New EE head Davenport discusses

Paul Schindler, The Tech Contributing Editor, recently discussed with Professor Wilbur Davenport, newly appointed head of the Electrical Engineering department, his plans for his own future and that of the department. Portions of that interview are printed here.

The Tech: Why is EE the largest department in the Institute?

Davenport: History. Two kinds of History. One is that the department, certainly since I've been around, has been remarkably flexible in terms of the intellectual areas that it has gotten into. In a number of these areas it has been a national leader.

What attracted many of our graduate students was the range of different things going on in the department. Talking with a number of undergraduates at the time of decision — when they are choosing a department — that seemed important to them too.

The other issue mentioned by undergraduates is the fact that this is a "good teaching department."

The Tech: Do all universities have a faculty as department heads?

Davenport: I know very few universities. Many junior faculty as department heads. The cases I have seen make me somewhat uneasy about it.

The criterion that most universities use for promotion and tenure tends to be somewhat different from the criteria that you need for a department head. Promotion and tenure tends to be focused on the person's intellectual abilities, his creative abilities in the field. Sometimes the measure is research, sometimes publication, sometimes performance in an engineering context. But its still intellectual creative performance you're looking for in a university that is research based in technology and science, as MIT is.

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The simple answer is yes. The reason I feel that way is that we have a very strong graduate department. The best way to approach it is that we have a very strong graduate faculty separate and distinct from the undergraduate faculty. The Tech: Why is EE a good teaching department? Do other departments resent EE's breadth?

Davenport: I'm sure they do. Human beings being what they are, I would be surprised if there wasn't some. On the other hand, again history comes into it. If you look back and ask why certain individuals came into the department, you have to look at the broad picture at that time. You then realize that many people came into our department, because the particular part of their field they were interested in was being done in our department and not elsewhere at the time.

I came here first as a graduate student and a TA, so I've been involved in teaching here as long as I've been on campus. It was certainly imposed on me when I came here that the department considered it important that I be involved in undergraduate teaching and counseling. The people that were the department head and the undergraduate office when I first arrived here took that position, and every department head and executive office I've dealt with since I arrived took the position that was something important for to do as a member of the teaching staff.

"Social engineering"

The Tech: Would you like to see students in Electric Engineering working at co-op jobs that are social or political as well as electrical?

Davenport: If I thought they would learn something from it and contribute to it, I would say absolutely, even if it is not directly related.

That's probably one of the strongest feelings I have. If you ask the next question: how to implement that, you face other questions. How do you make the overall educational system at the undergraduate level something that achieves your objectives and still doesn't cost itself out of existence?

There's a lot of rhetoric around the country about the use of technology in education. I think we have a lot to learn. I do not think it is true that anyone, either here or elsewhere in fact knows a good way, let alone the best way of doing this technology in education. I think we have to — we must experiment.

The question we have to face is: what is the best way to attack the presentation of the technical material that we want our students to get, at the same time giving them some experience at making use of some of the other ideas they should be getting out of their education, ideas about the human side of engineering, and the world they live in.

The Tech: Can the human side of engineering be more than a slogan? Will the faculty teach it?

Davenport: The simple answer is yes. The reason I feel that way is that we have a very large department. That means a large number of faculty, and in order to accomplish the kind of thing we're talking about, you need a few faculty to get it started, to do a good enough job so that the faculty as a whole can look at it and get a feeling for what's been done, whether it's been done well (Please turn to page 7)

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