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Teaching Entrepreneurship to Engineering
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Examples of Initiatives to Engender an
Entrepreneurial Culture in the Faculty of
Engineering at the University of Sydney

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EXAMPLES OF INITIATIVES TO ENGENDER AN ENTREPRENEURIAL CULTURE IN THE FACULTY OF ENGINEERING AT THE UNIVERSITY OF SYDNEY

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Abstract

The Faculty of Engineering at Sydney University is a traditional research intensive faculty comprising four schools; Aerospace; Mechanical and Mechatronics Engineering; Chemical Engineering; Civil Engineering and Electrical and Information Engineering. As part of the world-wide trend to broaden Engineering education we have been working hard to ensure our graduates are well skilled in generic attributes such as leadership; communication and teamwork with particular emphasis on improving the 1st year experience. At the same time we are trying to instil an entrepreneurial culture into our faculty both at undergraduate and postgraduate levels. To this end two specific programs have been introduced to the freshman course at Sydney University.

The Aircraft Design and Build program involves freshmen working in groups to construct a flying aeroplane. The aircraft is a two-seater Jabiru which we purchase in kit form. The students then do the construction under appropriate supervision and subject to Civil Aviation inspections. The completed aircraft is then sold commercially at a small profit. The students see the completion of their own work; have the opportunity to fly in the completed aircraft and witness first-hand the ability of a traditional research academic entity to earn profit from its teaching programs.

The other 'entrepreneurial' program is the Advanced Engineering Program in which high-achieving school leavers are invited to substitute (in the freshman year) 1st semester Maths and Physics with an interdisciplinary project. The students are placed in multi-discipline groups; given \$5000; an academic mentor; an idea and asked to make the product by the end of Semester 1. They are then required to demonstrate their products to the general public at our University Open Day. recent projects include a Directional Hearing Aid; A digital Canary; A mars Space Helmet and An Internet Controlled Robot.

The paper will describe these initiatives and how the Advanced Engineering Program is followed through in Years 2,3 and 4 with projects involving Business Planning; Community service and Integrated Design.