

Columbia University Biological Sciences PhD Program Mentoring Expectations

Graduate programs are very different from undergraduate programs. In our program, we seek to provide you with the skills and experiences needed to be an independent researcher. As undergraduates you may have worked in a lab, but courses were considered as your main training. In high school and college, you probably became proficient at learning material for exams. In graduate school, this emphasis is flipped. You will still take courses, but they will be training for your future career as a scientist, not for a grade on an exam. Most of your training will be “on the job” in a lab. We have developed a program to help you become an outstanding researcher, and we want you to take full advantage of the opportunities that are available. We are excited to have you join us (and often lead us) pushing the boundaries of what we know in the biological sciences. We are also eager to see how you develop in our program and afterward in whatever career you choose. As a start, we think it useful to spell out what we expect and what you should expect during your years as a graduate student in the Department of Biological Sciences, and so we have produced this document. We are always available to discuss any questions you have about our program and your specific training and development. We are happy you have joined us. Welcome!

Brief Outline

A. Program objectives and mentoring support

Support of tailored student choices towards aspirations, commensurate with progress in required training and accomplishments for timely graduation.

Program-wide provision of documents and recommended practices, including IDPs, to promote student-advisor dialog.

B. General Expectations- Respect, Support, Safety & Accountability

Columbia University expects each member of the community to treat all others with respect and prioritizes health and safety. Appropriate research documentation, following individual lab practices, is essential for all researchers at all times.

C. General expectations for an advisor

Pls hosting thesis research (“advisors”) are expected to

(a) spearhead research training,

(b) support other student training objectives, including an intent to graduate within 6 years, and

(c) explicitly consider how best to satisfy the dual objectives of optimizing research progress and the progress of each trainee.

D. General expectations for a PhD student

Each student has primary responsibility for progress towards becoming an independent researcher and fulfilling all program requirements, with the intent to graduate within 6 years.

E. General expectations for the PhD Program

The Program will continually be responsive to student and faculty suggestions, requests or complaints with regard to any aspect of training offered. This includes supporting professional skills development and all forms of mentorship.

Advisors and students should be aware of PhD training program elements and rules presented in the [Graduate Student Handbook](#).

A. Columbia University Biological Sciences PhD Program Mentoring Expectations

The Biological Sciences PhD Program serves primarily to train students as independent researchers. The objective is to develop a broad set of skills, with evidence of significant mastery and accomplishment. Accordingly, PhD degree requirements include coursework, teaching and research achievements. These requirements are intended to ensure accomplishment of a significant professional contribution to the biomedical research enterprise and to establish a strong foundation for a variety of careers related to biomedical research. Several voluntary activities are also available to students for additional training, accomplishments and public contributions, many of which may be highly valued, in line with evolving individual ambitions. It is expected that advisors and other Program officials will support student choices regarding these voluntary activities, commensurate with progress in required training and accomplishments.

Expectations for PhD students, advisors and other PhD program faculty are outlined in this document in a manner intended to accommodate a variety of different research areas, laboratory environments, advisor and student preferences and ambitions. Additional documents (“[Individual Mentoring Values](#)” and “[Mentoring Style Questions](#)”) are designed to facilitate discussions between PIs and prospective rotation or thesis students regarding individual lab and mentoring practices. Annual [IDPs](#) have been instituted to support student training and progress towards degree completion. The common objective of these documents and recommended practices is to promote transparency, alignment of expectations between mentors and mentees, timely sharing of relevant information and recurrent dialog regarding all aspects of student progress and mentoring.

B. General Expectations- Respect, Support, Safety & Accountability

Columbia University expects each member of the community to treat all others with respect, and prioritizes health and safety. These expectations are buttressed by various mandatory and voluntary trainings and the obligation to report inappropriate behaviors, together with the provision of several support services. The Biological Sciences Department reflects the same values, laid out in the [New Members Handbook](#), which includes many links to key University resources.

In some laboratories, safety training and compliance may involve significant extra effort or constrain some activities (such as working alone) but safety is of paramount importance. Each lab is expected to set and enforce appropriate standards. Any lab member should feel free to consult with the PI or the Department’s Director of Laboratories regarding any concerns.

