

## **Faculty of Pharmacy**

### **Teaching and Learning Plan 2006: Report of Achievements**

#### **Context**

The Faculty of Pharmacy was established on January 1, 2000 as the eighteenth Faculty of the University of Sydney. It is located within the Faculties of Health, and offers a range of undergraduate and postgraduate coursework and research degrees. The 4-year Bachelor of Pharmacy and Bachelor of Pharmacy (Rural) Degrees and the 2 year Master of Pharmacy lead to registration as Pharmacist. In addition the faculty also offers post-graduate courses in Herbal Medicines.

The Faculty Teaching and Learning Plan has been designed to articulate with the University Strategic Plan, and should be considered within the context of the relevant goals and values described in this Plan. Responsibility for review of the Faculty Plan, and evaluation of progress in the implementation of strategies and achievement of performance measures, lies jointly with the Learning and Teaching Committee, chaired by the Associate Dean (Undergraduate); the Programs Committee, chaired by the Associate Dean (Admissions and Administration); and the Pharmacy Education Unit, PEU (Director, Associate Professor Greg Ryan).

The Learning and Teaching Committee is responsible for issues relating to learning and teaching at both undergraduate and postgraduate levels, and the Programs Committee is responsible for administrative and organisational aspects. Associate Professor Greg Ryan is a member of both committees. The Pharmacy Education Unit is responsible for initiating and managing a process of curriculum review, conducting pharmacy education research, guiding the Faculty's use of educational technology, and implementing a professional development program in education for Faculty staff.

#### **Objective 1: Strengthen Undergraduate Programs**

##### *1.1 Review the existing undergraduate programs and ensure that all courses exceed relevant University standards and that content meets the needs of contemporary pharmacists.*

Review of the existing undergraduate programs commenced in 2006 with the formation of a curriculum review planning group. The planning group consists of two members of staff from each of the three disciplines, the Associate Dean (Undergraduate) and the Director of the PEU. As a result of extensive consultation with all stakeholders, including staff, students and members of the profession and professional bodies, the planning group has developed a new BPharm curriculum structure to be implemented in 2008. The new curriculum is designed to produce graduates who will be

- (a) equipped with the knowledge, skills and behaviours which, with relevant additional experience, will enable them to become leading practitioners in any area of pharmacy and pharmaceutical sciences; and
- (b) able to assume prominent roles in all aspects of the pharmacy profession, and who are able to provide leadership in the incorporation of both established and innovative cognitive services and evidence-based practice.

The restructured BPharm curriculum is also designed to meet the demands of the changing Pharmacy profession, with key features including:

- graduate attributes benchmarked against national and international standards
- constructive alignment – learning outcomes aligned with learning activities, aligned with assessment tasks
- spiral construction – demonstrating both vertical and horizontal integration
- detailed learning outcomes describing knowledge, skills and behavioural milestones to be achieved each year and by the time of graduation
- outcomes clustered under four curriculum themes:
  - Basic and Pharmaceutical Sciences
  - Professional Practice in Pharmacy
  - Personal and Professional Development
  - Society and Pharmacist
- greater emphasis on integrated learning rather than a discipline-based approach
- focus in early years on sciences, with increasing emphasis on practice in later years
- greater flexibility in the final year to allow students to undertake majors in rural or industrial pharmacy, participate in university exchange programs.

Major developments in years one and two include a more systematic introduction to professional and interprofessional issues; integration of mathematics where its application to pharmacy will be more apparent to students; and the restructuring of biology, molecular biology and genetics - to incorporate the future role of genomics in health care and to provide a platform for teaching pharmacogenomics. Integrated learning of anatomy, biochemistry, physiology, pharmacology and medicinal chemistry will also be promoted through the strategic use of cases, scenarios, problems and issues.

Years three and four emphasise the integration of pharmaceutical sciences and pharmacy practice. Greater opportunity is provided for integration, based predominantly around body systems and problem/case based learning. Opportunities are expanded for final year students to undertake research internationally and/or in an industrial laboratory, or to experience extended rural or international professional practice. The new curriculum also provides opportunities for students to participate in inter-professional learning activities that are being developed with other health Faculties, including Medicine and Nursing.

*1.2 Enhance the teaching skills of staff involved in delivering undergraduate programs, through participation in professional-development activities, mentorship of junior teaching staff, and the introduction of mechanisms for monitoring and improving the quality of teaching*

Strong support and encouragement including teaching relief, has continued for staff undertaking the Graduate Certificate in Higher Education with ITL. To date, 15 Pharmacy academics have successfully completed the program, with 3 further staff enrolled in 2007. Faculty staff also act as mentors in the Graduate Certificate program.

A more systematic, evidence-based approach has been taken to professional development of Faculty staff, through the launch of the 'Pharmacy Education Development Series', details of which are located at: [http://www.pharm.usyd.edu.au/peu/upcoming\\_events.shtml](http://www.pharm.usyd.edu.au/peu/upcoming_events.shtml) . The series will contribute significantly to the professional development of Faculty staff, for example a workshop on the writing of effective MCQ's was held in April 2007. Underway since February 2007, it aims to promote excellence in Pharmacy learning and teaching through workshops,

conferences, seminars and graduate study, many of which are facilitated by Pharmacy staff, and others by members of the broader University community.

