

**The University of Sydney**  
**Faculty of Agriculture, Food and Natural Resources**

**Teaching and Learning Strategic Plan, 2003 - 2007**

This version of the Plan was prepared in April 2003, with input from the Dean, Associate Deans (Undergraduate, Science degrees and Economics degrees), Associate Dean (Postgraduate), Degree Coordinators for Horticultural Science, Land and Water Science, Animal Science, and the Faculty's Teaching and Learning Committee.

### **Introduction**

The Strategic Plan for Teaching and Learning, 2003-2007 of the Faculty of Agriculture, Food and Natural Resources has three objectives intended to make valuable improvements to teaching and learning in the Faculty. Each objective is supported by strategies and indicators of performance.

The objectives are –

1. To improve teaching in the Faculty and the learning experience of its students
2. To maintain and enhance the quality of the Faculty's programs
3. To improve the educational and physical environment for students and staff.

These objectives are designed to contribute to the achievement of the goals of the University set out in its Strategic Plan, particularly, Goal 1:

The University of Sydney will maintain and enhance its position as an outstanding provider of high quality undergraduate and postgraduate teaching, both in Australia and internationally.

In pursuing these objectives, the Faculty's strategies will, *inter alia* –

- provide scholarship schemes; flexible admissions schemes for students from a diversity of backgrounds and for disadvantaged students; improved information for prospective students, parents and teachers; programs for ensuring effective transition from school to university; student support services; monitor progression rates; evaluate teaching; and regularly review programs.
- provide a wide variety of course offerings; regularly review curricula with input from employers and the professions; and encourage and support innovative teaching; and
- emphasise the provision of high quality space for teaching; and improve access to information technology.

The Faculty will work in partnership with the Life Sciences Libraries Team to integrate an information literacy program into the curriculum, both at undergraduate and postgraduate levels.

### **Context**

The term "agriculture" is used by the Faculty in a broad sense to include: crop and animal production; natural resource management; produce handling, processing and quality; food systems; marketing; and agribusiness. The Faculty of Agriculture, Food and Natural Resources provides the environment to foster cross-disciplinary approaches to teaching and research in agriculture, natural resource management and the development of sustainable food production systems. The Faculty's combination of expertise in applied sciences and economics gives it a unique character, and provides academic opportunities at the important interface between science and economics in agriculture and natural resources.

In this context, the Faculty offers a diverse range of undergraduate degree programs, which lead to applied degrees in science or economics related to sustainable food and fibre production and natural resource management. These degrees are the;

Bachelor of Science in Agriculture  
Bachelor of Horticultural Science  
Bachelor of Agricultural Economics

Bachelor of Land and Water Science  
Bachelor of Resource Economics  
Bachelor of Animal Science

The first intake of students into the BAnimSc was in 2002, and the first cohort of graduands will complete the BLWSc and BResEc degrees in 2003.

The Faculty also offers postgraduate coursework programs at Masters and Graduate Diploma levels. Approximately 15% of student load is in postgraduate research degrees.

The Faculty considers the strengths of its undergraduate degrees to be;

- Emphasis on basic science/economics, and quantitative skills
- Combination of technical, generic and professional skills
- Fourth Year of all undergraduate degrees, including a research project
- Professional experience and field-based studies
- Integrated teaching with other faculties
- Strong links between teaching and research

The Faculty's small size fosters strong interactions between staff and between staff and students, and makes it easier for students to develop strong bonds of friendship and co-operation, both within their own year cohorts and across them. The broad range of excursions in which students participate and the professional work experience requirement offer unique educational experiences and are strengths of the Faculty's degree programs. The excursion for First Year students in their first semester is considered to be particularly important in putting the learning into an agricultural and natural resources context at an early stage, and for building *esprit de corps* among the students.

Major challenges for the Faculty include –

- managing the succession of staff who will retire in the next few years, and keeping the staffing profile aligned with the curricula
- scattered and poor quality accommodation and facilities, and outmoded teaching laboratories.

The Faculty's teaching programs were reviewed by the Academic Board in 2002. The Review Team concluded that the Faculty was following good practices in the areas of equipping students with generic skills, attracting local and international postgraduate students, and research led teaching. Students considered staff to be committed, approachable and responsive, and there were some good initiatives in teaching and learning, and identifying students at risk. The Review Team recommended that the Faculty give consideration to improving practices in the areas of rewarding good teachers, communication, input into the curricula of service units, staff-student liaison committee, induction and orientation of new staff, resources for research students, student feedback, and alerting students to their IP rights and responsibilities.

