Graduate Attributes Challenge Written Report

Science Faculty

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Southern IML Pathology, subset of Sonic Healthcare, is the largest private pathology lab servicing the Illawarra and south coast with more than 300 staff members throughout labs and collection centres stretching from Wollongong to Nowra. They provide 24 hour service, and same day turnaround on a comprehensive range of routine and specialist tests, including spirometry, ECG, Holter monitoring and venesection.

Elizabeth Macarthur Agricultural Institute (EMAI) is the largest division of NSW Agriculture. It employs a staff of over 200 and is involved in diagnosis, control and prevention of animal and plant diseases, minimising the wastage of natural resources and improvement of Australian agriculture through research.

The most important attributes outlined by employees in this field were teamwork, communication skills, problem solving, independence and continued learning, safety and ethical awareness.

Teamwork was stressed in the interviews as one of the most important attributes of graduates joining their profession. In a laboratory environment, employees are required to work individually, but also to contribute as a team to achieve the desired outcome, and thus, teamwork is a major focus of continual development and promotion within and between functional areas or departments.

The graduate attributes state that UOW graduates have a capacity for, and understanding of, teamwork. Students in the science faculty experience teamwork and develop critical skills through the assessment of group tasks, involvement in practical classes and many extracurricular programs offered by the university.

Student graduates are able to interact with individuals and with groups, have developed and are able to implement leadership skills in a group situation, understand and accept the opinions and needs of others in a group through compromise and negotiation, and effectively offer and receive criticism, argument and encouragement from team members.

The ability to communicate effectively is another attribute required by any employer, as it is with Southern IML and EMAI. The process of recruitment requires successful written communication in the form of application forms and/or responding to selection criteria, followed by an interview, displaying oral communication to the employers.

Within the pathology workplace at Southern IML it is necessary to communicate, orally in particular, with colleagues, department heads, and with collection centres and doctors around the Illawarra. At EMAI both oral and written communication are extremely important in conveying information between colleagues and to clients and the public.

Self-confidence combined with oral and written communication skills of a high level is a key graduate attribute developed throughout a UOW degree. Academic literacy is the combination of reading, critical analysis, listening, written and oral presentation within a discipline. It requires an understanding of this discipline, which has accepted conventions and methods of data acquisition, critical analysis, argument and presentation or communication of information, and the expectations of the discipline. Through increasing complex use of spoken and written language within each discipline, academic literacy is developed, along with the essential oral and written communication skills for the workplace.

Increasing difficulty and depth or assignments, both oral and written ensure continued and improved development of essential communication skill throughout the degree. For example, a first year student may be assessed on a 5-minute presentation in a tutorial situation, while a final year, or honours student presents a 20-minute seminar to the class, faculty or other academics within the discipline.

The development of profession practices as a tertiary literacy and graduate attribute is critical to the transfer from university study to the workplace. Both companies interviewed expressed the importance of applying knowledge in their discipline into practical and professional instances.

These are attained at UOW through a four step learning process involving
1) Acquiring and understanding knowledge;
2) Putting knowledge into practice;
3) Testing knowledge and practice against personal orientations; and
4) Creating new knowledge and practice.

In the science faculty in particular, these skills are gained through the involvement in practical classes, performing procedures to strengthen knowledge, and critically analyzing the usefulness of this knowledge. This is also attained with participation and involvement in research in the discipline, generally available as a third year subject, honors program or post graduate degree, as well as other supplementary activities offered by the careers service and the university, such as EEP and work placement programs.

At the conclusion of a science degree, graduates are able to match needs and knowledge to resources and to understand the implications and applications of the knowledge, as stated in the graduate attributes. These skills are vital in the workplace and in the management of a professional career.

In the Southern IML pathology laboratory, human samples of various natures are subject to testing and analysis to identify possible disease and abnormalities in the health of patients in the Illawarra. At EMAI, critical agricultural research is performed alongside pathological testing of plant and animal specimens for individuals, and for organizations. It is of critical importance, therefore, in both these environments that the highest level of privacy is maintained at all times.

A breech of confidentiality can result in instant and automatic dismissal from the company, which stresses the importance of this issue. Just as a doctor cannot discuss a

patient with another person, so too, a pathologist, scientific, or any other employee at a pathology, or agricultural lab cannot disclose this private information about individuals or organizations.

The second graduate attribute of UOW graduates touches on the ethical implications and practices in the discipline, for which confidentiality would fall. The issue of privacy in the workplace is generally not dealt with at university unless research is conducted as part of the course and involves human subjects. It may also be explored through participation in work placement or work experience

The key attribute EMAI reported to be lacking in graduates was the depth of knowledge and understanding of Code of Practices and safety issues.

Knives, corrosive chemicals, biological hazards and carcinogens are just some of the dangers employees are exposed to when working in a laboratory. The safety of employees and safety within the lab surrounding these hazards is a crucial and ongoing challenge for employers to provide the safest possible workplace.

Occupational Health and Safety practices are in place within the lab, regularly monitored and updated, to ensure the safest environment for employees. Codes of practice dictate the way in which research and testing is performed in laboratories, including the use of living animals, and hazardous materials.

The graduate attributes state that UOW graduates understand and apply, practically, relevant OHS legislation and guidelines in the workplace. These are gained, in the science faculty, through involvement, and attendance in practical classes in various subjects throughout the degree.

In some subject instances, more safety issues and COP are encountered and utilised, possibly leading to a difference in the understanding and application of OHS and COP between graduates choosing different degrees, specialisations or courses.

