



PhD in Biological and
Biomedical Sciences

MD-PhD (MDP) Curriculum 2025-2026

COURSES

BBS HST MDP students	BBS Pathway MDP students
Total 3 full-semester (4 credit course) equivalents	Total 5 full-semester (4 credit course) equivalents
BBS 230: Analysis of the Literature & Experimental Design (<i>fall</i>) (4 credits)	BBS 230: Analysis of the Literature & Experimental Design (<i>fall</i>)(4 credits)
**BBS 330qc: Critical Thinking and Research Proposal Writing (<i>fall</i>) (2 credits)	**BBS 330qc: Critical Thinking and Research Proposal Writing (<i>fall</i>) (2 credits)
MedSci 300qc: Responsible Conduct of Science (<i>fall</i>) (2 credits – NIH requirement not BBS requirement)	MedSci 300qc: Responsible Conduct of Science (<i>fall</i>) (2 credits – NIH requirement not BBS requirement)
1 Core Content course (Gen 201, BCMP 200, or CB 201)	1 Core Content course (Gen 201, BCMP 200, or CB 201)
	2 full- semester elective equivalents*
(*This may include the other Core Content courses or specialized courses in the form of full-semester (4 credit), quarter (2 credit), or nano-courses (3 nanos = 2 credits). The maximum number of nanocourses allowable towards degree is 6.)	

Should an MDP student have graduate-level mastery already in all the content and skill areas covered in all three core courses (Genetics, Molecular Biology, and Cell Biology), they may request an opt-out upon review of course content with each course director.

**Since many MDPs are already in their thesis lab in their G1 year, they usually take BBS 330qc in the fall of their G1 year as it's helpful for preparing for a PQE exam in spring of the G1 year.

ROTATIONS

Rotations provide an excellent opportunity for students to experience a variety of labs and find the one that best fits their interests for pursuing thesis research. Rotations also offer a source of experiential training in different experimental models, approaches, and technologies. BBS requires students to rotate in at least three laboratories throughout the course of the first year. The length and timing of G1 rotations are flexible, but we recommend that you spend 8 weeks in each lab (minimum of 8 weeks and a maximum 12 weeks).

To help MDP students meet their ambitious timeline, they are only required to complete **2 rotations** prior to declaring a lab but may rotate in more labs if they choose. Moreover, MDP students who have rotated during their first two years of their MD training (M1/M2) may count them towards their PhD curriculum in BBS. In some cases, MDP students may have already selected a thesis lab on or before the beginning of the G1 year.

For those who still need to identify potential rotation labs, current students organize a weekly “Rotation Club” and a “Faculty Seminar Series” in the fall each year where they present their experiences rotating in different labs and provide advice to new students in choosing a lab. We also organize a mentoring workshop and faculty poster sessions during orientation.

PRELIMINARY QUALIFYING EXAM (PQE)

The primary goal of the Preliminary Qualifying Examination (PQE) in BBS is to ensure that students can assemble an effective research proposal, and then defend the details of this project with a team of three faculty that students select with the appropriate expertise. More detailed information can be found in the PQE Guidelines document on the BBS [website](#).

PhD students normally take the PQE in year two; however, due to the expedient timeline of many MDP students, there is the option for MDP students to take the PQE in year one. As such, MDP students are invited to attend the required PQE meeting each September. Daniel Gonzalez will send the incoming MDP students an invitation to the PQE meeting at the beginning of the academic year and MDPs should plan on attending this if they think they might take the exam during year 1. For any questions, please contact [Danny](#).

TEACHING REQUIREMENT

Teaching is a highly transferrable skill that BBS believes to be central to the role of a scientist in society. Pedagogy (the strategies and techniques or “art” of teaching) allows the communication of scientific concepts, principles, methods, and details for the training of others. Teaching is also a powerful vehicle to offer mentorship and encouragement to others.

The BBS program requires that each student fulfill one semester as a non-paid Teaching Fellow at Harvard University. Additionally, all BBS first-time TFs are required to participate in a preparatory short course in pedagogy prior to their service. Given the number of courses that MDP students have completed prior to starting in the BBS program, MDP students may want to TF in HMS courses such as HST or PWY; this is allowed. MDP students are asked to participate in the annual TF Matching Process, which begins in February each year. For more information, please refer to the Teaching Requirement [website](#).

Please note that GSAS PhD students are not allowed to TF in their first semester of their PhD program including MDPs per GSAS policy.

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