Alongside this curriculum re-development, the PEU has commenced a comprehensive review of the quantitative and qualitative learning and teaching evaluation data that was gathered during 2006, when all units of study were evaluated (2006 was the first full year of implementation of a standardized 6 credit point UoS system across the existing curricula and provided an opportunity to establish a baseline performance standard prior to implementing the new BPharm curriculum in 2008.) The evaluation report will guide the Faculty in addressing learning and teaching issues, and will lead to the commencement of two major, related projects commencing in 2007:

- *Review and Report of Assessment Practices (commenced 2007)*
- *Review and Report of Unit of Study Student Workload (planned for 2007/08)*

*1.3 Improve the experience and satisfaction of students taking undergraduate programs by structuring teaching programs and administrative procedures to give students more flexibility.*

During 2006 the Faculty's use of WebCT was reviewed by the PEU to ensure that maximal gain could be made of the added functionality available in WebCT CE6. The Faculty's unit of study syllabus template and WebCT sites were re-designed to ensure increased user friendliness and ease of use for both staff and students.

The Faculty and PEU carried out a number of trials of educational technology during 2006 including:

- online delivery of lectures, in several different file formats
- online PBL delivery for BPharm(Rural) groups in Broken Hill and Lismore
- contributed to University-wide trial of Camtasia lecture-capturing software
- increased use of online forms for student submissions

A TIES grant for the development of digital videos to promote blended learning in practical class teaching was submitted in 2006. This grant was successful and production of the videos will be undertaken in 2007.

In conjunction with Sydney University Pharmacy Association (SUPA) the Faculty trialled a peer mentoring program for first year students. This program was based on the successful program run in the Faculty of Economics and Business. Mentors were trained by Della Aynsley a Staff Development and Training Coordinator with the University of Sydney Library. Evaluation of the program by surveying both mentors and mentorees indicated that although participants enjoyed the program the mentorees did not feel that they had gained substantially through participation in the program. However a need for a student liaison officer (SLO) particularly for country and international students was identified. A SUPA member was identified as SLO and the support mechanism promoted to first year students during O-week 2007.

A review of the Talented Students Program (TSP) was undertaken during semester 1 2006 and the revised program implemented in semester 2 2006. Students involved in the program have taken part in a range of activities including vacation industrial and hospital placements and summer vacation research projects.

In 2006, a Teaching Improvement Fund (TIF) Grant, awarded to Dr Daniela Traini and other staff in the Faculty to develop links with local pharmaceutical industry allowing Talented, 2<sup>nd</sup> and 3<sup>rd</sup>

year BPharm students to undertake extended (4 week minimum, 8 weeks maximum) vacation placements with participating pharmaceutical companies. In line with the Faculty's primary educational aim of producing graduates well prepared for participation in a wide range of activities within the industry for a project allow students to develop a greater awareness of the scope and complexity of the industry as well as providing important exposure to practical applications and industry trends. Feedback from both participating companies and students was overwhelmingly positive.

In semester 2, 2006, the Faculty implemented an "At Risk" program for students. Students asked to meet with the Associate Dean, during the meeting problems that the student may be experiencing were explored and students received information about University resources e.g. learning centre and counseling service, to assist them in a successful outcome. The Faculty of Pharmacy is also taking part in the trial of the University "At Risk" program which was implemented late in 2006. The Faculty assisted in the development of the "at risk" criteria and testing of the FlexSiS implementation.

#### *1.4 Support increased enrolment in undergraduate programs by meritorious students from disadvantaged backgrounds, especially Indigenous students, and those from rural Australia.*

Prof Jo-anne Brien Associate Dean (Programs) and Dr Jane Hanrahan Associate Dean (Undergraduate) initiated discussions between the Faculty of Pharmacy and the acting director of the Koori centre in 2006, exploring ways of attracting indigenous students to Pharmacy. Suggestions included the Faculty providing information leaflets to the Koori centre for their school outreach program. The Faculty is currently developing a Pharmacy summer school for indigenous school students based on the successful Koori Engineering summer school run at the University of New South Wales.

The Faculty will continue to offer entry to students from rural areas under the Rural admission scheme for students who have attended a rural high school in the last four years of their education. Applicants who qualify for consideration under this scheme may be able to gain entry into the Bachelor of Pharmacy with a UAI of up to five points lower than the standard UAI.

### **Objective 2: Strengthen graduate-entry programs**

#### *2.1 Consolidate newly-introduced graduate-entry coursework programs in the Faculty of Pharmacy.*

As required by the Academic Board for all new degree programs MPharm program underwent a full review in 2006. Members of the review panel included Dr Jane Hanrahan (Chair), Associate Dean (UG), Dr Mary Collins (co-Chair), Associate Dean (PG) Rebecca Hung, MPharm Graduate, A/Professor Chris Maher, Faculty of Health Sciences, Dr Sean McAteer, Pharmacy Practice Discipline, Gerry McInerney, Pharmacy Board of NSW, A/Professor Greg Ryan, Pharmacy Education Unit, Professor Nerida Smith, Griffith University and Dr Daniela Traini, MPharm Co-ordinator.

