PENNSTATE

**Center for the Study of Higher Education**

## Preparing the Engineer of 2020 Faculty Survey

Thanks for checking us out! We need your help. The National Academy of Engineering has identified the knowledge and skills that engineers will need to succeed in the workplace of the future. This National Science Foundation-funded study is designed to benchmark the current state of undergraduate engineering education and find out if we're making progress toward those goals. To do that, we're surveying students at 35 colleges and universities around the country. (You can find out who else is participating at http://www.ed.psu.edu/educ/e2020/p2p - participating-institutions.)

We know you're busy, so we will really appreciate your help. We also think you may find completing this survey a good opportunity to reflect on your engineering program and its students.

The next page outlines your rights as a research participant and provides more details on the study. Once you review these, click on "I consent" to begin the survey, which should take about 20 minutes. And thanks for your time!


**This study is funded by the National Science Foundation**
**and endorsed by the following associations and professional engineering societies:**

AIChE 100

ASCE American Society of Civil Engineers

ASEE American Society for Engineering Education

ASME Setting the Standard

IIE Institute of Industrial Engineers

IEEE Celebrating 125 Years of Engineering the Future

PENNSTATE

**Center for the Study of Higher Education**

**National Survey of Undergraduate Engineering Instruction**

## Personal Information

1. What is your gender?
   - ☐ Man
   - ☐ Woman

2. Are you (check all that apply):

- ❑ African American
- ❑ Asian American
- ❑ Hispanic or Latino/a American
- ❑ Native American
- ❑ Caucasian/White
- ❑ Foreign National
- ❑ Naturalized U.S. Citizen
- ❑ Other (please specify) _____

3. Which of the following best describes your primary department?
   - ❍ Bio-medical or Bio-engineering
   - ❍ Chemical Engineering
   - ❍ Civil Engineering
   - ❍ Electrical Engineering
   - ❍ General Engineering/Engineering Science
   - ❍ Industrial Engineering
   - ❍ Mechanical Engineering
   - ❍ Other engineering discipline (please specify):_____

4. Is your appointment?
   - ❍ Tenured faculty [Go to question Q5]
   - ❍ Tenure-track faculty [Go to question Q5]
   - ❍ Non-tenure track, fixed-term [Go to question Q10]

5. What is your faculty rank?
   - ❍ Assistant professor
   - ❍ Associate professor
   - ❍ Full professor

6. Years in your current rank: _____

7. Years at this institution: _____

8. Have you held any faculty positions prior to coming to this institution?
   - ❍ No
   - ❍ Yes, (number of years) _____

9. In what field did you complete your Ph.D.?
   - ❍ Bio-medical or Bio-engineering
   - ❍ Chemical Engineering
   - ❍ Civil Engineering
   - ❍ Electrical Engineering
   - ❍ General Engineering/Engineering Science
   - ❍ Industrial Engineering
   - ❍ Mechanical Engineering
   - ❍ Other (please specify) _____

10. What is the highest degree you have earned?
   - ❍ Bachelor's
   - ❍ Master's
   - ❍ Doctorate

11. In what field did you complete your highest degree?
   - ❍ Bio-medical or Bio-engineering
   - ❍ Chemical Engineering
   - ❍ Civil Engineering
   - ❍ Electrical Engineering
   - ❍ General Engineering/Engineering Science
   - ❍ Industrial Engineering
   - ❍ Mechanical Engineering
   - ❍ Other (please specify) _____

12. What is the length of time specified in your current fixed-term contract?
   _____ year(s)

13. Years teaching at the college level (<u>excluding</u> graduate teaching assistantships):
   _____ year(s)

14. What <u>formal training</u> in teaching did you have <u>before becoming a faculty member</u>? Check all that apply.
   - ☐ No formal training
   - ☐ Attended a program for graduate students on how to teach
   - ☐ Took course(s) in college teaching
   - ☐ Completed a teaching certificate during graduate program
   - ☐ Had K-12 teaching experience
   - ☐ Other (please specify) _____

15. How many years have you worked as an engineer outside of higher education (e.g., industry, government, self-employed)?

