**MD-PhD STUDENT INDEPENDENT STUDY AND LAB ROTATION GUIDELINES**

**SPRING / SUMMER OF YEAR 1 of the PROGRAM – FULL TIME MED SCHOOL PHASE**

**OVERVIEW**

In the spring semester, while attending Medical School full time (very dense course schedule, frequent exams, heavy time commitment – often 8am to 5pm in class), MD-PhD students also work with a PI who is a potential thesis mentor. Some students will continue to work with the same PI for the spring activity and the summer lab rotation (~9 months continuous), and others will switch to a different PI for the summer. There are two models and requirements vary by graduate group. Each model is summarized below, with expectations of each graduate group listed at the end.

**#1: ONE PI - RAMP MODEL (AKA traditional model)**

**Spring activity is a ramp to summer rotation with the same PI**

* **Goal:**
  + Prepare for, plan for, and get a jump-start on the summer rotation with the same PI.
* **PI choice approval:** 
  + Student must have approval from their Graduate Group AND the MD-PhD program.
* **Time commitment**:
  + Average 5 hours total a week (combined contact time with PI or in lab plus reading/prep time).
  + Time commitment will vary week to week – eg less time when medical school is esp busy, more time during weeks when med school requirements are lighter.
* **Format / activity**:
  + First few months are typically spent on directed readings and one-on-one meetings with PI (eg weekly mtg to discuss articles relevant to the work of the lab and potential summer projects).
  + Later in the semester, activity typically transitions to more concrete planning for summer project(s) and spending some time in lab to begin to learn techniques, lay foundation for experiments, etc.
  + Students receive two letter grades / evals: one for the independent study in the spring and one for the summer lab rotation.
* **Philosophy**:
  + The summer rotation is short, only ~8-9 weeks, so working with the same PI in the spring allows students a deeper dive into the literature, and opportunity to lay groundwork to facilitate an optimally productive rotation.
  + This model also allows student and PI ample time to assess whether there is a good fit as a potential dissertation mentor match.
  + Caveat: While the default expectation is that the spring and summer will be with the same PI, if over the course of the spring the student (or PI) decides it is not a good match (eg because of evolving research interests), students may request to switch to a different PI for the summer.
* **History of model**:
  + This was the standard model for all students for many years so will be familiar to some PIs.

**TWO PI MODEL – INDEP STUDY AND ROTATION**

**Spring activity is a stand-alone independent study with the expectation that the summer rotation will be with a different PI.  This will give the student significant exposure to two PIs, which may help optimize add’l rotation choices in year 3 and/or facilitate earlier choice of thesis mentor.**

         **Goal:**

o   To allow students to have meaningful interaction with two PIs during the first year.

         **PI choice approval:**

o   Student must have approval from their Graduate Group AND the MD-PhD program for both the spring and summer PI.

         **Time commitment**:

o   Average 5 hours total a week (combined contact time with PI or in lab plus reading/prep time).

o   Time commitment will vary week to week – eg less time when medical school is esp busy, more time during weeks when med school requirements are lighter.

         **Format / activity - variable**:

o   Can be modeled on the traditional ramp format – eg primarily directed readings.

o   Also may involve interactions in lab assisting with experiments, learning techniques, attending lab meetings when possible.

o   In some cases, depending on grad group expectations and PI and student preferences, the student may even develop and execute a constrained independent rotation project during the later months of the semester.

o   Students receive letter grades for the independent study in the spring (note will receive a separate one for the summer rotation, not described here). Depending on the graduate group, the independent study may count as an official rotation (BBCB, yes; CAMB, no; Neuro, on discussion with graduate group chair; Immuno no; BE not applicable, since only one PI is required).

         **Philosophy**:

o   The spring independent study can lay a strong foundation for returning to that PI for a rotation during year 3, if student and mentor are enthusiastic.

o   A structure that allows students to work with two PIs during the first year may help students to refine their vision of the optimal mentor match early in the program, and this may help facilitate earlier thesis mentor decisions and therefore shorter overall time to degree.

         **History of model**: This model was piloted for the first time in 2019-2020, and has been getting positive feedback so far. For PIs who have only done a traditional Ramp model before, the student and graduate group chair will need to make sure the PI is aware of the modified plans.

**Start and end dates**

* Spring experience should begin in mid-January for either model, in keeping with the University calendar and the start of spring semester classes.
* For the two PI model, there are two options for when the spring activity ends and the summer rotation begins. The transition can take place in mid-May or mid-June, and students can choose either option.
  + Grad school calendar option: students can complete the spring indep study in mid-May, when the grad school semester ends, and begin the summer lab rotation at that time, OR
  + Med school calendar option: students can stay in the spring indep study until the end of the medical school semester in mid-June, and begin the summer lab rotation at that time
* Summer experience for either model will end in mid-August, before the start of the MS2 semester. Exact end date will depend on the MS2 start date, and also will vary depending on when the student takes summer vacation. Students may take up to 2 weeks of vacation.

**GRADUATE GROUP EXPECTATIONS**

**(list only includes grad groups with 1st year students engaged in these models)**

Each Graduate Group, in consultation with the MD-PhD Program, has decided to recommend one of the two models and/or to allow the students to choose between the two. There are variations among the graduate groups regarding the nuances of the two PI model and how it fits into other requirements and students are encouraged to refer to their Graduate Group guidelines. In cases where the students have a choice, they are encouraged to seek advising from the MD-PhD Program and the Graduate Group. They may choose before the start of the spring semester, or they can keep both options open initially, with a plan to firm up the decision between the two models by mid-semester.

**BGS Grad Group expectations:**

* BBCB: two PI model
* CAMB: ramp model or two PI model
* GCB: ramp model or two PI model
* EpidBiostats: ramp model or two PI model
* Immunology: ramp model or two PI model
* Neuroscience: ramp model or two PI model
* Pharmacology: ramp model or two PI model

**SEAS/Bioengineering and GAS/Chemistry:**

Students are only required to rotate with one PI, so the issues are a bit different for students in this group. Students may choose to work with one or two PIs during the first year.

**GAS/Anthro and Wharton/HCMG**

Not applicable. Anthropology and Health Care Management students will be engaged in independent study work, but do not do “lab rotations” in the same sense.

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