

Female enrolment in engineering an uphill battle

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News Staff

Walk through ETLC and you will see a building full of hard-working students. A close look, however, will show that an overwhelming majority of the students are males. Every year the size of the faculty keeps increasing, but the declining percentage of female engineers has some faculty administrators worried.

Figures from the Faculty of Engineering showed that in 2000 approximately 22.2 per cent of the students enrolled in engineering were females, or about 674 women in a faculty of 3032 students. When compared to 2006, with women making up 20.1 per cent of undergraduates, it would seem that the female engineering population is shrinking. However, according to Ken Porteous, Assistant Dean of Engineering, this isn't so.

"[The year 2000] was when we had the largest relative per cent of women in engineering," Porteous said, adding that it is difficult to determine why the proportion of females is declining and also noting that in 2006 there were 3503 students enrolled in the Faculty of Engineering, of which 703 or 20.1 per cent were female.

"Why there aren't more women in engineering is a very tough question to answer," Porteous said. "There are some disciplines [in engineering] that seem to attract more women than others, for example, chemical, environmental and biomedical engineering. It could be because women enjoy work that sees a more immediate benefit to society."

Although the size of the faculty

may be growing and the number of women enrolled expanding along with it, engineering still seems to be a decidedly less popular option for women than other previously male-dominated faculties such as science, law, medicine or dentistry. Efforts by programs such as WISEST (Women in Scholarship, Engineering, Sciences and Technology) and Discover E don't seem able to counteract the problem, either.

These programs, and many others like them, are aimed at bringing increased numbers of females into the world engineering by presenting them with mentorship and research opportunities. They are also trying to increase awareness with young women about all of the possibilities for a career that engineering can offer.

Despite these initiatives, the gender split remains; however, Janet Elliot, an engineering professor who focuses on thermodynamics at the U of A, said that the year-to-year decline in the percentage of female students in the faculty can be misleading.

"You really can't look at it over a one- or two- or three-year window ... it's generally over decades that it's increasing," she said. "The general trend is increasing numbers of women."

Elliot added that every generation sees a rise in the number of women in high-level teaching and professional positions in the field, which in turn can make potential female students more aware of the field as an option.

Mary-Ellen Compton, Director of the Discover E program at the University, says that the problem stems from limited awareness, as



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NO MORE GLASS CEILING Thermodynamics prof Janet Elliot says women are now encouraged to pursue engineering.

well as the negative perception of engineers that some women may have. She also said that women could be self-selecting themselves out of the program.

"If you go back a few years, there were a number of programs that were male-dominated, such as medicine, dentistry, law and engineering. I think it is taking a while for engineering to catch up," Compton said.

"Women need to know that they are every bit as capable as their male counterparts of doing the work [involved in getting an engineering degree]. I think girls tend to underestimate their abilities in math and science, even though they are every bit as capable in those areas, whether

it's because of perception or old stereotypes," she added.

Elliot agreed that social pressures can prevent women from choosing a career in engineering, but that within the faculty, there are few obstacles.

"Math and science are gender neutral. You either like solving problems with [them,] or you don't," she said. "[In the faculty] I've never reached a barrier or had a problem just because I was a female."

First-year engineering student Gillian Allen says that her choice to go into engineering was all her own, not having any relatives in engineering.

"I went into engineering because the faculty was offering scholarships," Allen said. "The fact that I would

be done in four years and out there making money already was attractive. It's just that I'm pretty much guaranteed a job right now because engineers are in high demand, but [engineering] was never like a dream of mine."

She also feels that for some women the male-female dynamic may be a bit hard to handle at times and could deter females from the program.

"I was sitting and looking at the people in class the other day and there were like five guys for every one girl in the class, so that's kinda brutal because the guys are all dorks. [It doesn't get intimidating for me] but I can see how it might be for some of the other girls," Allen said with a laugh.

With files from Scott Lilwall

GFC COMMITTEES: STUDENTS NEEDED

The terms of office for students serving on **General Faculties Council (GFC)** Standing Committees and Appeal Boards and committees to which GFC elects members will expire on April 30, 2007. Undergraduate and graduate students (except as noted) are encouraged to apply now to serve on any of the following committees for terms of office beginning May 1, 2007, and ending April 30, 2008. (Some students currently serving on these committees may be seeking re-election to serve additional terms.)