More specifically, the Review Team recommended to Faculty that:

1. although informal mechanisms are working well, due mainly to the small size of the Faculty, more effective formal mechanisms should be introduced; this would aid in the dissemination of information to all staff.
2. the Faculty consider ways of informing research higher degree students of their rights and responsibilities under the University Intellectual Property rule.
3. the staff communicate the University generic skills to the students more clearly, and that these skills should be more carefully mapped to the curriculum in order to ensure consistent outcomes.
4. further efforts are needed to improve the quality of teaching across the Faculty.
5. the Faculty consider introducing a more consistent induction process for new and casual staff.
6. the Faculty consider the development of a Faculty level teaching excellence award.

7. the Faculty nominate lecturers from Soil Science 2 for a University excellence in teaching award.
8. the Faculty investigate ways of providing more input into the curricula of teaching provided by other faculties.
9. the Faculty considers ways of stressing the link between research and teaching to students.
10. the introduction of a formal induction program for research students and opportunities for peer review and support be considered.
11. the Faculty consider ways in which the annual progress reports could be made more informative for students.
12. the Faculty consider making improvements in the resources and accommodation for research students.
13. staff consider providing feedback in class, as it would save time taken in individual feedback through their open door policy, and relieve pressure on staff.
14. the Faculty undertake more work in the articulation and communication of assessment standards to students.
15. the Faculty instigate a process which acknowledges the problems raised and addresses the answers to them; the current process discourages students from coming forward with issues.

These recommendations are being implemented and have been considered in formulating the objectives and strategies of the Teaching and Learning Strategic Plan 2003-2007 and the Teaching and Learning Operational Plan 2003. Progress towards implementing the recommendations is also addressed in the Faculty's annual Self Evaluation Report for 2002.

The Faculty's assessment and examinations procedures were also audited by the University Auditor in late 2002. No major deficiencies were noted, although recommendations were made for improving some processes, most of which have since been implemented.

### **Objective 1: To improve teaching in the Faculty and the learning experience of its students**

#### Strategies

- Ensure that the information from Unit of Study Evaluations (USEs), Student Course Experience Questionnaires (SCEQs) and Graduate Course Experience Questionnaires (GCEQs) is analysed and used as the basis for improvements in the teaching and learning within the Faculty
- Continue to use feedback from students, directly and through the Faculty/Student Liaison Committee, to make improvements even while a semester is in progress. The Faculty is small enough for this to be effective.
- Continue to enhance the electronic dissemination to students of information on processes and content within all teaching programs
- Recognising and rewarding good teaching through Faculty Teaching Awards
- Encouraging new members of Faculty to participate in teaching development programs

#### Indicators

- Improvements to USE and SCEQ scores, relative to the respective scores obtained in previous years for Faculty units and courses, and relative to scores achieved by comparable Faculties in other Go8 universities.
- Improvements to GCEQ responses relative to responses obtained in previous years
- Highly developed intranet sites for staff and students on the Faculty's website
- Staff receiving awards for excellence in teaching

### **Objective 2: To maintain and enhance the quality of the Faculty's programs**

#### Context

All of the undergraduate programs aim to give students an appreciation of both the technical and socio-economic framework of agriculture and natural resources management, while affording students opportunities to specialise in particular disciplines. The courses employ a wide range of styles of

teaching and learning, but all place a strong emphasis on analytical, quantitative, computing and professional skills and experience. They recognize the diverse destinations of graduates, and that graduates need good interpersonal skills to be equipped for the workplace. As noted by the Academic Board Review Team in 2002, the Faculty's undergraduate teaching has strong links to the research programs, which together with links to industry, ensure that course offerings remain up-to-date and relevant to the needs of graduates and employers.

The Faculty affirms a continuing responsibility to ensure that all of its programs;

- are informed by research and scholarship of the highest quality
- are delivered with the highest quality teaching and administration
- are responsive to the needs of its communities, and
- produce graduates well equipped to contribute to the society in which they work.

The Faculty is implementing a new non-departmental organisational structure in May 2003, in which the undergraduate degrees will be coordinated through "science" and "economics" discipline groupings. The leaders of the discipline groups will be responsible for maintaining the quality and integrity of the teaching programs within the discipline groupings, promoting excellence in teaching among members of the academic staff of the discipline groupings, and ensuring that research in the discipline areas informs the teaching programs.

