Graduate Mentoring Guidelines for the UMD Department of Astronomy

Preface

Generating an engaging and intellectually rich research environment is central to the goals of the UMD Department of Astronomy. A major component of this is the mentoring partnerships developed by the graduate students, faculty, and staff. Although each partnership is different, each should be built on ***mutual respect***, ***integrity***, ***communication***, and ***accountability***. This document serves as a framework and reference to the key goals, values, and resources available to mentors, advisors, and mentees alike. With that in mind, this document alone is not sufficient to encourage the conditions necessary for healthy and sustainable mentoring. It is up to all parties, at the departmental and personal level, to *actively* seek, reassess, and implement advising & mentoring principles as necessary.

Mentoring vs. Advising

For the purposes of this document, an advisor is a mentor, but anyone who provides growth and betterment – personal or professional – to someone can also be considered a mentor. An advisor is someone who tracks progress towards a goal and provides advice and strategies for academic and professional success when necessary, but mentoring has broad, dynamic, longer term goals which nurture the mentee's capability for independence within their career and beyond. A successful mentorship involves significant effort on the part of both the mentor and mentee to see the relationship grow and thrive, although the primary responsibility should lie with the mentor.

Mentoring Goals

Each mentorship has unique facets. However, there are questions that should be asked frequently to ensure that the mentorship is healthy:

- Is the mentorship an ongoing process rather than being restricted to specific meeting times?
- Is the mentorship style flexible enough to accommodate both the mentor and mentee?
- Do both know the goals of the other are and whether progress is being made? How is 'progress' determined?
- Are the mentor and mentee well-informed about what resources (funding / feedback / support structures) are available which could assist both parties in achieving their goals?

Here are some guidelines related to the UMD Department of Astronomy, which have been left general so that they may be adapted to each individual situation.

I. Departmental Responsibilities

Although mentorship is a relationship between individuals, it is a framework that is mediated through the structure of the department. Therefore, mentorship guidelines should also extend to the environment in which the mentorship operates.

- The department should facilitate some form of mentorship training organized by and for all facets of the department on a regular, possibly yearly, basis.
    - Recommendations include, but are not limited to, an in-house workshop, a university-led training program, and/or coordination with an external expert to facilitate periodic training.
- Discussion amongst students and faculty regarding optimal mentorship in astronomy is an essential aspect of departmental culture. The department should continue to facilitate mentoring pairings via mechanisms such as ASTR 695 and conversations with the Graduate Advisor.
    - Constructive mentorship practices should be reinforced by discussing mentorship with peers and colleagues at all departmental levels through formal and informal channels. (e.g., the faculty/1st year mentoring program, Grad Buddies, and mentoring of junior faculty by an assigned senior faculty member).
- The Graduate Director and Graduate Advisor are responsible for overseeing graduate student mentoring. Along with the resources provided by BANG![1]and the Equity, Diversity, and Inclusion (EDI) Committee[2], these positions exist to assist graduate students in navigating the formal and informal structures designed to help them succeed.
    - The Graduate Director is responsible for facilitating the department's graduate program and the administrative portion of a student's degree progress. The Graduate Advisor's role is to provide advice, guidance, and resources to students as they progress through their degree. Students are encouraged to meet with the Director and/or the Advisor in confidence as issues or obstacles arise.
- The power dynamic between advisor and student is asymmetric. The department needs to therefore review and strengthen existing[3] formal procedures for conflict resolution when the mentoring relationship breaks down, with a particular focus on department-specific procedures. Special attention should be taken to protect students from retaliation and detriment to their professional development.
- The department should incentivize effective mentorship.
    - e.g., increase the weight of mentorship when considering merit raises, promotion cases, and nomination for prizes, and annually reevaluate the department's mentorship practices using feedback from department members or external experts.

[1] https://www.astro.umd.edu/events/colloquia/bang.html
[2] https://www.astro.umd.edu/EDI/EDICommittee.html
[3] Reporting Unacceptable Behavior or Other Concerns Section of the Department's Graduate Student Handbook

II. Academic and Research Responsibilities

The Department of Astronomy is currently structured such that a graduate student's academic advisor is intended to be a built-in mentor. To this end, the following are some guidelines and suggestions for the academic and research portions of a developing mentorship. Many of these points apply mainly to mentorships between students and faculty advisors.