While employed full-time as a faculty member _____ years
Before working full-time as a faculty member _____ years

16. How many years have you served at <u>any</u> institution as:

| | None | 1 - 3 years | 4 - 6 years | 7 - 9 years | 10 or more years |
|---|---|---|---|---|---|
| Curriculum or program coordinator | ❍ | ❍ | ❍ | ❍ | ❍ |
| Curriculum committee member or chair | ❍ | ❍ | ❍ | ❍ | ❍ |
| Undergraduate advising coordinator | ❍ | ❍ | ❍ | ❍ | ❍ |
| ABET self-study team member | ❍ | ❍ | ❍ | ❍ | ❍ |
| Dean or associate dean | ❍ | ❍ | ❍ | ❍ | ❍ |

17. At your current institution have you seved <u>in the past five years</u> on a: (Check all that apply)

- ❑ <u>Department</u> promotion and tenure committee
- ❑ <u>College or institution-wide</u> promotion and tenure committee
- ❑ Program or department search committee
- ❑ College search committee

18. <u>In the past five years,</u> (at any institution) have you: (Check all that apply)

- ❑ Team-taught a course with a faculty member from another engineering discipline
- ❑ Team-taught a course with a faculty member from outside engineering
- ❑ Served as PI or Co-PI on a grant supporting undergraduate curriculum development or revision
- ❑ Led a major curriculum reform project in your department or college
- ❑ Developed a new course

19. On average over the <u>past three years</u>, approximately how many hours per week did you spend on research-related activities (e.g., conducting research, writing research proposals, supervising lab research)?

_____ hours per week

20. Have you taught any <u>undergraduate</u> engineering courses in the <u>past five years</u>?

- ❍ No [Go to question Q36]
- ❍ Yes [Go to question Q21]

21. Approximately what percentage of your teaching load (calculated on the basis of number of courses) this academic year is at the (responses must total 100):

Lower division (primarily students in the first 2 undergrad. years) _____
Upper division (primarily students in the 3rd through 5th years) _____
Graduate level _____

**Interactions with Undergraduates:**

22. In a typical week, how much time do you spend interacting informally with undergraduates outside of class (e.g., discussing academic matters, careers, current events):

- ❍ 1 hour or less
- ❍ 2-3 hours
- ❍ 4-5 hours
- ❍ 6-7 hours
- ❍ hours or more

23. In the past three years, have you (check all that apply):

- ❑ Advised a design team in an out-of-class design competition
- ❑ Accompanied students on an international study tour
- ❑ Taught in a summer bridge program for incoming engineering or other STEM students
- ❑ Developed or directed a summer bridge program for incoming engineering or other STEM students
- ❑ Taught in or directed a summer engineering or science camp for K-12 students
- ❑ Advised an engineering-related student organization
- ❑ Participated in recruitment activities for women and underrepresented students

24. Approximately how many undergraduate students do you advise per year?

_____ students

25. Over the past three years, with approximately how many students have you worked as:

Faculty supervisor for a credit-bearing undergraduate research project _____
Faculty mentor for an informal undergraduate research project (excluding an undergraduate theses) _____
Faculty supervisor on an undergraduate independent study course _____
Undergraduate thesis advisor _____
Faculty advisor for an internship or cooperative education experience _____
Graduate thesis or dissertation advisor _____

## Curriculum

To answer the following questions, think about one of the undergraduate courses that you teach most often.

26. Is this course:
- ❍ Lower division (primarily first-/second-year students)
- ❍ Upper division (primarily third-/fourth-/fifth-year students)

27. On average, approximately how many students per term enroll in this course?

_____ students

28. Which category best describes this course?
- ❍ Fundamental science or math course
- ❍ First-year design course
- ❍ Required engineering course
- ❍ Engineering elective
- ❍ Capstone design course

29. Is this course?
- ❍ A stand-alone laboratory course
- ❍ A lecture with a lab component
- ❍ Neither of the above

### Topics in Engineering

30. In this course, how much do you emphasize:

| | Little/No Emphasis | Slight | Moderate | Strong | Very Strong | Not Applicable |
|---|---|---|---|---|---|---|
| Ethical issues in engineering practice | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| The importance of life-long learning | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Current workforce and economic trends (globalization, outsourcing, etc.) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| The value of gender, racial/ethnic, or cultural diversity in engineering | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Creativity and innovation | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Emerging engineering technologies | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Examining beliefs and values and how they affect ethical decisions | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| How theories are used in engineering practice | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Making explicit connections to knowledge and skills from fields other than engineering | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