Committee	Student Vacancies	Meeting Times
ACADEMIC PLANNING COMMITTEE (APC): GFC's senior committee dealing with academic, financial and planning issues.	ONE undergraduate & ONE graduate	2:00 pm/2nd & 4th Wednesdays
ACADEMIC STANDARDS COMMITTEE (ASC): GFC committee dealing with admissions, academic standing, transfer and examination policies and other related issues.	ONE undergraduate	9:00 am/3rd Thursday
CAMPUS LAW REVIEW COMMITTEE (CLRC): Reviews Code of Student Behaviour, Code of Applicant Behaviour and Residence Community Standards.	TWO STUDENTS (undergraduate and/or graduate)	9:30 am/4th Thursday
COMMITTEE ON THE LEARNING ENVIRONMENT (CLE): Promotes an optimal learning environment in alignment with guiding documents of the University of Alberta.	ONE undergraduate & ONE graduate	2:00 pm/1st Wednesday
FACILITIES DEVELOPMENT COMMITTEE (FDC): Recommends on planning and use of facilities, proposed buildings and parking and transportation facilities.	ONE undergraduate	9:00 am/3rd Friday
UNDERGRADUATE AWARDS AND SCHOLARSHIP COMMITTEE (UASC): Approves new awards for undergraduate students including selection and eligibility criteria.	TWO undergraduates	2:00 pm/2nd Tuesday in October, January, March and June
UNIVERSITY TEACHING AWARDS COMMITTEE (UTAC): Adjudicates the Rutherford Award for Excellence in Undergraduate Teaching, the William Hardy Alexander Award for Excellence in Undergraduate Teaching, and the Teaching Unit Award.	TWO undergraduates & ONE graduate	Normally three times a year (October, March and May)
ACADEMIC APPEALS COMMITTEE (AAC) / UNIVERSITY APPEAL BOARD (UAB): AAC hears and decides appeals regarding academic standing. UAB hears and decides appeals regarding disciplinary decisions of the Discipline Officer and/or Dean as made under the Code of Student Behaviour.	AAC: THREE undergraduates & TWO graduates UAB: NINE undergraduates & FOUR graduates	Hearings are normally scheduled from 4:30 pm onward and last from 3-5 hours. Student members normally participate in 1-3 hearings in a calendar year, therefore some evening flexibility over the calendar year is needed (including summer months). Training is provided.
COUNCIL ON STUDENT AFFAIRS (COSA): The aim of the Council is the betterment of the quality of student life at the University of Alberta.	ONE undergraduate & ONE graduate	Afternoons/normally 3rd Monday (September to March)

Application forms and committee information are available on the University Governance website: <http://www.uofaweb.ualberta.ca/secretariat/>, or in Room 2-5 University Hall. Applications should be completed and returned to the University Governance by **Wednesday, March 7, 2007**. For information regarding committee membership and terms of reference, students are invited to contact: Ms Vanessa Ogilvy, Secretary to the GFC Nominating Committee (NC), at 492-4715, or by e-mail: vanessa.ogilvy@ualberta.ca.

NOTE: There is ONE STUDENT VACANCY on the GFC EXECUTIVE COMMITTEE for an undergraduate student who is a GFC member. Expressions of interest should be directed to Mr. Garry Bodnar, (garry.bodnar@ualberta.ca) Secretary to the GFC Replenishment Committee, University Governance.

STUDENT AWARDS

SANDY MACTAGGART AWARD

The Sandy Mactaggart Award was created to honor Sandy A Mactaggart for his many contributions to the University of Alberta.

This award provides an opportunity for undergraduate and graduate students to receive up to \$25,000 to study in the Orient for one year as part of a University of Alberta degree.

Application forms are available on the Student Awards website at www.registrar.ualberta.ca/awards.

Deadline for receipt of applications in the Students Awards Office is **01 March 2007**.

FOR ADDITIONAL INFORMATION ON UNIVERSITY OF ALBERTA SCHOLARSHIPS, PLEASE VISIT www.registrar.ualberta.ca/awards

