

ENGLISH 206
FINAL EXAM
SPRING 2003-2004



Name: _____

Section: _____

Instructor: _____

Time Allowed: 2 ½ Hours

PASSAGE A:

Mentoring Engineering Students: Turning Pebbles into Diamonds

1. Engineering faculty have many types of interactions with students. They appear in class as the purveyors of information and the facilitators of learning, and they act as advisors, guiding the students through their years of education. In some cases, the relationship between student and professor evolves into one of mentoring—which is the topic of this paper.
2. It is difficult to define the relationship between a mentor and a protégé. Mentoring is not just advising, for example, although advising is certainly part of mentoring. Mentoring is also not paternalism. Paternalism refers to a relationship between unequal parties where the “parent” imposes his or her will on the “child” because the parent supposedly knows far better what is to the child’s benefit. Although mentoring has been sometimes defined as paternalism, this is an inaccurate characterization because the relationship between mentor and protégé is a voluntary one—either party can disengage at any time—unlike the parent/child relationship.
3. If we search for analogies, the coach/players relationship might be a model. The coach and players all work hard, and the coach succeeds when the players win. Or perhaps the mentor/protégé relationship is more like a master craftsman/apprentice relationship, where the craftsman, if the apprenticeship is successful, has helped to produce another craftsman who would be competitive in the skill of the craft.
4. In most mentor/protégé interactions, the mentor takes joy in watching the protégé succeed. Such “laying on of hands” is characteristic of the professions. Recently a group of practicing engineers, members of the local American Society of Civil Engineers chapter, met at a university. They came to the campus mostly to have a chance to get to know the students and to offer their advice and expertise in the students’ professional development. I asked them during the meeting why they took time away from their jobs to volunteer to come talk to engineering students. As I suspected, they had not given this much thought. To them it was simply part of what they did as professional engineers. It’s part of their heritage—the debt they pay to the people who helped them in their own path to professional engineering.
5. Mentoring, of course, has rewards. If a student goes on to have a successful professional career, either in academics or in the real world, then the mentor shares the joy of that success. Some mentors, like successful basketball coaches,

may not have had brilliant careers themselves but know how to get the very best out of their students.


6. So how does one become an effective mentor of engineering students? Perhaps we can list the attributes of good mentors and simply say "do that." This approach is not without precedent. The widely distributed book from the National Academy of Sciences, *Adviser, Teacher, Role Model, Friend* takes this approach. For example, it gives advice for new mentors:

- Listen patiently.
- Build relationship.
- Don't abuse your authority.
- Nurture self-sufficiency.
- Establish "protected time" together.
- Share yourself.
- Provide introductions.
- Be constructive.
- Don't be overbearing.
- Find your own mentors.

But such lists are unsatisfying. Learning to be a good mentor also requires effort, although knowing some of the rules, just as in learning to ride a bicycle, are useful and helpful.

The Mentor as Friend

7. Some leaders in the collegiate teaching profession advise strongly about maintaining a strict business-like relationship between the student protégé and the professor mentor. A professor should not have any casual relationships with students, that such relationships "conflict with our fundamental obligations as professors," and the ethics of the relationship require that the professor remain "dispassionate," avoiding any appearance of partiality. The professor should "not seek to be their psychiatrist, friend, or lover."
8. I firmly agree about the psychiatrist and lover part, but I am not sure about the evil of friendships between students and professors. Too often we tend to be overly cautious and to keep students at a distance, not offering them the encouragement and support they need. One educator has observed that "there are far too many students in our courses for whom learning has been a humiliating experience... It is remarkable in how many ways teachers unwittingly exacerbate [students'] lack of self-esteem". One way of encouraging students to higher levels of achievement is to offer friendship as a part of the professorial role.
9. Richard Baker, in a wonderful critique of the book *A Small Room* by May Sarton, presents a convincing case for friendship between professor and student. There are times and situations, he argues, where friendship is exactly what is needed in the mentoring relationship. Such a friendship does not have to be destructive or result in unjust impartiality. A small note of encouragement, a friendly gesture, making time during a busy schedule for "hanging out," asking an underachieving student to chat, answering e-mail, paying attention to their extracurricular activities and achievements, ... these are all indicators of friendship, and they



mean a great deal to students. As Baker concludes, "The key ethical point... is that the professor—both inside and outside the classroom—should act as a friend."