#### Strategies

- Curricula
  - After the new Faculty organisational structure is fully operational, commence major review of curricula of the four science-based degrees (BScAgr, BHortSc, BLWSc, BAnimSc) in 2003/04, and of the two economics-based degrees (BAgrEc, BResEc) in 2004/05 (the delayed start for the economics degrees is to allow for the appointment of several new academic staff)
  - Further develop cross-disciplinary teaching with other sections of the University, in the areas of plant science, geoscience and environmental science
- Quality assurance
  - Leaders of the science and economics discipline groupings to convene panels to review all aspects of the degrees to ensure that quality is maintained and enhanced, and that the course components continue to be relevant to students and employers. Input into the reviews will be sought from staff from the Faculty and wider University, current students, graduates and employers. Information to be used in the review will include SCEQ and GCCA survey data.
- Better publicise the research programs and achievements of the Faculty to attract more postgraduate research students from outside the University of Sydney, and to increase progression rates from the undergraduate cohort to postgraduate studies
- Expand intensive short course and coursework Masters degree offerings.

#### Indicators

- Improved USE, SCEQ and GCEQ scores for the Faculty
- Enhanced student demand for undergraduate and postgraduate courses
- High employability of graduates maintained.

### **Objective 3: To improve the educational and physical environment for students and staff**

#### Context

The Faculty has a wide range of established support mechanisms - academic, financial, professional and social - for its students, and it will seek to maintain and improve the range and extent of these services. However, the Faculty faces major challenges regarding staffing and infrastructure. The Faculty's buildings on the Camperdown campus are of considerable age and, in some cases, in very poor condition. In particular, the teaching laboratories in the Ross St Building have major problems with noise and dust penetration, and the Badham laboratories have poor acoustics and a layout unsuited to modern teaching. The lack of adequate preparation areas for laboratory classes is a serious problem. Many of the Faculty's laboratories for postgraduate research are out-moded and

overcrowded. Excellent teaching is less likely to be recognised, let alone achieved, with second-rate, inadequate accommodation and facilities.

#### Strategies

- With advice from the Staffing Committee, semi-annually update the Faculty's plan for staffing priorities
- Continue the program started in 2002 to improve computing facilities available to undergraduate and postgraduate students of the Faculty
- Develop an operational plan to progressively refurbish facilities, using resources from within the Faculty and seeking matching funds from within the University, but recognising that such a plan can only bring marginal improvements without significant funding from sources other than the Faculty
- Ensure that the Faculty does not lose its place in the capital development plan, and continue to press for the construction of a new building now that additional bequest funds have been targeted for its construction
- Support the University Library in the creation of a rich and relevant collection of print and electronic resources to support teaching and learning, and research in the Faculty
- Continue the program to assist the transition of new first year students to the University environment
- Continue to provide co-curricular activities to complement the formal degree structure and foster broad interest in agriculture and the environment
- Continue to encourage and support the societies for undergraduate and postgraduate students in the Faculty.

#### Indicators

- improved access of students to computers in the Faculty
- improvements to the Faculty's teaching facilities and targetting of funds for the construction of the new building
- retention rates into second year from first year
- student interest in and, where relevant, positive student evaluations of field trips and excursions, the student societies and Landcare
- improved morale of staff and students

## Faculty of Agriculture, Food and Natural Resources - Operational Plan, 2003

### Objective 1: To improve teaching in the Faculty and the learning experience of its students

#### Overall Target

Maintain and, where appropriate, improve the Faculty average scores in the Good Teaching Scale, Clear Goals and Standards Scale, Appropriate Assessment Scale and Appropriate Workload Scale of the SCEQ. These improvements are relative to both scores obtained in previous years for Faculty courses, and relative to scores achieved by comparable Faculties in other Go8 universities. Maintain and, where appropriate, improve USE scores for Faculty units, relative to scores for the same unit in previous years and to scores for similar units in other faculties/universities.