**Professional Skills**

31. In this course, how much do you emphasize:

| | Little/No Emphasis | Slight | Moderate | Strong | Very Strong | Not Applicable |
|---|---|---|---|---|---|---|
| Professional Skills (knowing codes and standards, being on time, meeting deadlines, etc.) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Written and oral communication skills | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Leadership skills | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Working effectively in teams | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Project management skills (budgeting, monitoring progress, managing people, etc.) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

**Problem Solving**

32. In this course, how much do you emphasize:

| | Little/No Emphasis | Slight | Moderate | Strong | Very Strong | Not Applicable |
|---|---|---|---|---|---|---|
| Application of math and science to engineering problems | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Designing, conducting, and analyzing data from experiments | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Understanding how an engineering solution can shape and be shaped by environmental, social, cultural, political, legal, economic, and other considerations | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Understanding how non-engineering fields can help solve engineering problems | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Integrating knowledge from engineering and other fields to solve engineering problems | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Systems thinking (i.e. looking at entire systems rather than individual components) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Applying knowledge from other fields to solve an engineering problem | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Defining a design problem | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Generating and evaluating a variety of ideas about how to solve a problem | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Solving problems from real clients (industry, government, etc.) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Producing a product (prototype, program, simulation, etc.) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

33. In this course, how often do you use the following instructional approaches?

| | Never | Sometimes | Often | Very Often | Not Applicable |
|---|---|---|---|---|---|
| Lecture | ❍ | ❍ | ❍ | ❍ | ❍ |
| In-class discussions | ❍ | ❍ | ❍ | ❍ | ❍ |
| In-class, small-group learning | ❍ | ❍ | ❍ | ❍ | ❍ |
| Group projects | ❍ | ❍ | ❍ | ❍ | ❍ |
| Reverse-engineering exercises | ❍ | ❍ | ❍ | ❍ | ❍ |
| Hands-on activities and/or assignments | ❍ | ❍ | ❍ | ❍ | ❍ |
| Frequent feedback to students | ❍ | ❍ | ❍ | ❍ | ❍ |
| Detailed feedback to students | ❍ | ❍ | ❍ | ❍ | ❍ |
| Examples or metaphors to explain concepts | ❍ | ❍ | ❍ | ❍ | ❍ |
| Sample problems | ❍ | ❍ | ❍ | ❍ | ❍ |
| Case studies or real-world examples | ❍ | ❍ | ❍ | ❍ | ❍ |
| Plant tours or site visits | ❍ | ❍ | ❍ | ❍ | ❍ |
| Community service | ❍ | ❍ | ❍ | ❍ | ❍ |

34. In this course, how important are the following in determining students' grades?

| | Not at all | Slightly | Moderately | Very | Extremely |
|---|---|---|---|---|---|
| Lab assignments | ❍ | ❍ | ❍ | ❍ | ❍ |
| Presentations | ❍ | ❍ | ❍ | ❍ | ❍ |
| Individual or group written reports | ❍ | ❍ | ❍ | ❍ | ❍ |
| Students' self-assessment of work or progress | ❍ | ❍ | ❍ | ❍ | ❍ |
| Peer assessment (i.e., students provide feedback to one another) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Design projects | ❍ | ❍ | ❍ | ❍ | ❍ |
| Multiple-choice tests | ❍ | ❍ | ❍ | ❍ | ❍ |
| Essay questions | ❍ | ❍ | ❍ | ❍ | ❍ |
| Homework | ❍ | ❍ | ❍ | ❍ | ❍ |
| Class participation | ❍ | ❍ | ❍ | ❍ | ❍ |
| Quizzes | ❍ | ❍ | ❍ | ❍ | ❍ |
| Problem-solving exams | ❍ | ❍ | ❍ | ❍ | ❍ |
| Attendance | ❍ | ❍ | ❍ | ❍ | ❍ |
| Other (please specify) | ❍ | ❍ | ❍ | ❍ | ❍ |

35. Now, think about current seniors in your program. Rate their abilities in the following areas:

| | None or Weak | Fair | Good | Very Good | Excellent | Don't Know |
|---|---|---|---|---|---|---|
| Math, science, and engineering science fundamentals | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Contextual competence (i.e., a student's ability to understand how various settings and/or technical factors influence an engineering solution) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Design skills | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Interdisciplinary competence (i.e., a student's appreciation and understanding of how academic disciplines outside engineering might contribute to an understanding of, or solution to, an engineering problem) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Communication skills | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Teamwork skills | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Leadership skills | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

**Views of Engineering and Engineering Education**

36. Several recent reports discuss the changing knowledge and skills engineers will need in the future and how engineering education needs to change. To what extent do you agree or disagree with the following statements about undergraduate engineering education?