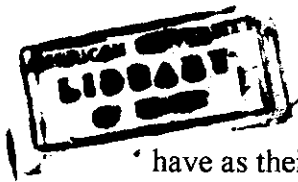
10. But there is a difference between "friend" and "pal". The teacher/professor/mentor has a special power relationship with the student and the professor will be called on to evaluate performance and to do this "dispassionately". An advisor or mentor cannot be a pal, shooting hoops with students and drinking beer afterwards, or joining them in dancing the night away at a sorority ball. A professor trying to be a pal will destroy the fragile relationship between student and professor that is such an integral part of education.

Student-Specific Mentoring

11. The mentor's relationship with the protégé must be student-specific because different students need different kinds of mentoring. Sometimes these needs are obvious, but often they are not. To get started, some gross generalizations are useful. For example, there is a significant gender difference in what undergraduate students expect from an advisor. The data are from a study with engineering undergraduate students.
12. Female students, on average, expect the advisor to get to know them as a person and to establish a working relationship. Male students, on average, want to just "get the facts, ma'am," and depend on the advisor to be right about the facts.
13. Although there is a stunning difference between what men and women expect from an advisor, we have to be careful about unwarranted generalization. More men than women want concrete and directive suggestions, but a significant fraction of women still expect such help. Similarly, one third of the men expect the professor to take the time to get to know them personally. What this means is that the advisor cannot easily predict, based on some characteristics such as gender, how best to serve the students' needs. All students should be treated as individuals by allowing them to set the tone for what the relationship will be like. It is usually best to allow the student to lead the way.

The Toxic Mentor

14. The relationship between the mentor and protégé can be a mutually satisfying and even rewarding one, but it can also be the cause of great anguish and pain. Perhaps it is wise to ask if the mentor/protégé system is a good one, or if some other system would be better. Consider, taking the lead from John Rawls, an "original position", of both professors and students in a department where every faculty member is to advise every student equally. With time, would students not seek out one or several professors with whom they have the greatest rapport and whose advice they begin to value? And would the professors not begin to identify those students they most would like to work with and in whom they see the greatest potential? In other words, the "original position" is an unstable situation, and students will eventually migrate to those professors who they most want to



- have as their mentors. It therefore appears that the mentor/protégé system is a natural outcome and is not one that is synthetically imposed on us.
15. Ideally, therefore, the student becomes a professor's protégé by mutual consent. But the world is often not ideal, and professors can become advisors by other means. For example, the advising system at a university might force a student to accept an advisor without mutual consent, or the availability of funds can force a student to choose or change a primary advisor, or the professor may leave the university or go on leave, again forcing a change in advisors. Finally, the process is dynamic and a relationship that seemed to be excellent in the beginning of the student's program can sour as the student develops in maturity or as new responsibilities and requirements are imposed. Thus, it is possible for students to have what Stephanie Bird calls *toxic mentors*.
 16. For example, one faculty member prominently displayed mildly suggestive pictures of women in his office. The female students were unable to convince the professor that the pictures made them feel uncomfortable, and eventually they went to the departmental chair and asked him to intercede, which he did. The pictures came down, but the relationship between the students and the advisor was poisoned. The professor did not understand that the pictures were inappropriate and resented the students going to the chair with their concerns. In this particular case, the relationship between the senior graduate student and the professor deteriorated to the point where she did not even ask him for a letter of recommendation when she sought academic work after graduation. The chair had to write a letter of explanation as to why no such recommendation from the primary advisor was forthcoming.
 17. Students caught in a trap with a toxic mentor can either suck it up and graduate fast or try to change the primary advisor. Neither is easily done. If the students are in graduate school, faculty often believe that they make investments in students and that the student should then show loyalty in not shopping around for a new primary advisor, taking the news of disloyal behavior personally and often vindictively. In undergraduate school, changing advisors is often impossible due to departmental or college rules on advising. An incompetent advisor is often blamed for the failure to graduate from a science or engineering program.

