Choosing a Thesis Lab
Opportunity Comparison Matrix - Instructions

UCSF Office of Career and Professional Development
Student Academic Affairs

How to use this tool

This tool is designed to help first-year students in PhD programs that do lab rotations compare their rotation labs in service of choosing a thesis lab. To use the Matrix:

1. Choose several criteria that are important to you to have in your thesis lab.
2. Give each criterion a weight that describes how important it is to you (1 = unimportant; 10 = extremely important).
3. Score each rotation lab on each of your criteria (1 = this lab does not meet this criterion; 3 = this lab completely meets this criterion).
4. The Matrix will give each rotation lab a total score based on the information you provided.

The final score is not meant to definitively indicate the choice you should make. Rather, you can use it as a "gut check" to help you build confidence in your decision, shape discussions with mentors or loved ones, or identify places where you need to do further research on some aspect of a lab.

Good luck!

Suggested activities and reflection questions

a. Was it difficult to identify criteria that are important to you in making this decision? Consider your research, career, and personal goals for your PhD – what do you need to achieve them? Also consider what you need to feel engaged – what worked well / didn't work well in your past lab experiences? Everyone will have different criteria – what is something that's important to you but may not be to other people? Brainstorm three additional criteria and assign each of them a weight.

b. Did you feel you had enough information to score each opportunity on each of your criteria? Rotations are short and you may not have had the chance to learn everything that's important to you. You may want to do more research to collect this "data", even if the rotation is over. Brainstorm three questions you still have and think about how you might get answers those questions.

c. What was your emotional reaction when you saw the final score for each lab? Did the scores confirm or challenge your gut feelings? Maybe this exercise helped you find your gut feeling! If you still feel uncertain about your decision, consider making a career counseling appointment with OCPD. Brainstorm three other people with whom you could also discuss your results.

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Choosing a Thesis Lab
Opportunity Comparison Matrix - Completed Example

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Below is an example of how Frances, a first-year PhD student in the Neuroscience Program, used the matrix to compare three rotation labs to better inform their thesis lab choice.

		Rotation Lab 1		Rotation Lab 2		Rotation Lab 3	
		Warren Lab		D'anjou Lab		Bartlett Lab	
Criteria - What you want in your thesis lab	Weight † (1-10)	Score (1-3) ‡	Weighted Score	Score (1-3) ‡	Weighted Score	Score (1-3) ‡	Weighted Score
PI is available for graduate students	10	2	20	3	30	3	30
Research questions are at systems-level	7	3	21	2	14	1	7
Lab has a community feel	6	1	6	1	6	3	18
PI supports teaching	5	1	5	2	10	3	15
Independence is achieved through guidance	8	1	8	3	24	3	24
Lab has difficult conversations	4	1	4	1	4	2	8
Research will develop marketable skillset	6	2	12	2	12	2	12
			0		0		0
			0		0		0
			0		0		0
Totals		76		100		114	

† 1 is not important and 10 is very important. Different criteria may receive the same weight.

‡ 3 means the lab completely satisfied the criterion. Different labs may receive the same score.

I didn't realize this was important to me until I experienced it in my third rotation!

It feels good to be able to weight this heavily. I think it maybe isn't what's expected from grad students, but I know it works well for me. I floundered in a lab when I didn't have guidance and it was a bad experience I do not want to repeat!

I realized I'm not super sure what these would be, and different skills might be better in different markets! Since I'm not sure what I want to do after my PhD, I gave them all a 2 and will ask about what previous lab members are doing now.

I was surprised by my good experience in the Bartlett lab even though the research wasn't what I thought I wanted. I noticed that even if I weight the entire 'research questions' criterion at 10, given the other criteria, the Bartlett lab still wins. Interesting!

I didn't actually see this, but I asked about it in each of my rotations and this was the only lab where someone had an example of a time it happened.

I'm not surprised this lab had the lowest score given how it felt in my rotation, but I was most excited about it because of the research topic. I see now that the other criteria, while individually less important, do add up!

I knew this rotation felt better than my first one, and at the time I thought it was going to be the one. I ended up feeling more motivated in the Bartlett Lab, but would definitely maintain a relationship with Dr. D'anjou.

I did this rotation last because it was furthest from my research interests but I wanted to see what it felt like to have other grad students around. It looks like that had a bigger impact than I thought!

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Criteria - What you want in your thesis lab	Weight † (1-10)	Score (1-3) ‡	Weighted Score	Score (1-3) ‡	Weighted Score	Score (1-3) ‡	Weighted Score
			0		0		0
			0		0		0
			0		0		0
			0		0		0
			0		0		0
			0		0		0
			0		0		0
			0		0		0
			0		0		0
			0		0		0
Totals		0		0		0	

† 1 is not important and 10 is very important. Different criteria may receive the same weight.

‡ 3 means the lab completely satisfied the criterion. Different labs may receive the same score.

This matrix is based on the Kepner-Tregoe Decision Analysis methodology developed by Charles H. Kepner and Benjamin B. Tregoe in the 1960s.

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