

Building the Advisor & Advisee Relationship



For Engineering Graduate Students

Students should begin searching for an advisor as soon as they have chosen KU for their graduate study. To begin, we suggest students review their departmental website (list of research areas or faculty) to identify a list of faculty working in areas of interest, then meet with the Graduate Director in their program to find an advisor. Student may contact faculty directly via email or set an appointment during office hours to determine if the faculty member is able to be an advisor. Below are questions you should consider asking a prospective advisor:

Research

- What general area of research is a particular advisor working on and what specific projects are currently being conducted?
- Is this general area something you are interested in working on for the next few years?
- Projects are continually evolving. You may not be working on the same project by the end of your graduate career. Project requirements may change to fit the aims/goals of the grant funding the research.
- Who are the lab collaborators? (undergraduate students, industry, Med Center Physicians)
- Where do graduates from this lab find jobs? What conferences do students attend or present? The [Engineering Career Center](#) is an excellent resource for employment information.
- Have a plan if you are unable to work with your “first choice” advisor or project.
- Peer review and research validation is important. MS students should expect to submit at least one published manuscript and PhD students should submit at least three; though you should discuss individual expectations with your advisor.
- Know and adhere to all guidelines for intellectual property. When in doubt, ask your advisor or contact the [Office of Innovation & Collaboration](#).

Cohesiveness

- Find out how much supervision and direction the advisor will give you and in what manner they conduct it. Establish open, effective and straightforward communication with your advisor and other lab personnel. Be culturally sensitive (half of the engineering population is from outside the US – including many faculty).
- Spend a few weeks in the lab of any prospective advisor before making any decisions. Make sure that the research area and functional dynamics are a good fit.
- Request to attend group meetings within the lab and communicate ideas clearly.
- Other students in the lab can provide good insight into the project, advisor and expectations. A good relationship with other students is valuable to your success.
- Try multiple labs before making a decision. You may be surprised how well you fit into a lab OR research area OR track that you didn't expect.

Time Commitments

- GRA/GTA agreements are typically set at 40-50%. This does NOT mean that you should expect to be in the “office” for 20 hours per week and you're done. You should consider your thesis to be above and beyond your GRA/GTA work requirements. On average 1 credit hour equals at least 3 hours of work outside of “class.”
- An advisor will generally expect you to hold regular hours like a job. Generally between 8-5, you should be working in class, lab, office, etc. Note: If you do not meet expectations your appointment may be terminated.
- Academic breaks are a great opportunity to catch up on research.
- An advisor will expect you to make regular forward progress on your research (even if it is negative results, it is still progress). The time it takes you to do this will vary.
- GRA research will develop your knowledge and experience. This should be kept in mind when “counting the hours you work.” The more work you put in, the more you get out.

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Funding

- Is research funding available? If the project is grant funded, discuss the details (number of years the project is funded and number of students working or needed to complete the research). Funding is important, but not required for everyone (especially if you are funded by internal or external awards or a Graduate Teaching Assistantship).
 - If funds are temporarily not available as a GRA, GTA's are sometimes available to bridge the gap between a Principle Investigator's (PI) grant. These should NOT be counted on as a guarantee.
 - Students with a GTA need to consider the time demands by that appointment and the impact that will have on your research ability. You will still be expected to be engaged and productive on your research project. Multiple GTA appointments throughout your career can impede research effectiveness and your graduation timeline.
 - Consider other students in regards to funding. There is only so much money to go around, and should you take an extended amount of time to complete your degree, remember that you are utilizing funds that could provide support for new incoming students. There is a limit to the number of semesters you may work as a GTA.
- Actively participate in the grant seeking, writing, and application processes. It is vital to the success of your lab and is an extremely beneficial experience for you to have.
- Funding is tied to a project that has specific aims and deadlines. If you accept funding, you agree to apply your time and efforts to that project and will need to manage your time to meet deadlines.
- Renewal of financial aid is not automatic. It is contingent upon factors such as availability of funding, satisfactory performance, good academic standing and adequate research progress.
- Be proactive about your funding. Do some work and find out what options are available to you (ie.. Scholarships and Fellowships, Grants: NIH, NSF, specific research foundations, etc). Do not expect your advisor or school administrators to keep track of your funding for you. Know when your current funding will end and initiate new funding with enough notice to meet deadlines.

General Tips

- A GRA is "a real job." Your responsibility is to your advisor and the ongoing research for which he/she is responsible. A GRA does NOT get paid to simply write their thesis or do homework.
 - Even if you are funded through an outside source (SELF, NIH, NSF, etc) you are still responsible for conducting research pertinent to the lab's goal in an appropriate way (responsible scholarship).
- Work independently with guidance to solve open-ended problems. Don't get discouraged when things don't work the way you expected. If you knew what was going to happen, it wouldn't be research. Collaborate with your advisor and peers, get creative and try something new.
 - When you graduate and get a job, YOU will be the expert people turn to for answers. Be able to overcome obstacles in research and support others in their endeavors.
- It is good practice to analyze data and make sure it is reliable (as you collect it - NOT after you've conducted all of your experiments or when you are ready to write your thesis).
- There are some great research & academic opportunities at the Edwards or medical center campuses or even off campus. These come with some additional challenges. It is advisable you discuss these with your advisor, the program assistant or other graduate students.
- Your advisor's time is extremely valuable. Consider the value of their time and input and utilize it like you were hiring them as a consultant.

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Other Helpful Questions

1. How is advising set-up? (how often do you meet, can you communicate remotely, are others involved - such as a lab group or other graduate students)
2. Are you allowed to take time off? (vacation, holidays, spring break, summer, etc)
 - a. How long?
 - b. Will your project require intervention from others if you're gone (cultures, etc)?
3. How do they assess your progress? Best practices are to discuss expectations and deadlines, then set up regular meeting times to "check-in" and update as needed.
 - a. Do you have to initiate contact or set expectations?
 - b. Are there ongoing weekly meetings/updates?
 - c. What should you do if you're struggling?
4. How are research hours graded (note: every department and some advisors within a department have different views on grading research)? It is best to set expectations for a given semester and discuss how those expectations will be assessed throughout the semester and graded. Most students receive a progress grade (P) for their research enrollment up to their final semester.
5. As you begin to engage in research at the beginning of your career, how is coursework prioritized?
 - a. What courses should you be taking and how does it apply to both your lab project/research and thesis or dissertation?
 - b. Should you concentrate on coursework in your first 1-2 years and then begin research or should you be working on research throughout?
 - c. How will this affect your academic timeline? (example: Qualifying Exam or Comprehensive Exam for doctoral students)
6. How many journal submissions are expected?
 - a. How can you be first author on a publication?
 - b. Where does that lab typically submit publications?
7. What is their policy if you deem it necessary to get another job or decide to switch projects or advisors?
 - a. Outside employment often conflicts with academic/research progress.
 - b. There may be forms required when students switch advisors and you may need to complete a project or work assignment before making the switch to a new advisor (especially if you were funded on a grant)