# Academic Credit and Careers Education for Engineering and Surveying Students

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Final and authorised version first published in the *Australian Journal of Career Development* in 9(2), published by the Australian Council for Educational Research. 

## Abstract

Research has indicated the potential of career education for academic credit at university. This case study describes how a university careers service integrated careers education workshops into the academic curriculum of an engineering and surveying faculty. Workshops on Job Skills and Career Transition were presented to 118 undergraduate students. Participants completed assignments for academic credit. These were 'marked' by career counsellors and follow-up careers counselling was provided to interested individuals. This pilot project confirms the utility of curriculum-integrated career education. Implications for career education across an entire undergraduate degree course and on-line education are raised.


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# Academic Credit and Careers Education for Engineering and Surveying Students

Curriculum-based career education programs have been a widely utilised approach to career development for young adolescents in secondary schools. Pena (1997) has raised the issue of career education in relation to preparing tertiary students for the workplace. Given the truism that academic course content is not the only factor underpinning career development, it would seem pertinent to prepare graduates for the employment market by training them in core non-academic work skills. However, Australian universities have not taken up curriculum-based career education to the same extent as the secondary sector.

Literature from North America has shown somewhat different experiences of their higher education. Crozier (1998) has indicated the utility of implementing a career-planning course into the undergraduate program with the added incentive of academic credit. Crozier's program focused on career development, higher education, and life transition. Evaluation by the participants provided a strong indication of its personal value. There have been other North American studies of course-integrated careers counselling for students with disabilities (Thompson, 1994), and business and accounting students (Brooks, 1995).

Graham (1999) has challenged the Australian higher education sector by arguing the case for inclusion of career development and practical experience into the curriculum of engineering students. Graham has set out a proposed program that spans the four-year Bachelor of Engineering course. The career development modules addressed: work skills and transition skills in year one; self-awareness, opportunity awareness in year two;

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decision making skills and transition skills in year three; and all five components again in year four. Graham suggested that such a curriculum could be integrated with the professional studies required for accreditation by a governing professional body, in this case, the Institute of Engineers Australia (IEAust, 1997).

The Careers Service of the University of Southern Queensland has recognised the importance of preparing its graduates for the employment market. The Careers Service has given workshops on work skills for a number of years (eg, resume preparation, job search). However, these workshops have not been associated with the curriculum of any faculty. In an attempt to enhance the delivery of services to students, the Careers Service provided curriculum-integrated career education for academic credit. We have described some of the issues encountered during implementation of the program.

## Background Issues

Service Utilisation. A review of Careers Service data over two years revealed that students from the Faculty of Engineering and Surveying had consistently lower attendance for careers counselling than students of any other Faculty.

Organisational Issues. Graham (1999) has demonstrated the utility of career development programs within curricula as a vehicle to raise the profile of careers counselling within the university setting. Moreover, Conger (1995) has argued that a mark of quality of a careers service is its ability to work with third parties. Hence, the Careers Service had to solve social and political matters within the university campus in order to gain access to the engineering students. In this case the Faculty of Engineering and Surveying had invited a university's Personnel Department to conduct workshops on

career development. The Careers Service argued that its brief was to serve students whereas the Personnel Department was to serve university staff. This was an issue of professional demarcation that required careful resolution. The Faculty revised its invitation when this argument was put forward by the Careers Service.

## The Program

The Students. The program involved 118 engineering and surveying students enrolled in their penultimate year. Of the 118 students, 40 were professionals working in fields related to their part-time study or were full-time with significant career experience. The remaining were full-time students without significant experience.

The Unit. All participants were enrolled in Professional Practice 1, the first core unit of two common to all majors within the degree course. This unit had as its foci those 'non-technical', professional matters that were independent of discipline knowledge. In addition to course work, the unit involved seminars and workshops in which students would be exposed to current engineering and surveying practice. Students had an array of workshops from which to choose. The Careers Service conducted workshops on Job Skills and Career Transition.

Job Skills Workshop. This workshop was conducted twice due to the large number of participants. Approximately forty students attended each session. The content of the workshop focused on self-assessment, market assessment, writing covering letters, resumes, and selection criteria, and performance at job interviews. Each workshop ran for four hours.

Career Transition Workshop. This workshop was open to those who were working in the field or who had significant experience, and who were attempting to change their career through study. The content focused on phases of career development, options for transition, awareness of self, stress and health management, personal skills, job and role analysis (Schein, 1995), networking, mentorship, office politics, further training, and job search skills. A considerable proportion of this material was taken from a professional development course offered by the University of Southern Queensland in external mode (Gibson, 1997). This workshop also ran for four hours.

Academic Credit. Participation in each workshop was assessed for academic credit. Each student was required to submit an assignment weighted at five percent of the total assessment for the unit. The Faculty set assignment weighting. Participants of the Job Skills workshop wrote their own resume. Those involved in the Career Transition workshop completed a strategic analysis of their current or a past job and roles of that job, based on the model offered by Schein (1995). Their assignments were submitted to the facilitators who reviewed, 'marked', and returned the work with feedback. The marking was based on a pass-fail system.

Follow-up Counselling. Participants were invited to attend individual careers counselling to discuss any matters raised in the workshops or to seek assistance in completing their assignments.

## Outcome

All students passed and received five- percent credit for their assignments. Students were encouraged to provide feedback throughout the workshops. The majority

of feedback from the students was suggestive of a positive learning experience. Nevertheless, a small number of students were critical of having to complete work they perceived as irrelevant to their professional training. We were unable to gain precise detail of their criticism. Feedback from academic staff was positive and the Faculty requested that the workshops be conducted again in the following academic year.

## Conclusion

Graham's (1999) suggestion that career development be integrated into the curriculum throughout the degree course, rather than the penultimate year, needs serious consideration given that a large amount of material was presented in short space of time in this program. However, the human resources required for such a project, especially across multiple faculties would be considerable. Furthermore, the faculties and departments would have to find appropriate locations within their units to insert a careers education program.

This pilot program provides evidence that careers education for academic credit is a viable and useful practice. Integration into the curriculum secures an opportunity to gain access to students, who for myriad reasons would not have benefited from careers counselling services. Success with this Faculty indicates the potential for others, especially for those with graduates of relatively lower employment rates (eg, humanities). However, we need to heed the feedback from students who believed that such training was irrelevant to their careers. Do we need to improve our product (viz. career education) or do we need to market it better?

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