The University's Role in Improving the Quality of Mentoring

18. The university can enhance the quality of advising available to students and increase the potential of having an adviser/advisee relationship turn into a much more rewarding and lasting mentor/protégé relationship. Some suggestions, based on experiences at some forward looking universities, are that universities should
 1. establish policies that would allow students to have the option of selecting advisors.
 2. be the organizer for improving advising.
 3. develop regular feedback sessions with students.
 4. ask students to complete exit surveys, asking them to assess the experiences they have had with their advisor and other faculty in their department.

These are all good ideas and if implemented can no doubt improve the advising process at any university. But we have to be realistic. If a faculty member, especially a senior faculty member, does not wish to spend time helping students, then there is little a university can do to improve the situation. Mentoring does not come from a guidebook, a set of rules, or even incentives. Mentoring comes from the heart. Ya gotta love it. It's kinda like the old saying: "Never try to teach a pig to sing. It won't work and it annoys the pig."

Source: Vesilind, P.A. (2001, July). Mentoring engineering students: Turning pebbles into diamonds. *Journal of Engineering Education*, 407-410

PASSAGE B:

MentorNet

1. When you're a female freshman engineering major at a prestigious technical institute, the stresses can pile up, and having an objective someone on your side can make a big difference in how you handle them.
2. When Erin McClain arrived at Rensselaer Polytechnic Institute in Troy, New York, she realized the climate was quite different from high school. From most of the male engineering students she met, she says, she experienced a condescension that stopped her short.
3. "This campus is 77 percent male. There are very few women professors, and a lot of the males think women are here because of affirmative action, not because we're as smart and capable as they are," Erin says, in an observation common to many female engineering students on campuses across the country. "Unless a woman is a really great programmer, they act like she doesn't know much. When you work with people in groups, the men will ask of the women, 'Are you sure you know how to do this?' They assume women don't know what to do with a computer, or how to fix it, that our knowledge is limited because we're female."
4. Erin had a campus mentor, who was helpful in many ways but unable to answer questions about professional concerns. So she signed up with MentorNet, indicating a preference to be matched with a female mentor who'd been an electrical engineering major.

A Friend and Advisor

5. A few weeks later she was paired with Veronica DeHart, 33, a software engineer in the IBM Enterprise Systems Group in Austin, Texas, who had informally mentored new employees there. Prior to her three years with IBM, Veronica had been an undergraduate researcher with the NASA "Hearts in Space" project at the University of Utah, which studies the effects of zero gravity on the human cardiovascular system. She had been a first-generation college student who earned her bachelor's degree in electrical engineering at the University of Utah with part-time jobs as an engineering aide. She'd also completed internships and a co-op placement and had mentored younger students on campus.
6. "Because I was a first-generation college student, most people in my family didn't understand what I was going through, especially as one of very few women in my electrical engineering classes. I hoped that as a mentor, I could be an active

- listener, relate some of my personal experiences, validate concerns, be a positive influence and, if necessary, a shoulder to cry on," Veronica says. "I wanted to be honest and not sugar-coat my experiences, and I wanted to keep Erin interested in math and science, whether that meant an engineering degree or some other path. I wanted to be a friend as well as an advisor."
7. Veronica's experiences turned out to be relevant to Erin's situation.
 8. "I sometimes find that women in male-dominated fields feel we cannot fail, that we must push ourselves to be better than men, and we become perfectionists," Veronica says. "When Erin and I were matched, she felt she wasn't doing as well as she could; she was doubting herself, wondering if engineering was the right major for her. Her environment also led her to ask questions about the differences in men's and women's work styles, how those are negotiated in the corporate workplace, how they affect organizational politics, and so on."

