is made up of at least four faculty members and is typically comprised of your candidacy committee plus an additional member. Beginning in the third year, you are expected to meet with your thesis committee annually to discuss your work and progress toward the Ph.D.

**You can choose non-chemistry faculty to be on your committee, but as with the candidacy committee, at least two committee members must be CCE faculty.** Ideally, the thesis committee will reflect your needs for scientific, professional, and personal development, and so it should be crafted with your goals and questions in mind. Sometimes, this may include having non-Caltech faculty be additional committee members. For example, some Ph.D. candidates ask scientists at NASA JPL to be on their committees if their work involves space or atmospheric science.

**You should talk to prospective additions to your thesis committee to decide whether they will be a good fit.** Unlike with the candidacy committee, you should discuss your work and goals with prospective faculty who you might ask to join your committee. Be prepared to discuss your research and explain how you think a specific faculty member would be a valuable resource to you during the remainder of your thesis.

**If a faculty member declines your request to be on your committee,** don't fret! Most likely, after careful consideration, they don't feel confident that they can be the best resource for you. You can always follow up to address their concerns if you think the faculty has something valuable to offer, and you can ask if they have suggestions for someone else who might meet your needs.

## Things to consider

When assembling your committee, you want to consider people who will be resources not only in your scientific endeavors but in your professional and personal aspirations as well.

### **Scientific considerations**

- Big picture research interest / parallels to your own research interests
- Specialization in techniques or instrumentation employed in your own research
- Knowledge in a generally out-of-field technique/concept you are employing in your work
- Relation to a field into which you may want to transition in the future

### **Professional considerations**

- Course instructor experience
- Industry experience
- Example for work-life balance
- Path after graduate school (postdoc, industry, etc.)
- Social media presence
- Networking connections

### **Personal considerations**

- Family life
- Common identities (gender, race, ethnicity, socioeconomics, etc.)
- Common non-science interests (for advice on how to balance that with research)