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Programs must periodically revise curricula so students are aware of new technologies. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Emphasizing professional skills takes time away from teaching technical content. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Humanities and social science courses are important in preparing engineers. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Students' leadership skills are best developed in extra-curricular activities. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Interdisciplinary learning - inside and outside engineering - should be part of the engineering curriculum. | ❍ | ❍ | ❍ | ❍ | ❍ |
| The engineering workplace requires systems thinking. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Concepts of sustainability should be a major focus of the undergraduate curriculum. | ❍ | ❍ | ❍ | ❍ | ❍ |
| It's very difficult to increase student diversity without sacrificing some academic quality. | ❍ | ❍ | ❍ | ❍ | ❍ |

37. To what extent do you agree or disagree that the engineering curriculum should:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Teach students about intercultural communication. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Start hands-on design in the first year and continue it throughout the program. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Teach students to consider all relevant factors (e.g., social, cultural, environmental) in designing solutions | ❍ | ❍ | ❍ | ❍ | ❍ |
| Cultivate student creativity. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Prepare students to assume community leadership roles. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Teach students learning strategies. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Prepare students to work effectively across national and cultural boundaries. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Address ethical issues in multiple courses. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Develop students who can think like entrepreneurs. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Provide opportunities for students to prepare for occupations other than engineering (e.g., business, medicine, law.) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Reward excellence in teaching commensurately with research. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Reward faculty who do peer-reviewed engineering education research. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Take responsibility for working with community colleges to facilitate student transfer. | ❍ | ❍ | ❍ | ❍ | ❍ |

37a. To what extent do you agree or disagree that the engineering programs should:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Reward excellence in teaching commensurately with research. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Reward faculty who do peer-reviewed engineering education research. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Take responsibility for working with community colleges to facilitate student transfer. | ❍ | ❍ | ❍ | ❍ | ❍ |

38. How familiar are you with the National Academy of Engineering reports:

| | Unaware of it | Heard of it | Read/Heard summaries | Read parts | Read most or all |
|---|---|---|---|---|---|
| *The Engineer of 2020: Visions of Engineering in the New Century* | ❍ | ❍ | ❍ | ❍ | ❍ |
| *Educating the Engineer of 2020: Adapting Engineering Education to the New Century* | ❍ | ❍ | ❍ | ❍ | ❍ |
| *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future* | ❍ | ❍ | ❍ | ❍ | ❍ |

**Educational Beliefs and Attitudes**

39. Do you agree or disagree that most engineering students in your courses:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Begin their engineering program well-prepared academically | ❍ | ❍ | ❍ | ❍ | ❍ |
| Learn very well from lectures | ❍ | ❍ | ❍ | ❍ | ❍ |
| Learn significantly more from working in groups than from lectures | ❍ | ❍ | ❍ | ❍ | ❍ |
| Focus too heavily on getting a job | ❍ | ❍ | ❍ | ❍ | ❍ |
| Don't know how to use the facts and knowledge they acquire | ❍ | ❍ | ❍ | ❍ | ❍ |

40. Do you agree or disagree with the following statements about community or two-year college students who transfer to engineering programs?

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| They are underprepared for engineering courses | ❍ | ❍ | ❍ | ❍ | ❍ |
| They are typically self-motivated learners | ❍ | ❍ | ❍ | ❍ | ❍ |
| They have outside obligations that interfere with their focus on learning | ❍ | ❍ | ❍ | ❍ | ❍ |
| They bring valuable life experiences to the classroom | ❍ | ❍ | ❍ | ❍ | ❍ |
| There are very few of these students in engineering on my campus | ❍ | ❍ | ❍ | ❍ | ❍ |

