College of Engineering
Definition and Guidance for Documenting Student Mentoring

Spring 2016

During the Fall Semester 2015, Purdue University approved a Document “Criteria for Tenure and Promotion for the West Lafayette Campus” to be effective January 1, 2016. Included in Section 1A of the Document is a statement to emphasize the commitment of the faculty to mentoring:

1A........Commitment to active and responsive mentorship, as well as an active role in mentoring, advising and supporting the academic success of students and postdoctoral scientists, will also be documented as part of the process that defines tenure and promotion.

In the College of Engineering, guidance in documenting this effort is centered on the following definition:

“Student mentorship by faculty is the commitment to actively and responsively engage with students and post-doctoral researchers using proven or emerging practices that enhance the success of students and post-doctoral researchers while at the university and to prepare them for subsequent career success. This process can occur as part of the development of a professional relationship between individuals or groups in various settings.”
Metrics/Evidence:

In the College of Engineering, faculty are involved in mentoring through a wide variety of activities and in different settings. Faculty are encouraged to focus on mentoring activities with significant impact and document their efforts for the purposes of Promotion and Tenure; this document serves as a guide for documentation. It is anticipated that the Engineering Promotion and Tenure template will offer an opportunity to add mentoring activities in each of the sections Discovery/Learning/Engagement. Activities relevant to each section may clearly also overlap but redundant reporting should be minimized. Certainly, the guidelines below are not exhaustive. Although some evidence is clear in the form of a list, other significant activities may require discussion for context and for an appreciation of the impact on one or more students. In each section, types of evidence that might be included are summarized below while specific examples are included in a later part of this document.

Discovery/Research

Sample evidence of mentoring activities that can be documented in the Discovery/Research section appear in the document “Instructions for Use with President’s Form 36”. Discussion of faculty mentoring of students and postdoctoral researchers that supports research activities is encouraged in the Discovery Statement as appropriate. Specific evidence of mentoring in this section includes, but is not limited to:

- Involvement of undergraduate students, graduate students, and postdoctoral researchers as co-authors on publications, poster presentations and oral presentations. [In publications, or other exhibitions of creative work, collaborators that are undergraduate, graduate students and post-doctoral researchers might be designated with different symbols.]
- Summary of direct faculty involvement with students and postdoctoral researchers in the research program:
  - Identification of undergraduate students involved in laboratory projects or specific laboratory activities supporting research efforts.
  - Identification of undergraduates, graduate students and post-doctoral researchers that have been directly supervised. Indicators of the impact on research output include: project titles, sponsors, publications, current roles for students or post-doctoral researchers, and other specific student recognitions.
  - Interactions with graduate students through service on thesis advisory committees; also, significant research collaborations or consultations and any joint publications resulting from such interactions
  - Summary of direct faculty involvement with undergraduates, graduate students and postdoctoral researchers in transformative activities that require a significant investment of time, e.g., workshops for career development, organization of student conferences, entrepreneurship workshops or symposiums, summer research programs.
Learning/Teaching

For the Learning section of the Promotion and Tenure document, the document entitled “Instructions for Use with President’s Form 36”, suggests some appropriate activities as guidance for this section. In particular, “Special activities that relate to teaching effectiveness could include involvement in supervising internships or overseeing student research, participating in study abroad or other experiential learning initiatives, as well as involvement in extra-curricular activities and mentoring”. These guidelines can serve as the basis for significant mentoring activities that may be discussed in the Learning Statement. Sample evidence of mentoring activities to be included in the Learning section include, but are not limited to:

- Summary of faculty activities with students for transformative coursework that involves significant one-on-one mentoring or mentoring a group of students.
  - Capstone or transformative experiences for undergraduates.
  - Interactions with students during service learning coursework.
  - Study-away coursework programs as appropriate.
- Participation in curricular or co-curricular transformative experiences for undergraduates that may include undergraduate research.
  - Service as a mentor for undergraduate research, honors or thesis projects.
  - Personal participation in activities that support Purdue students, e.g., the Women in Engineering Mentoring Program
  - Engagement with Purdue undergraduates in planning or coordinating campus events that may involve undergraduates from other colleges or universities participating in transformative experiences hosted by Purdue
  - Participation with Purdue undergraduate students in developing, planning and/completing curricular or extracurricular experiences for K-12 students, e.g., summer research programs or summer education and outreach programs.
- Faculty advisor for student organizations, national challenge or contest teams, events and networks
- Mentoring of students and postdoctoral researchers through professional society activities, e.g., AIAA student section