Strategies for 2003	Indicators	Targets for the period
Detailed analysis of the responses of SCEQ surveys, including identifying aspects of the student experience that require improvement and actions by which such improvement may be achieved	SCEQ and GCEQ scores for individual items, and overall satisfaction  Review of actions taken through individual student feedback and SCEQ response scores	Improvement of the Faculty average in each SCEQ scale so that it at least equals, and preferably exceeds, the scale averages for similar faculties in the Go8 by the end of 2004
Continue cycle of evaluating one third of the Year 1, Year 2 and Year 3 units offered to students of the Faculty, including service units  Detailed analysis of 2002 USE responses to identify units of study with scores significantly lower than those of other units, and reasons for any outlying scores and actions to achieve improvements	For all units, improved USE average scores over the 3-year rotation cycle, while recognising that some units already achieve high scores  Enhanced student progression rates, especially from First to Second Year	For most questions on Faculty-taught units, a target score of 3.5 to 4 is sought  Progression rates from First to Second year improve by at least 5% during the period 2003 – 2005
Consultation with service unit providers in the Faculties of Business & Economics, Science and Veterinary Science to improve any aspects of those units receiving critical attention in the 2002/2003 USEs.	Improved USE responses in service units	For most questions on evaluations of service units, a target score of 3.5 to 4 is sought
Encourage staff to participate in programs from teaching development	Adoption of principles and techniques from these programs	At least one member of staff enrolled in a program each year

**Objective 2: To maintain and enhance the quality of the Faculty's programs**

**Target**

Improvement of the degree average in the Generic Skills and Overall Satisfaction scales so that they at least equal, if not exceed, the national Faculty average for each of the scales.

Strategies for 2003	Indicators	Targets for the period
Commence revision of curricula for BScAgr, BHortSc, BLWSc and BAnimSc degrees	New/revised units of study available as appropriate Shared teaching with School of Biol Sciences Response of students and employers to proposed curricula	Revised curricula implemented from 2004 Assessment procedures and items reviewed progressively until completed for the 2004 academic year
Continue to develop the Faculty's intranet site as an important teaching and learning resource, including provision of standardised unit outlines, details of assessment, goals and expectations, appropriate content material.	New material added to the Faculty's intranet sites USE and SCEQ scores in 2003/2004	Unit outlines, details of assessment, goals and expectations, appropriate content material available on Faculty intranet site for all units of study
Discipline Leaders and Unit Coordinators to implement processes to review teaching programs in the discipline groupings for quality and relevance of teaching and relevance of assessment to learning objectives as specified in unit outlines	USE, SCEQ and GCEQ responses	Annual review of programs implemented
Provide better feedback on marking of assignments, where resources permit, by giving critical comments in addition to a grade	USE responses	
Review progressive assessment in all units in the light of student concerns about excessive pressure, while recognising that time management is a generic skill students need to acquire	SCEQ responses Faculty/Student Liaison Committee	More even spread of assessment task, within academic constraints of the teaching in respective discipline areas
Continue to work in partnership with the information professionals at the University Library to create information and knowledge management systems to benefit the Faculty	Development of information systems	Significant progress towards developing information systems in two teaching disciplines

**Objective 3: To improve the educational and physical environment for students and staff**

Strategies for 2003	Indicators	Targets for the period
Continue to assist the transition of new first year students to the University environment through the 'Bridging the Gap' program, monitoring student performance in first year and counselling students who are experiencing difficulties, arranging special tutorials (paid for by students)	Progression rates into second year from first year, and performance of students in first-year units	Progression rates improve by 5% over the period
Provide co-curricular activities to complement the formal degree structures and foster broad interest in agriculture and the environment (eg, Undergraduate Achievers' Program, Field Studies Program in Central Australia, Student Landcare Society), and encouraging and supporting the activities of undergraduate and postgraduate student societies	SCEQ and GCEQ responses	Overall satisfaction with the programs and satisfaction with individual aspects  Vibrant student Landcare Society  High participation in active student societies
Semi-annually update the Faculty's plan for staffing priorities	Staffing Committee meetings	Up to date strategic plan for staffing priorities
Develop an operational plan to progressively refurbish teaching facilities, using resources from within the Faculty and seeking matching funds from within the University, but recognising that such a plan can only bring marginal improvements	Availability of plan  Evidence of incremental improvement of facilities	One to two refurbishment projects of \$50K completed per year per year
Ensure that the Faculty does not lose its place in the Capital Development Plan, and continue to press for the construction of a new building	Capital Development Plan	Funds committed to the construction of the new building
Continue the program started in 2002 to improve computing facilities and support available to undergraduate and postgraduate students of the Faculty	Number of computers available to undergraduate and postgraduate students	Sufficient computers so that postgraduate students and undergraduate students in practical classes do not need share a computer Average score of +30 for Q.59 of the SCEQ, which relates to the standard of Faculty computing facilities