



Center for the Study of Higher Education

Preparing the Engineer of 2020 Program Chair Survey

Welcome [School Name] Program Chairs

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 program chairs, faculty, students, and alumni 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 your students' experiences.

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:**





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Preparing the Engineer of 2020 Program Chair Survey

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. What is your faculty rank?

- Assistant professor, Associate professor, Full professor

4. Years in your current rank:

___ years

5. Years at this institution:

___ years

6. Years teaching at the college level (excluding graduate teaching assistantships)

___ years

7. In what field is your:

Table with 3 columns: Field, PhD, Your Primary Department. Rows include Bio-medical or Bio-engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, General Engineering/Engineering Science, Industrial Engineering, Mechanical Engineering, and Other (please specify).



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8. 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

Program Responsibilities

9. Years as a program chair/department head in this or another institution: ____ years

10. How many years have you served at any institution as:

	None	1-3 years	4-6 years	7-9 years	10 or more years
Curriculum or program coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum committee member or chair	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Undergraduate advising coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ABET self-study team member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dean or associate dean	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. In the past five years (at any institution), have you (check all that apply):

- 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
- Facilitated development of a new course



Undergraduate Program Curriculum and Instruction

12. In a typical term, approximately what percent of your time is spent in (total must equal 100%):

- Administration _____ %
- Teaching _____ %
- Research _____ %
- Fundraising _____ %
- Service _____ %

13. Tell us about the courses in your program that focus primarily on design.

	Not offered	Optional course	Required course
First-year design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Second-year design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Third-year design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capstone design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Do the design teams in your course(s) have students from (check all that apply):

First-year design	Second-year design	Third-year design	Capstone design
<input type="radio"/> Only within the program	<input type="radio"/> Only within the program	<input type="radio"/> Only within the program	<input type="radio"/> Only within the program
<input type="radio"/> Different engineering fields	<input type="radio"/> Different engineering fields	<input type="radio"/> Different engineering fields	<input type="radio"/> Different engineering fields
<input type="radio"/> Non-engineering fields	<input type="radio"/> Non-engineering fields	<input type="radio"/> Non-engineering fields	<input type="radio"/> Non-engineering fields
<input type="radio"/> Not sure	<input type="radio"/> Not sure	<input type="radio"/> Not sure	<input type="radio"/> Not sure
<input type="radio"/> Not offered	<input type="radio"/> Not offered	<input type="radio"/> Not offered	<input type="radio"/> Not offered



Topics in Engineering

15. How much does your program curriculum emphasize:

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

Professional Skills

16. How much does your program curriculum emphasize:

	Little/No emphasis	Slight	Moderate	Strong	Very strong	Not applicable
Professional skills (knowing codes and standards, being on time, meeting deadlines, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Written and oral communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working effectively in teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project management skills (budgeting, monitoring progress, managing people, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Problem Solving

17. How much does your program curriculum emphasize:

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

18. Are most faculty members in your program part of your formal undergraduate advising system?

- No; professional staff advise undergraduates at all levels
- Yes, but only lower-division (first- and second-year students)
- Yes, but only upper-division (third- and fourth-year students)
- Yes, both lower- and upper-division students

Program Information

19. Does your program have an Industry Advisory Board or Council?

- Yes [Go to question 20]
- No [Go to question 21]

20. How involved is your Industry Advisory Board or Council in the following:

	Not at all	Slightly	Moderately	Highly	Very highly
Curriculum review and/or reform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presentations to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student internship placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing financial or other forms of support for the program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aid in ABET reviews	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. What kinds of preparation do graduate teaching assistants receive before their teaching assignment begins (check all that apply)?

- They do not receive any formal training
- They meet with the instructor for the course

They attend a department-level teaching orientation of:

- ½ - 2 hours
- 2 ½ - 4 hours
- 4 ½ - 6 hours
- 6 ½ - 8 hours
- More than one day

They attend some other teaching orientation of:

- Less than 2 hours
- 3-4 hours
- 5-6 hours
- One day
- More than one day

22. What kinds of supervision and/or evaluation do graduate teaching assistants undergo?

Check all that apply.