41. Do you agree or disagree that as a teacher, it's your responsibility to:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Make your expectations for students' performance clear. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Motivate students to learn. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Create a classroom environment that is respectful of all students. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Encourage students to reflect on their values and how these might influence their work as engineers. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Prepare students for graduate school. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Ask students to make connections across engineering disciplines. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Prepare students for the engineering workforce. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Help students consider the world from multiple perspectives. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Make engineering concepts and principles relevant to students. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Help students connect their prior knowledge and experience to what's being learned. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Prepare students for the role of citizen. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Understand the value of diversity in its many forms (e.g., ideas, cultures, gender). | ❍ | ❍ | ❍ | ❍ | ❍ |
| Help students understand the value of a liberal education. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Help students succeed in engineering, rather than weed them out. | ❍ | ❍ | ❍ | ❍ | ❍ |

42. During the past 12 months, have you: (Check all that apply)

- ❑ Taken a class or worked in industry to enhance your knowledge or skills
- ❑ Attended ASEE, FIE, or other engineering education conference
- ❑ Made a significant effort to improve your teaching or one of my courses
- ❑ Attended a workshop on teaching, learning, or assessment
- ❑ Read journals/books on teaching, learning, or assessment
- ❑ Wrote a paper, article, or chapter on teaching, curriculum, or assessment

43. In your opinion, what is the relative weight given to teaching versus research in your department in:

| | Teaching ← → Research | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Not applicable |
| Hiring decisions | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Merit salary decisions | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Promotion and tenure decisions | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

44. In general, how much do the following "count" in annual merit salary decisions and promotion and tenure reviews in your department?

Merit Salary

| | Not at all | Slightly | Moderately | A Good Deal | A Great Deal |
|---|---|---|---|---|---|
| Engineering education research grants | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering education research publications | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering education conference presentations | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering-specific research grants | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering-specific research publications | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering-specific conference presentations | ❍ | ❍ | ❍ | ❍ | ❍ |
| End-of-course evaluation results | ❍ | ❍ | ❍ | ❍ | ❍ |
| Curriculum or course development | ❍ | ❍ | ❍ | ❍ | ❍ |
| Writing textbooks | ❍ | ❍ | ❍ | ❍ | ❍ |
| Writing article/chapter/book on teaching, curriculum, or assessment | ❍ | ❍ | ❍ | ❍ | ❍ |
| Helping recruit women and underrepresented students | ❍ | ❍ | ❍ | ❍ | ❍ |
| Advising out-of-class student design competition teams | ❍ | ❍ | ❍ | ❍ | ❍ |
| Advising a student organization | ❍ | ❍ | ❍ | ❍ | ❍ |
| Serving as ABET coordinator | ❍ | ❍ | ❍ | ❍ | ❍ |

Promotion and Tenure

| | Not at all | Slightly | Moderately | A Good Deal | A Great Deal |
|---|---|---|---|---|---|
| Engineering education research grants | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering education research publications | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering education conference presentations | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering-specific research grants | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering-specific research publications | ❍ | ❍ | ❍ | ❍ | ❍ |
| Engineering-specific conference presentations | ❍ | ❍ | ❍ | ❍ | ❍ |
| End-of-course evaluation results | ❍ | ❍ | ❍ | ❍ | ❍ |
| Curriculum or course development | ❍ | ❍ | ❍ | ❍ | ❍ |
| Writing textbooks | ❍ | ❍ | ❍ | ❍ | ❍ |
| Writing article/chapter/book on teaching, curriculum, or assessment | ❍ | ❍ | ❍ | ❍ | ❍ |
| Helping recruit women and underrepresented students | ❍ | ❍ | ❍ | ❍ | ❍ |
| Advising out-of-class student design competition teams | ❍ | ❍ | ❍ | ❍ | ❍ |
| Advising a student organization | ❍ | ❍ | ❍ | ❍ | ❍ |
| Serving as ABET coordinator | ❍ | ❍ | ❍ | ❍ | ❍ |

45. Do you agree or disagree with the following statements about your program?

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| We periodically review the program mission and objectives. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Faculty in my program generally resist new curricular ideas or experimentation. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Faculty often collaborate on curriculum development and revision. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Our curriculum is a frequent agenda item at faculty meetings. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Curriculum revisions in our program are typically made in response to some problem rather than through a periodic planning process. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Curriculum planning in my program is systematic. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Curriculum decisions in my program are usually based on opinions rather than data. | ❍ | ❍ | ❍ | ❍ | ❍ |
| Most faculty in this program are knowledgeable about our curriculum beyond their own courses. | ❍ | ❍ | ❍ | ❍ | ❍ |