Recognising and finding solutions for problems is a key attribute sought by employers. In a situation where an issue is causing problems or concern, finding a solution in an appropriate timeframe is vital for smooth running of a laboratory.

When seeking the answer to problems arising in the laboratory it is often useful to communicate the issue with colleagues, as they may have experience with the problem or may too be suffering with it, and a solution is more easily found. In some cases the solution to a problem may lead to change in the procedures and techniques used in the laboratory to better service the community.
Graduate Attributes 5 and 8 outline the abilities and strengths of acquired in the area of problem solving. Students are able to logically evaluate, identify, respond to and devise solutions to problems in situations clearly evident as well as those requiring critical thinking, and in doing so, understand and identify ethical implications.

Through assessment, tutorials, exams and practical classes, problems arising in the particular discipline are evaluated, discussed and in some cases answered, leading to attainment of this graduate attribute important in the workplace and in everyday life.

Along with recognising and finding solutions to problems, taking personal responsibility, where necessary, is imperative to the workplace. It is also essential to take individual responsibility for your own work, that is, being able to work independently and confidently when required.

Knowing, too, your individual responsibilities and duties, as they fit into the whole scheme of the workplace is imperative to completing your duties and successful running of the workplace.

Graduate applicants acknowledge and accept individual responsibilities and obligations. They can implement and understand relevant OHS legislation in the workplace, thus taking responsibility for their own safety, and are able to perform as an individual within a team situation, such as the workplace. Working in groups in lab classes, and other group assessments throughout the course of study, graduates learn to accept their individual duties when working within a team, in order to reach a desired goal or outcome. Individual responsibility for problems is learnt through

assessment, if mistakes are made, lower grades are awarded, and it is the responsibility of the student to rectify and learn from the mistakes.

Learning is a continuous process from birth to death, as it is in the workplace. Learning from personal experiences, as well as situations and problems arising in the laboratory is a valued attribute for employment in Southern IML and EMAI.

This is encouraged throughout the workplace through scholarships to study at university, seminars and conferences and readily available scientific journals in relevant disciplines.

The ability to learn methods, tasks and responsibilities within the lab quickly is highly valued, as training new recruits is an expensive venture. It is also important to be able to not only identify mistakes and problems, as identified above, but also to learn from them to reduce the future incidence or to create new protocol.

Graduates as part of the tertiary literacies policy develop academic and information literacy, in particular, to expand and strengthen this attribute. The first graduate attribute states the ability and commitment to continued and independent learning and intellectual development.

This is the epitome of the any university degree, to learn and develop intellectually. Through increasing in difficulty, depth and specialisation of courses from first to final year, observed as increasing subject credit points from 6 to 8 from second to third year of a degree at UOW, increased capacity and continued learning is demonstrated.

Many of the graduate attributes were found in this instance to be relevant and beneficial when considering the employability skills sought by employers at Southern IML and EMAI. These attributes depend on successful completion of the academic degree, as well as personal strengths and development and growth from life and work experiences.

APPENDIX

The process of GAC

After initial meetings and discussion of possible companies to approach and interview we decided on one agricultural laboratory and a pathology laboratory.
A list of questions was devised, with the help of books on employability skills, to ask employers in the interview.[included below]
Employers were contacted in the second week of GAC and interviews were arranged. The questions were posed, and employers were given a copy of the graduate attribute to help identify the skills and comment on the relevance of the attributes to their company.
A meeting was held after all the interviews to discuss and combine the results for analysis and presentation. Each participant decided on a presentation style to complete and regular meeting in the third week ensured full understanding of the employer interviews and major points made for all participants.

QUESTIONS ASKED OF EMPLOYERS

1) How many of the following groups does your organisation/company recruit each year on average? (approx.)

- undergraduate trainees
- graduates with little or no experience
- graduates with more than one years work experience

2) What are the benefits to your organisation/company of employing graduates as opposed to non-graduates?

☐ Able to learn ☐ More independent
☐ Professionally qualified ☐ Better analytical ability
☐ Achievement orientated ☐ Current knowledge in field
☐ More innovative ☐ Other (state)_____

OTHER NOTES:

3) What are your selection criteria for new graduates?

☐ Academic results ☐ Willingness to learn

☐ Presentation skills ☐ Flexibility/ adaptability

☐ Initiative ☐ Achievement orientated

☐ Oral communication skills ☐ Analytical ability

☐ Able to work in a team ☐ Enthusiasm

☐ Relevant work experience ☐ Written communication skills

☐ Other _____

OTHER NOTES:

4) Does your company have a structured development program for your new graduates?

5) What are the differences between a successful and an unsuccessful candidate?

☐ Flexibility/ adaptability ☐ Willingness to learn

☐ Presentation at interview ☐ Academic results

☐ Initiative ☐ Leadership potential

☐ Specific desired skills or qualifications to that particular workplace state_____

☐ Enthusiasm ☐ other

OTHER NOTES:

6) Is work experience/work history important to you when considering employing a graduate?

How can this be obtained?

7) What areas do you aim to develop the new graduates during their first year of employment?

☐ Knowledge of organisation ☐ written communication skills

☐ Oral communication skills ☐ self management skills

☐ Other

OTHER NOTES:

8) What desirable skills and areas of knowledge are currently lacking in new graduates?

9) How long would new graduates remain with your company after completing the initial year/graduate program?

10) What is a common path of new graduates? (return to study, another company, move within company etc.)