Engagement/Service

There are many opportunities for the mentoring of students and post-doctoral researchers in the development and delivery of programs that inform and impact the university and the community. Sample evidence of mentoring activities that can be appropriately documented in the Engagement/Service section can again be based in the document “Instructions for Use with President’s Form 36”. Sample evidence of mentoring activities in the Engagement/Service section include, but are not limited to:
• Involvement in students in planning global experiences and other engagement with student-away experiences, i.e., traveling with the students or involvement with student preparations.
• Interactions with Purdue students to develop, coordinate, and implement workshops and educational activities, e.g., continuing education and recruitment events. Such events might take place away from the Purdue campus.
• Support and interactions with students for community service activities involving Purdue students as representatives of Purdue, e.g., aiding Purdue undergraduates in planning and coordinating K-12 experiences on- and off-campus.
• Public and/or governmental services activities that involve Purdue students in planning and delivery.
Examples of Specific Mentoring Activities

Faculty participate in mentoring activities with significant impact and document their efforts for the purposes of Promotion and Tenure. From the guidelines that reflect evidence of mentoring activities, some specific examples of student and post-doctoral researcher mentoring in the College of Engineering are summarized. Certainly, the list of examples is not exhaustive but offers specific examples of faculty activities that can be documented to demonstrate faculty mentoring.

Examples: Research/Discovery

1. Faculty involvement in specific undergraduate student research project supervision. Engagement with the students on research and open-ended hands-on projects. Examples include: SURF, REU, DURI Programs, sponsored research projects, projects serving the broader university community (e.g., MDE students designing and implementing the sound systems for Convocation Events)

2. Interaction with a student to formally disseminate research results focused on a research community, e.g., the Journal of Purdue Undergraduate Research, undergraduate research and poster symposiums at Purdue. Such activities might also include extramural research symposia and papers, e.g., as a poster co-author at professional society meetings.

3. Interactions with students to disseminate results for connections to a broader community, e.g., networking events, Posters on (Capitol) Hill (student presentations to Congressional staff and directors of funding programs, School poster sessions to inform alumni and School Advisory Boards.

4. Connecting students with other researchers internally or beyond Purdue:
   (a) Interactions with students to organize the Purdue Research Roundtable—connecting undergraduate students with research groups on campus.
   (b) Prepare an individual student to participate in the Roundtable event.
   (c) Coordinating with students to engage inviting research visitors, e.g., to meet with undergraduates who have an interest in the topic

5. Unsolicited testimonials from students in their undergraduate research experiences.

6. Results from any survey on faculty mentoring of undergraduate, graduate student, or post-doctoral researchers in their research experience
Examples: Teaching/Learning

1. Involvement with capstone design courses and other design experiences, including formal team programs that may offer academic credit. Mentorship components include: (i) direct work with students on skills for definition of projects; (ii) project management and presentations; (iii) feedback at design reviews; and, introducing opportunities to discuss academic/career issues beyond the specific project.
2. Active participation in courses that offer other experiential learning activities, e.g., EPICS, zero-gravity experiments and flights, team-based competitive design and build projects (in a particular school or across the college/campus), learning communities.
3. Participation in optional classes that enrich but may not be for-credit; teaching honors course; interacting with students in honors activities.
4. Engagement in a student professional organization chapters, other organizations or an honor society.
5. Evidence of recognition of mentoring activities from the students: class evaluations (add a targeted question to the evaluation questionnaire; ‘Best’ mentor nominations and/or awards as elected by students.

Examples: Engagement/Service

1. Participation formal and informal programs for faculty/student interactions, e.g., the Faculty Fellows Program in the University Residences; regular lunches with students in the dining halls; BGR Faculty Mentor.
2. Active engagement with students in special initiatives, e.g., ‘The Anvil’ that supports student entrepreneurship.
3. Direct Involvement with students in GDT (Global Development Teams): the semester cultural preparation, ‘Maymester’ student-centered preparation for a global experience, the global travel of varying durations.
4. Active engagement with Purdue students in support of a local K-12 school (one school or many) activities, e.g., such as the Robotics Program, Fall Space Day.
5. Support and share responsibility with Purdue students in community service and fundraising projects, e.g., Purdue Student Service Organizations, ‘B-INVOLVED’