In light of the University's move to a 6 credit point system, many changes to the MPharm were implemented in 2006. This has also taken into consideration feedback from the first cohort of students and the observations and experiences of Faculty staff involved in the program. These changes have addressed workload, parallel teaching with the Bachelor of Pharmacy (BPharm)

and timetabling issues. In terms of content, an advanced Pharmacology unit of study has been introduced to replace the elective unit, which it was felt, was not offering students a wide enough range of units from other postgraduate coursework programs to select from. The most recent set of data and feedback from the Unit of Study Evaluation Questionnaires has been extremely positive in relation to these changes. The Faculty has continued to use quality assurance measures, such as Unit of Study Evaluation Questionnaires, SCEQ feedback and Focus Groups. There is now also an MPharm representative on the Faculty Student-Staff Liaison Committee.

*2.2 Improve the experience and satisfaction of students undertaking graduate-entry programs by means of a range of initiatives.*

A series of interactive, online, case-based modules, were developed and trialed in the BPharm(Rural) and MPharm programs during 2006. Further development and refinement of these modules will continue throughout 2007.

*2.3 Develop and implement processes for identifying, selecting and attracting a diverse range of outstanding graduate-entry students locally, nationally and internationally.*

Regular review of the admission process through quality assurance measures indicated that the interviews have not been an effective procedure for selecting the best candidates. For 2007 admission the interview was replaced with shortlisted applicants being asked to complete a Pharmacy Case Study Scenario task. Students were given 30 minutes to provide a short written response to five scenarios. This process was validated on current students in both the BPharm and MPharm program prior to implementation.

In 2006, the Faculty was awarded an additional 10 CSP places for 2007, and received permission for these places to be allocated to the Master of Pharmacy degree. The CSP places were awarded on merit to the highest ranked 10 applicants of the 2007 intake.

A TIES grant received in 2006 will be used to undertake a study of the demographics of MPharm students during 2007. This information will be used in conjunction with data gained on graduate destinations from a survey of graduate employers required as part of the COPRA accreditation process which is required for all new Pharmacy degrees leading to registration. Information on where the MPharm students come from and where they are headed will aid us in our selection processes.

**Objective 3: Improve staff performance, efficiency and satisfaction with regard to teaching**

*3.1 Systematically identify and address staff development needs, particularly in teaching and in management, cultural competency, and use of information and communication technology.*

A number of expanded opportunities for staff development have been provided by the Pharmacy Education Unit. See Section 1.2 for outline of the 'Pharmacy Education Development Series'

A wide range of collaborative learning and teaching projects were undertaken during 2006 and will continue through 2007. These projects have resulted in the development and implementation of a number of new technologies and most will also result in publications for the staff members involved.

- Development of online alternative UoS PBL experience for rural students – pilot project

with students and tutor: on-campus plus two remote sites, this pilot project will be expanded in 2007

- Expansion of flexible-learning opportunities for students by a lectures- online pilot study for PHAR3631. Expertise in the recording and processing of online lectures was gained by staff and the software recommended by Pharmacy was adopted for a University-wide trial
- The use of “new media” in teaching and its effect on student learning. This project will trial the use of a blog in place of a reflective diary assignment.
- In collaboration with the Faculty of Nursing a Flexible Online Learning Team grant (totalling 300 hours of developer time) has been obtained for the development of a PBL template that provides a tool for flexible delivery of PBL cases and an environment in which students are encouraged to develop their own PBL cases

Faculty discussion of potential new projects for 2007 grant applications is currently underway.

Support mechanisms for our current use of WebCT for course delivery have been streamlined. Responsibility for development and implementation of, and training in, new technologies is held by the staff of the PEU. Routine maintenance and updates of UoS WebCT sites is now shared by three administration assistants, allowing the dispersal of WebCT skills and workload among Faculty staff.

A number of Faculty Forums and Retreats occurred during 2006 to discuss aspects of the BPharm curriculum review process and to promote scholarship of learning and teaching. This process has continued into 2007 – to date, a Faculty Retreat and two Forums have occurred.

### *3.3 Enhance the staff mentoring scheme, having particular regard for the needs of junior staff and new staff.*

All staff continue to be encouraged to participate in the mentoring scheme both as mentors and mentorees. Feedback from mentorees is that they appreciate having a particular member of staff identified to them that they can contact. However, both mentors and mentorees indicate that although they value the program, time commitments often make it difficult to meet regularly.

### *3.4 Enhance the existing scheme of awards for excellence in teaching, and ensure that those who receive awards are duly recognised throughout the Faculty.*

The Faculty teaching awards have been modified to bring the timing and requirements in to alignment with University and Carrick awards. An online nomination procedure for the awards has been created along with an accompanying website with information about the awards and previous winners. This new process was trialled in 2006 and refinements made to the nomination process for 2007.

**Faculty of Pharmacy  
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