

How to Mentor Undergraduates

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(Slides prepared by J.Singer, Director of the BSC Office of Undergraduate Research)

What is Mentoring?

- Involves a relationship between a faculty member and student in which the faculty member (mentor) encourages and guides the student's personal growth and academic development, while providing support and assistance as the student works through the challenges of academic life. (from Malachowski, CUR Quarterly, December 1996)

Expectations

- Mentoring students is an educational activity.
- Undergraduate students, while very capable, are not at the same level as graduate students and mentors need to be realistic about their students' abilities and level of independence.
- Mentors need to make adjustments for students' varying levels of preparation, skills, and abilities.
- Mentoring takes time - important to communicate frequently and clearly about the project and expectations for outcomes.
- Mentors letters of recommendation are very important to students as they apply to graduate programs and/or job

(adapted from "How to Mentor Undergraduate Researchers", C.A. Merkel and S.M. Baker, CUR, 2002)

What Students Expect

- According to several studies and interviews with students conducting undergraduate research, students report that the most important aspect of the experience is the relationship they formed with their faculty mentor.
- Students may also expect to make a significant contribution as an outcome of their project.

(from “The Mentoring Role in Undergraduate Research Projects”,
M.Malachowski, CUR Quarterly, Dec 1996)

Elements of Mentoring

- Appreciation of varying level of students' background and preparation to undertake research, scholarly and/or creative activity.
- While some aspects of mentoring may be broadly applicable to all mentors-mentees, the nature of this relationship is adapted to individuals.
- Attributes of a good mentor are interested and supportive toward students, patient, positive personality characteristics, knowledgeable, and giving.

(from "The Mentoring Role in Undergraduate Research Projects",
M.Malachowski, CUR Quarterly, Dec 1996)

Stages of Mentoring

- Initiation Stage - mentor largely directing the student, providing the necessary background so that the student understands the significance of the problem. It also involves project planning and is a time when the faculty mentor and student build trust and set expectations. This stage includes frequent face-to-face meetings between the student and the mentor.
- Cultivation Stage - mentor and student interactions are greater and more equal. The student starts taking 'ownership' of the project. The frequency of meetings will be less than the initiation stage, but are regular and at a frequency that ensures that the student and mentor are meeting to discuss progress, changing direction(s) of the project, emerging ideas, etc.

Stages of Mentoring (cont.)

- Transformation Stage - the student requires less day-to-day guidance and the student is taking over running the project. The mentor provides feedback and advice. The student and mentor may begin to interact more like collaborators.
- Separation Stage - the student works even more independently and the mentor embraces more of the student's decisions. The mentor may be able to move onto other project(s) and work with other students.

(from "The Mentoring Role in Undergraduate Research Projects",
M.Malachowski, CUR Quarterly, Dec 1996)

Setting Goals: Things to Consider

- Has the student had any prior undergraduate research experiences? Why does the student want to participate and what do they hope to achieve from the experience?
- What are the student's plans after graduation (graduate school, specialized training, or look for a job)?
- What advanced (upper-level) courses has the student taken and are currently taking? What issues/topics are they excited about?
- How much time can the student devote each week to the project? Is the research taking place during the academic year or summer?
- Does the student plan to pursue the project over several semesters? If yes, then ideally the student should begin the research activity in their sophomore or junior year.
- Will the student receive course credit for the experience? How will their final grade be determined?