

Faculty Survey 2008

Using pen or pencil, please completely fill the appropriate box or circle with your response.

Part I. Personal Information

1. How many years have you been teaching as an engineering faculty member?
2. How many years have you been a faculty member at KAU?
3. Approximately how many years have you been employed full-time as an engineer in industry or private practice? Years

Part II. Faculty Teaching

Please think about a particular undergraduate course that you teach more or less regularly. With that course in mind, please answer the following questions (3 to 14):

4. Please indicate the level of the students in this course:
 Mainly junior students Mainly senior students Mixed
5. Approximately how many students are enrolled in that course?
6. Indicate the category that best describes that course. (Select all that apply.)
 First-year design course Required program/engineering course Capstone design course
 Elective course Other (specify)
7. Please indicate the level of that course: 200-Level 300-Level 400-Level
8. In which year did you most recently teach that course (approximately)?
9. In which year did you first teach that course (approximately)?
10. Compared to the first time you taught that course how, if at all, has the emphasis on the following changed?

Area	Significant Decrease	Some Decrease	No Change	Some Increase	Significant Increase
Engineering Design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teamwork	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional ethics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engineering in global/social contexts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional Responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching writing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verbal Communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of contemporary issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experimental methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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11. To what extent has each of the following influenced the course changes above?

	Not at All	Slightly	Moderately	A Great Deal
Collective faculty / department council decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change in program goals (Objectives/ Outcomes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizational restructuring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ABET accreditation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decreased resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry/employer feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision by Dean or other administrator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My own initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research on undergraduate engineering education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Compared to the first time you taught that course how, if at all, has the emphasis you place on the following teaching methods changed?

	Not Applicable	Significant Decrease	Some Decrease	No Change	Some Increase	Significant Increase
Use of groups in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assignments or exercises focusing on application	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open-ended problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hands-on experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Case studies or real world examples	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lectures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer simulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problems from the textbook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. How has each of the following influenced your use of active teaching methods, such as group work, projects, and student presentations?

	Not at All	Slightly	Moderately	A Great Deal
Collective faculty decision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change in program goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizational restructuring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ABET accreditation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decreased resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry/employer feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My own initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research on undergraduate engineering education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Approximately how much weight do you give to each of the following when assigning grades in that course?

Quizzes and exams	
Class participation and presentations	
Group work or Team project (s)	
Individual paper(s) or project(s)	
Homework or lab problems	
Other (specify)	
Total	100 %

Part III Students Learning

15. What impact did the changes you made in course content and/or teaching methods have on your students' ability to do the following?

	Not Applicable	High-Negative Impact	Some Negative Impact	No Impact	Some Positive Impact	High Positive Impact
Apply knowledge of mathematics, science, and engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design and conduct experiments, as well as to analyze and interpret data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design a system, component, or process to meet desired needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Function on multi-disciplinary teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify, formulate, and solve engineering problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand professional and ethical responsibilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand the impact of engineering solutions in a global and societal context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize the need for and engage in life-long learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of contemporary issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use the techniques, skills, and modern engineering tools necessary for engineering practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage a project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Think about graduating seniors currently in ME (AE) Program. On average, please rate their ability to do the following:

	No Ability	Some Ability	Adequate Ability	More than adequate Ability	High Ability
Apply knowledge of mathematics, science, and engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design and conduct experiments, as well as to analyze and interpret data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design a system, component, or process to meet desired needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Function on multi-disciplinary teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify, formulate, and solve engineering problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand professional and ethical responsibilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understand the impact of engineering solutions in a global and societal context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognize the need for and engage in life-long learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge of contemporary issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use the techniques, skills, and modern engineering tools necessary for engineering practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage a project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Compared to graduates 3-5 years ago, have current graduating seniors' abilities increased or decreased?

	Greatly Decreased	Slightly Decreased	About The Same	Slightly Increased	Greatly Increased
To use engineering, math, science, and technical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To apply problem-solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To communicate and work in teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To understand the organizational, cultural, and environmental contexts and constraints of engineering practice, design, and research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To continue to learn, grow, and adapt as technology and society evolve in unpredictable directions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. To what extent, in your opinion, are these changes attributable to ABET's EC2000?

- Not at all
- Some
- Moderately
- A great deal

19. Is your participation this year in the following professional development activities, less, the same, or more, as compared to 3 years ago?

Participation In	Not participating this year	Participating but less than 3 years ago	Participating the same as 3 years ago	Participating more than 3 years ago
Seminars or workshops on teaching & learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using services of on-campus education development centre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing or teaching a course with someone in another engineering discipline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Activities to enhance content knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading materials on teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A project to improve undergraduate engineering education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seminars or workshops on assessing student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for external funding for an undergraduate engineering education project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. To what extent do you agree or disagree with the following statements about current curriculum planning and revision practices in ME (AE) Program?

Statement	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Faculty periodically review program mission & objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty generally accept new curricular ideas or experimentation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty collaborate on curriculum development and revision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Program 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 are typically made through a periodic planning process rather than in response to some problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum planning in the program is systematic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum decisions are usually based on data rather than opinion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty are knowledgeable about the program's curriculum beyond their own courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. What is your level of enthusiasm for outcomes assessment as part of a process of program improvement?

- None at all
- Some
- Moderate
- A great deal

22. What has been your level of personal effort in student outcomes assessment?

- None at all
- Some
- Moderate
- A great deal

23. How much has ABET's EC2000 increased your knowledge of the strengths and weaknesses of the program?

- Not at all
- Some
- Moderately
- A great deal

24. How familiar are you with ABET's EC2000 Accreditation Criteria dealing with student outcomes?

- Not at all
- Slightly familiar
- Moderately familiar
- Very familiar

Part IV Program Educational Objectives:

25. How do you feel that recent engineering graduates, from KAU Aeronautical Engineering Department, are prepared to:

	Inadequately prepared	Adequately prepared	Well prepared	Don't Know
Engage in productive career in industry, military, academia, or research, enabled by their technical competence in mechanical and aeronautical engineering?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advance in responsibility and leadership in public, private, or military sectors in Saudi Arabia and the Gulf Area?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate commitment to personal professional development as well as the sustainable development of the society?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. In the fields of mechanical and aeronautical engineering, have the abilities of recent graduates increased or decreased, compared to engineering graduates of 5 years ago, to:?

	Decreased	About the same	Increased	Don't Know
Engage in productive career in industry, military, academia, or research, enabled by their technical competence in mechanical and aeronautical engineering?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advance in responsibility and leadership in public, private, or military sectors in Saudi Arabia and the Gulf Area?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Demonstrate commitment to personal professional development as well as the sustainable development of the society?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>