

By SIMRIT KAUR

WHAT constitutes a good education in engineering? Prof Brian Tuck believes that it's about obtaining training that helps students solve real problems, not just pass examinations.

The University of Nottingham in Malaysia (UNiM) academic says that the trouble is that many education institutions focus their efforts on the latter, instead of concentrating on the former.

"Creativity and independence of thought need to be developed. Engineering is not about passing exams and obtaining a piece of paper, it's about how you approach problems," he says.

This is a subject that Prof Tuck believes strongly in as he feels that it's a responsibility that many education institutions have abrogated.

"Engineering is a creative profession. If you talk to any employer they will tell you that new engineers don't know how to approach new problems as they haven't seen them before."

Prof Tuck, who is head of the Engineering Division at UNiM, will be a panellist in a talk about Engineering to be held in conjunction with *Star Education Fair 2003* on Jan 11 and 12 at the Putra World Trade Centre in Kuala Lumpur. The talk will be held from 3.45pm to 5.15pm at Bilik Redang on Jan 12.

Star Education Fair 2003 will also be held in Penang, from Feb 21 to 23, at the Penang International Sports Arena.

Prof Tuck adds that students and parents should look for courses where students are engaged in open-ended tasks where "there is not one answer but many answers and a good engineer chooses which is the most appropriate based on the facilities, money, etc available."

This is a method employed at UNiM. "We give them tasks which they have not done before. We don't show them how to do it as we believe that through doing it they will develop a belief in themselves and a deeper understanding of the subject. Even if they fail the task they would have learnt something in the process."

But how do you find the right institution? Certainly not by reading advertisements, Prof Tuck says. "They all say the same thing. The best way is to visit the place and talk to people who teach the course."

At a time when a degree is almost the norm, its value will be on how well those with a degree, like engineers, are able to do their jobs.

"What's the point of having a degree if you can't do the job? The degree will only get you

What makes a good engineer



FIELD WORK. Few women do civil and mechanical engineering because of on-site visits; they opt for electrical and electronic engineering.

through the door, it can't do the job for you. Having a degree is no longer the meal ticket it used to be."

Another panellist, Inti College Malaysia's Benny Lee, will talk on the many branches of engineering and the ones that are currently "hot".

Among the specialisations offered by education institutions are electrical and electronic, mechatronics, mechanical, civil, materials, chemical, computer and construction engineering.

Most of the 3+0 courses offered by private institutions are in electrical and electronic engineering as mechanical and civil engineering require more capital outlay.

"At one time electrical and electronic engineering was the most popular but with the

economic slowdown, interest has decreased."

Lee adds that a popular specialisation now is mechatronics, which he describes as a hybrid of mechanical, computer and electronic engineering.

"The market for electrical and electronic engineering is quite saturated.

"More students are opting for mechatronics because of better career prospects, especially with increasing automation in manufacturing, including car assembly," says the assistant head of engineering programmes (university foundation and pre-diploma).

On the popularity of engineering among women, Lee says that more women opt for electrical and electronic engineering.

"Very few choose civil and mechanical engineering perhaps because of the nature of

the job as they have to go to the site very often."

He adds that at Inti the ratio of men to women is 65:35.

The Institution of Engineers Malaysia (IEM) will also be sending a representative who will talk about recognition of engineering qualifications.

Other than engineering, there will also be panel discussions on information and communication technology, medicine and medical sciences, design and media studies and professional programmes.

Yow Lop Siew will talk on *Options after SPM*, while Dr Mohd Talha Alithamby's talk is entitled *Directions in Higher Education*.

Look out for the times and venues for these sessions in *The Star*.