- TAs are formally supervised
- Undergraduate students fill out evaluations at the end of term that include questions about TAs
- TAs are formally evaluated by course instructor
- TAs are formally evaluated by a third party (not the course instructor)



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23. How much do the following limit your program’s ability to improve its undergraduate curriculum?

	Not at all	Slightly	Moderately	Very	Extremely
Outdated lab equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space or facilities constraints	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty stretched too thin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty apathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emphasis on research in reward system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of support staff (e.g., clerical, technical, laboratory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of teaching assistantships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High student-faculty ratios	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ABET requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Institution-wide curriculum requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. How much do you use data on student learning in:

	Not at all	Slightly	Moderately	Very	Extremely
Course redesign	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum review and development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Continuous improvement processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty performance reviews	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resource distribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

	Teaching ←————→ Research							Not applicable
	1	2	3	4	5	6	7	
Hiring decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Merit salary decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promotion and tenure decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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

	Merit Salary					P&T				
	Not at all	Slightly	Moderately	A good deal	A great deal	Not at all	Slightly	Moderately	A good deal	A great deal
Engineering education research grants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engineering education research publications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engineering education conference presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engineering-specific research grants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engineering-specific research publications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engineering-specific conference presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
End-of-course evaluation results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum or course development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing textbooks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing article/chapter/book on teaching, curriculum, or assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping recruit women and underrepresented students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helping recruit women and underrepresented faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advising out-of-class student design competition teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advising a student organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Serving as ABET coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Serving on an ABET self-study team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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27. 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 our program mission and objectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty in my program generally resist new curricular ideas or experimentation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty often collaborate on curriculum development and revision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our curriculum is a frequent agenda item at program meetings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum revisions in our program are typically made in response to some problem rather than through a periodic planning process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum planning in my program is systematic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum decisions in my program are usually based on opinions rather than data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most faculty in this program are knowledgeable about our curriculum beyond their own courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. Do your non-tenure track, multi-year, full-time instructional staff have a vote in program curriculum decisions?

- We don't have any non-tenure track, multi-year, full-time instructional staff
- Yes
- No

Views of Engineering and Engineering Education

29. Several recent reports discuss the changing knowledge and skills engineers will need in the future and how engineering education should 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.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emphasizing professional skills takes time away from teaching technical content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humanities and social science courses are important in preparing engineers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students' leadership skills are best developed in extra-curricular activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interdisciplinary learning—inside and outside engineering—should be part of the engineering curriculum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The engineering workplace requires systems thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concepts of sustainability should be a major focus of the undergraduate curriculum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's very difficult to increase student diversity without sacrificing some academic quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's very difficult to increase faculty diversity without sacrificing some academic quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Center for the Study of Higher Education

30. 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.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Start hands-on design in the first year and continue it throughout the program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teach students to consider all relevant factors (e.g., social, cultural, environmental) in designing solutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultivate student creativity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prepare students to assume community leadership roles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teach students learning strategies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prepare students to work effectively across national and cultural boundaries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Address ethical issues in multiple courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop students who can think like entrepreneurs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide opportunities for students to prepare for occupations other than engineering (e.g., business, medicine, law).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. Do you agree or disagree that engineering programs should:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Reward excellence in teaching commensurately with excellence in research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reward faculty who do peer-reviewed <u>engineering education</u> research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take responsibility for working with community colleges to facilitate student transfer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. How familiar are you with the following National Academy of Engineering reports?

	Unaware of it	Heard of it	Read/heard summaries	Read parts	Read most or all
<i>The Engineer of 2020: Visions of Engineering in the New Century</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Educating the Engineer of 2020: Adapting Engineering Education to the New Century</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Rising above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