- Advisors and students should meet semesterly to have a conversation about their concrete and specific mutual expectations[4], even if those expectations appear to be currently met. It is the responsibility of the faculty to initiate this conversation, but the student should feel free to discuss expectations at any time. The Graduate Director should be available, if desired, to help structure and document this meeting. This meeting should include the following major themes:
    - *Mentor and mentee goals and responsibilities*. This includes timeline estimates, funding constraints & opportunities, progress on work supported by grants, professional development, and deliverables for both term and post-degree expectations (academic and non-academic).
    - *Scheduling and communication*. This includes determining the preferred method of communication, the cadence of regular meetings, and expected feedback timelines. Within this dedicated time, both students and advisors should be aware that each have competing demands on their time, and schedule requests accordingly. Students and research advisors should meet or have substantial back-and-forth communication weekly and students should touch base with academic advisors (if different from the research advisor) at least monthly. Students should also meet with their committee, ideally at least once a semester.
    - *Work expectations*. This includes (potentially offset) work hours, vacation time, maintaining a healthy work/life balance, and communicating to one another what is expected in terms of workload.
    - *Implications*. Mentors and mentees should be transparent about their investment/potential gain from the work that the student is doing towards the degree. Advisors and students should periodically discuss and acknowledge the stakes each has in completing the work toward the degree.
- Adaptation and flexibility are essential for successful mentoring. Mentees and mentors will require varying levels of support depending on their current goals. Remaining open to new ideas and practices regarding mentorship allows for continued candor and respect.
- Mentors and mentees should be familiar with the professional responsibilities of the other (e.g., teaching, service, research, and travel).
- Advisors should provide thoughtful and constructive feedback on reasonable timescales, and students should act on the suggestions or respond thoughtfully.

[4] Sample Expectations Sheet from the Graduate School

- Students should have prominence on publications and presentations of work performed by the student.
- A faculty member may not require time from a student they do not currently fund to perform research. At the same time, there needs to be freedom for a student to pursue other research avenues, as long as these are not at the detriment of the funded project. A student should, therefore, consult with the advisor or supervisor who is funding them before embarking on other research.
- When a student is hired on a grant, the student and advisor have responsibilities to see that the work is directly related to the grant's goals, and that the work is completed within the grant period. This is important for developing project management skills and for obtaining experience in maintaining a focused and attainable degree timeline while ensuring that the project is of manageable scope.

III. Professional Responsibilities

It is equally important for a mentee to benefit professionally from a mentoring partnership as for them to conduct self-led research under the guidance of a mentor. Further support for professional development outside of networking will ensure a successful mentorship. Professional development includes job fairs, technical training, workshops, etc.

- Mentors should be alert to opportunities for student professional development and should encourage those with the student.
    - e.g., improvement of presentation skills, attendance of conferences (including discussions of how to get the most out of conferences), temporary residency at other institutions, delivery of seminars, introduction to other possible senior collaborators, and discussions of how to build a network.
- Mentors should strive to connect students with relevant elements of their professional network. In addition to this, mentees should also endeavor to expand their mentor network beyond their regular committees to diversify their contacts and sources of advice.
    - e.g. include students in collaborations where applicable, introduce students to relevant collaborators/potential collaborators, make introductions for the student, bring up students in research or professional contexts even when they are not present. The students are encouraged to interact with other attendees at conferences, contact experts in their field, and be alert to relevant workshops and meetings.
- Mentors and mentees should be proactive about assisting/seeking assistance when known program and/or career milestones are coming up.
    - e.g. mentors should inform students of the timeline to apply to postdoctoral positions and students should prepare questions on that process, should offer to

provide feedback on the student's papers and presentations, and should enable students to present research and attend conferences, meetings, and seminars relevant to their career path. This should include working with the mentee to identify individuals or resources for pursuing different careers.

- When mentors provide suggestions on professional improvement (e.g. presentation style or work habits) those suggestions should be constructive and supportive. In their turn, mentees should solicit such suggestions.

IV. Personal Responsibilities

Mentoring is a living process that requires participants to recognize the multifaceted nature of existing as a human being in academia and how experience, identity, and culture play a crucial role in creating and maintaining a healthy partnership. While advising is focused on the advancement of one or both parties professionally and academically, it cannot be disentangled from the fact that it is a relationship between people. To ensure that both parties establish healthy boundaries while maintaining an open dialogue, here are some personal aspects to a mentorship that are present in many interpersonal relationships.

- Mentors and mentees should communicate when situations (personal or professional) arise that can impact the regular cadence of productivity and interaction, specifically those which preclude research progress or meeting deadlines, and accommodate these events as much as is reasonable.
    - If the mentor anticipates being unable to perform normal mentorship duties for an extended period of time (or at a reduced level), they should make arrangements for another qualified individual to fill in for that period of time.
    - For major disruptions, a leave of absence could be considered
- External and personal circumstances may affect work or research output in the long or short term. It is important for mentors and students to recognize the validity of both and make arrangements or adapt goals accordingly.
    - Individuals should not be expected to do work to the detriment of their mental or physical health.
- Mentors and mentees should be receptive to having conversations about mental health with each other, and are encouraged to improve their understanding of mental health. If mentors are not comfortable or do not feel confident discussing specific mental health issues with the student, they should identify other individuals in the department or other resources that the student can utilize.
- If the mentoring relationship is not working for either party, then switching advisors is reasonable and needs to be without blame, although it may lead to research delays and should not be done lightly.