Keeping the Faith

9. Erin had begun to consider changing majors, and Veronica's encouragement during that time was key, she says.
10. "I realized I didn't want to do electrical engineering, nor be in straight engineering either, so I talked to my advisor and checked out different options. In the end I chose information technology because it seems so interdisciplinary and a better fit for my personality," she explains. "While I was considering this change, I consulted Veronica, and she told me how important information technology is to engineering and how in a management IT position, I could be a liaison between management and engineering.
11. "We discussed things like how being a woman in engineering affects self-esteem, and how I had to believe in myself. Veronica always said, 'Whatever you choose to go into, I know you'll do well,'" Erin says "I never met her, and we talked only through email, and it amazed me that she could have that kind of faith and trust in me."
12. "My relationship with Veronica was different than any other I've had. She really accompanied me through my freshman year and helped me deal with the negativity," she says. "After talking with her and my mentor on campus, I know that pursuing my interest in technology is the right choice. I bring my own unique experiences to this, I believe I can contribute, and I'm at the right school."

Influencing the Future

13. Since changing her major, Erin has kept one foot planted in engineering by continuing to take classes in that department. And because of her good experience with Veronica, Erin says, she signed up for another MentorNet mentor for her sophomore year and became a campus mentor herself to two female freshmen.

Source: MentorNet: The E-Mentoring Network for Women in Engineering and Science. (2003). Retrieved from www.mentornet.net

**ENGLISH 206
FINAL EXAM
Spring 2003-2004**

Name: _____

Section: _____

Instructor: _____

Time Allowed: 2 ¹/₂ Hours

1. Address a memorandum to the Dean of Engineering and Architecture, Dean I. Hajj, **proposing** on behalf of the students of the Faculty of Engineering and Architecture that AUB seriously consider the possibility of starting an online mentoring program which connects students with practicing engineers worldwide. The website for your mentoring program may include the following:

- E-mail accounts for undergraduate and graduate students and mentors for one-on-one e-mail based mentoring relationships
- An E-forum: Web-based discussion groups for topics such as 'Work/Life Balance' and 'Job Searching'
- Resources for and about engineers, including a section on women in engineering and science
- A resume database for students seeking jobs or internships

Use the relevant ideas in passages A and B to write your proposal. Use your discretion to supplement this information with needed details from your general knowledge. In your proposal elaborate on difficulties you, or your friends, have encountered and explain how e-mentoring would resolve such difficulties. Since students have advisors, make sure you distinguish between advisors and mentors. Stress the benefits for all involved, especially female engineering students who need encouragement in a male-dominated profession.

1.1 Before writing the report, analyze the situation by answering the following questions briefly. (10 pts.)

- 1.1.1 A proposal for e-mentoring at the AUB may undermine the role of on-campus advisors. Do you believe you should address this potentially negative issue in your proposal, or should you simply ignore it because drawing attention to it may weaken your proposal? Justify your answer. (5 pts.)

1.1.2 Identify two instances of inappropriate style (words, phrases or expressions) in Passage A, knowing that the article was published in the *Journal of Engineering Education*. Explain briefly why you find them inappropriate. (2.5 pts.)

1.1.3 Would you use such expressions in your proposal? Justify. (2.5 pts.)

1.2 Write your report on pages 3 and on. (Use the back of the sheets for drafting if needed. You will **not** be given extra sheets of paper for drafts.) (50 pts.)

2. Write a letter to a certain professional in a field related to your area of specialization to request that he/she become your off-campus e-mentor. Preferably approach someone who works in the corporate workplace (not in academia) and stress the benefits involved for mentors. (The passages have some useful ideas.) Address your letter to a specific person whom you came to know about through your own research or through someone you know such as a professor of yours. You could write, for example, to someone at IBM (IBM Enterprise Systems Group, Austin, Texas, USA). Use your own AUB address (American University of Beirut, P.O. Box 11- 0236, Riad El Solh Beirut 1107 2020, Lebanon).

2.1. Write your letter on page 8. (Use this page for drafting.)

2.2. Use the full block style when writing your letter.

2.3. Enclose some documents about yourself or AUB to acquaint your addressee with the context. (40 pts.)