

**CHEMICAL ENGINEERING
UNDERGRADUATE SURVEY**

May 2001

Note: We are focusing on our undergraduate program. Please return by July 15, 2001.

1. Please complete the following current information about yourself:

Gender: Male _____ Female _____

Year began at UW-Madison 19____ Year received BS degree _____

2. If you are *currently enrolled* or have *earned additional degrees* in a graduate degree program, complete the following:

a. Field: _____

b. Field: _____

Institution: _____

Institution: _____

Degrees earned (circle all that apply):

Degrees earned (circle all that apply):

MS MA MBA MD JD Ph.D.

MS MA MBA MD JD Ph.D.

3. Have you taken continuing education or industrial short courses? Yes _____ No _____

What subjects have you studied? Why?

4. Are you currently employed? Yes _____ No _____ If no, complete a) only.

If Yes, Please complete b) through e) below.

- a. If you are currently not employed, please describe the reason(s) why.

b. Name of company or institution _____

- i. Circle the description below that best characterizes your current employer.

fewer than 100 employees 100 to 1000 employees greater than 1000 employees

- ii. How many years have you been with this employer? _____ years (If less than 1 year, enter 0)

c. What is your current job title or position? _____

d. How would you describe your job activities over the past 2 years:

- i. Which kinds of materials, substances, and products does your work involve?

___ Agricultural or bioprocess high volume materials

___ Consumer products

___ Electronic materials or devices

___ Food products

___ High volume chemicals

___ Metals/minerals

___ Petroleum, fuels, primary petrochemicals

___ Pharmaceuticals/biologicals

___ Polymers

___ Pulp and paper products

___ Specialty/fine chemicals

___ Other: _____

- ii. What are your main job activities?

(Indicate % of time for each if several apply.)

___ Business planning, managerial functions

___ Economic evaluation

___ Laboratory research & development

___ Marketing and product sales

___ Pilot plant process development

___ Plant operations: scheduling and logistics

___ Process and equipment design

___ Process operations: monitoring, improvement, and troubleshooting

___ Product development

___ Project engineering/management

___ Software development

___ Other (chemical engineering):

___ Other (not chemical engineering):

- e. How long have you been in this position? (circle one)
 Under 1 year 1 to 4 years 5 or more years

f. Please write a short description of the type of work you do in your present position.

5. Rate how well your ChE undergraduate education at UW-Madison prepared you in the following areas and also rate how useful these areas have been in your career.

	College Preparation			Professional Usefulness			
	Very prepared	Adequately prepared	Poorly prepared	Frequently used	Moderately used	Not used	Courses not taken
a. Mathematics (calculus, diff. eq., etc.)							
b. Statistics (elective, or required since 1999)							
c. Chemistry							
d. Physics							
e. Computer Science (CS 302 or CS 110/310)							
f. Electric circuits and electronics (ECE 373 or EC376)							
g. Thermodynamics (ChE 310, or 211,311)							
h. Engineering Mechanics (EM 214) (now eliminated)							
i. Process Synthesis, Control, and Design (ChE 250/210, 424, 450,470)							
j. Transport (ChE 320, 324, 326, and 426)							
k. Reaction Engineering (ChE 430)							
l. Materials & Polymers (ChE 540 or 440)							

6. If you rated your preparation in any of the above topics as “very prepared” or “poorly prepared, please comment on those ratings.

7. If you rated any of the above topics as “frequently used” or “not used,” please comment below on why.
8. Do you supervise the work of other Chemical Engineers? _____ Yes _____ No
9. In your view, what deficiencies do entering Chemical Engineers have?
(Consider your own start, or other new engineers you have known.)
10. What are the most important qualities or skills that a Chemical Engineer should have? Why?
(For example: working independently, creative thinking, problem solving, time management, communication, working in a team, intellectual curiosity, confidence in field, ethical responsibility, etc.)
11. Which skills would you like to see the ChE program encourage or improve on?
12. How do you rate the quality of career advising you received in the College of Engineering? (Circle one):
very adequate somewhat adequate somewhat inadequate very inadequate not applicable
How could it be improved? Be as specific as you can.
13. If you have attended or completed graduate school or are currently in graduate school, please rate how well your undergraduate education at UW-Madison prepared you for graduate study? (Circle one):
very adequate somewhat adequate somewhat inadequate very inadequate not applicable
How could it be improved? Be as specific as you can.
14. How well prepared do you believe you are to compete within your field or current area of employment?
(Circle one): very adequate somewhat adequate somewhat inadequate very inadequate not applicable

Please comment:

15. How does your undergraduate education compare with that of peers in your field from other schools?
(Example: advantages, disadvantages)
16. During your undergraduate study, what subject areas, if any, would you have liked to study more? Why?
17. The ChE degree requires 15 credits of laboratory courses involving Chemistry and Chemical Engineering.
Please rate the value of this laboratory experience to your career and comment on why you rated it this way.
(Circle one): very valuable somewhat valuable of limited value not valuable
- Comment:
18. Please rate the value of the summer laboratory course in particular and comment on why you rated it this way.
(Circle one): very valuable somewhat valuable of limited value not valuable
19. Did you take an independent study course – ChE 599? Yes_____ No_____ (If No, go ahead to question 20.)
- How do you rate the value of your independent study? (Circle one):
very valuable somewhat valuable of limited value not valuable
 - Why do you rate it this way?
 - How, if at all, could it have been improved? Be as specific as you can.
 - In what ways, if any, did your independent study experience influence your choice of career?
 - If you went to graduate school, in what ways, if any, was your graduate school experience influenced by the independent study? Mark here if not applicable_____

20. Please comment on your preparation for and the usefulness of the following factors: [Note that these are distributed throughout classes, and are not necessarily covered intensively in a specific course.]	College Preparation			Professional Usefulness		
	Very prepared	Adequately prepared	Poorly prepared	Frequently used	Moderately used	Not used
a. ability to function on teams						
b. ability to communicate effectively						
c. knowledge of contemporary issues						
d. understanding of professional and ethical responsibility						
e. understand impact of engineering solutions in a global and societal context						
f. ability to engage in lifelong learning, and recognition of its necessity						

21. If you rated your preparation in any of the above topics as “very prepared” or “poorly prepared,” please comment on those ratings.

22. If you rated any of the above topics as “frequently used” or “not used,” please comment below on why.

23. Did you participate in a co-op experience? Yes_____ No_____ If No, go ahead to Question 24.

a. How do you rate the value of your co-op experience? (Circle one):
very valuable somewhat valuable of limited value not valuable

b. How, if at all, could it have been improved? Be as specific as you can.

c. In what ways, if any, did your co-op experience influence your choice of career?

d. If you went to graduate school, in what ways, if any, was your graduate school experience influenced by your co-op experience? Mark here if not applicable_____

24. Please give an overall rating about how well your undergraduate education prepared you for your professional career. (Circle one): very good good fair poor

Why do you rate it this way? Be as specific as possible.

25. Please add any comments you feel would be helpful in improving our undergraduate program:

**THANK YOU VERY MUCH FOR YOUR TIME AND EFFORT!
PLEASE RETURN SURVEY BY JULY 15, 2001**