Scientific research is built on accurate documentation throughout the research process, including the generation of supporting material for publications and database submissions. Appropriate documentation is therefore essential for all researchers at all times. Individual labs will generally have established practices appropriate to their discipline, which all lab members are expected to follow. The Program recommends the use of electronic notebooks, as laid out in the [New Members Handbook](#).

C. General expectations for an advisor as a mentor

PIs hosting thesis research (“advisors”) are expected to (a) *spearhead* research training and to (b) *support* all other objectives, including those for which others serve as direct mentors.

Ensure a lab environment that is safe, equitable and free of harassment or discrimination of any kind, with a culture of tolerance and positive aspirations

Focus significant continuous attention on the progress of each student, actively providing encouragement and guidance towards the intent of graduation *within 6 years* of entering the PhD program. This includes early and continued consideration of future publications and authorship.

Be available for requested personal meetings regarding research progress or other student concerns on a regular basis (generally, no more than a delay of 7d following a request).

Facilitate training of students at early stages for all requisite lab practices.

Provide productive critical feedback and suggestions for each student’s research on a regular basis.

Support timely development of skills closely allied to the conduct of research (such as preparation of Figures, manuscript writing, developing research proposals, talks in various formats, and attendance of scientific meetings). This will be promoted by the use of annual Individual Development Plans ([IDPs](#)).

Support broader discussion of lab research and relevant research literature (likely through regular lab meetings).

Plan the whole lab research enterprise (grant applications, employment, allocation of projects, publication plans) with *explicit consideration of how best to satisfy the dual objectives of optimizing overall research progress and furthering the progress of each trainee*. Prioritize student progress where possible and discuss potential conflicts with the relevant parties.

Discuss individual mentoring values and expectations with each interested prospective student prior to organizing a rotation and near the end of a rotation when considering the possibility of thesis work (facilitated by the Mentoring Values and Mentoring Style Questions documents).

Discuss the annual [IDP](#) plan at the designated time of year for each student engaged in thesis work in the lab, focusing on productive steps towards the dual objectives of timely progression to degree and future career preparation.

Advocate for each PhD student, commensurate with an objective assessment, to support progress after graduation (for example, through personal recommendations or letters of reference). Anticipate the attributes to be communicated and include ongoing perceptions and suggestions for adjustments in annual [IDP](#) discussions.

D. General expectations for a PhD student

Each student has primary responsibility for progress towards becoming an independent researcher and fulfilling all program requirements, with the intent to graduate within 6 years. This includes early consideration of future publications and authorship.

Contribute to a lab environment that is safe, equitable and free of harassment or discrimination (of any kind), with a culture of tolerance and positive aspirations

Meet all lab expectations, clarified by early discussion of mentoring values and normal practices, including full transparency and honesty with regard to documentation of research (as is expected for all members of the research group, including the PI) and active participation in training and discussion opportunities presented within the lab.

Discuss mentoring values and expectations with the PI prior to organizing a rotation and near the end of a rotation when considering the possibility of thesis work.

Discuss the annual [IDP](#) plan at the designated time of year with the PI (and, as appropriate, with the thesis committee) to support timely progression to degree and future career preparation.

Comply with Program requirements and reply promptly to all Program communications.

Seek assistance when needed or helpful (resources include advisor, DGSs, Mentoring Working Group, all program faculty and administrators, GSAS Dean's office and many University services, several of which are listed in the Department of Biological Sciences New Member Handbook).

E. General expectations for the PhD program

Program Administrators will provide guidance or initiate contacts on behalf of students regarding practicalities of student finances, housing and academic progress. The Directors of Graduate Studies (DGSs) will provide additional orientation, advise entering students on course choices and lab rotations, with continued oversight and availability until students are engaged in a thesis lab and complete course and teaching requirements.

The Program will continually be responsive to student and faculty suggestions, requests or complaints with regard to any aspect of training offered. This includes supporting professional skills development and all forms of mentorship. Responsive personnel or bodies include Program Administrators, DGSs, the PhD Graduate Committee, and the Mentoring Working Group, with relay through student organizations, including the Graduate Student Council.

The Program is committed to support the timely graduation of all students who fulfill student expectations, even in difficult situations, including relocation or financial difficulties of a host lab and health challenges, insofar as is possible.