

Overview Comparison of the Universities, the Faculties of Science and First Year Teaching in Biology and Chemistry, Benchmarking project, 2003

University of Melbourne

Established in 1853

Current student enrolment: 39,000 students

Staffing: total staff of 4240 (2634 Academic; 1606 General)

Faculties and Divisions:

Architecture, Building and Planning

Arts

Economics and Commerce

Education

Engineering

Land and Food Resources

Law

Medicine, Dentistry and Health Sciences

Melbourne Business School

Music

Science

School of Graduate Studies

Veterinary Science

Victorian College of the Arts

Melbourne University Private

University of Sydney

Established in 1850 to promote useful knowledge and to encourage the residents of New South Wales to pursue a regular course of liberal education.

Current student enrolment: 40,000 students

Staffing: total staff of 5,200 (2,300 Academic; 2,900 General)

College of Sciences and Technology

Faculties of

Agriculture, Food and Natural Resources

Architecture

Engineering

Rural Management

Science

Veterinary Science

College of Humanities and Social Sciences

Australian Graduate School of Management

Arts

Economics and Business

Education and Social Work

Graduate School of Government

Law

Sydney College of the Arts

Sydney Conservatorium of Music

College of Health Sciences

Dentistry

Health Sciences

Medicine, Nursing

Pharmacy

Appendix 3A

Schools/Departments in the Faculty of Science

Schools

Botany,
Chemistry,
Earth Sciences,
Physics

Departments

Genetics
Information Systems
Mathematics and Statistics
Optometry and Vision Sciences
Zoology

Entry requirements:

English, Maths Methods and two of Biology, Chemistry, Physics and Special Mathematics.

In 2003, Science required an ENTER of 80.

Biomedical Sciences ENTER of 96.5 a study score of at least 25 /50 in English (any) Chemistry and Maths Methods OR Specialist Maths and one of Physics , Biology or another Maths.

Degree programs:

As well as BSc, Melbourne offers 4 specialist degrees and 9 combined degrees.

Overall degree program :

300 credit points = degree

12.5 credit points = 1/8 year

4 x 12.5 credit points per semester = 100 credit points per year

3 years of 100 credit points per year = degree

Benchmarking- Science- Melbourne and Sydney

Schools/Units in the Faculty of Science

Schools

Biological Sciences
Chemistry
Geosciences
Information Technologies
Mathematics and Statistics
Molecular and Microbial Biosciences
Physics
Psychology

Unit

History and Philosophy of Science Unit

Entry requirements:

All Science based degrees require Maths; some degrees require other disciplines as well.

Science in 2003 required a UAI of 82.20; other, restricted entry Science or combined degree

Science courses have higher UAI.

B. Medical Science UAI of 93.10

B. Computer Science & Technology UAI of 94.05

B. Information Technology UAI of 97.60

B. Psychology UAI of 96.05

Degree programs:

As well as BSc, Sydney offers 14 specialist science degree and 6 combined science degree programs, together with a double Science/Engineering degree.

Overall degree program:

144 credit points = degree

First year: 4 “subjects” at 6 credit points per subject per semester = 48 credit points in year

Second year: 3 “subjects” at 8 credit points per subject per semester = 48 credit points in year

Third year: 2 “subjects” at 12 credit points per subject = 48 credit points in year

Appendix 3A

Transition

Central programs Every Faculty has a program which is either a 101 workshop series and study groups or peer or academic mentoring.

There is a central Transition Program Manager and an assistant

Faculty of Science Program

Welcome Day after selection & Faculty Day

Science 101, offered to all incoming students enrolled in a BSc or combined degree (except with engineering) and BBiomed students from 2004. Consists of 2 workshops commencing in week 2, conducted by academics and Sci Faculty admin staff. Funded by the Dean, appears on transcript (a zero points subject). Study groups are set up by admin staff in Faculty and facilitated by a trained postgraduate student.

School Program – The Biology Learning Centre and Chemistry Learning Centre are available for students to seek help from tutors or meet with peers.

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Transition

Central programs – SWOT (Sydney Welcome, Orientation and Transition). Run by the Registrar's Unit but is a collaboration of a number of units including the Student Union; program both semesters; all students invited by mail out; staffed by Registrar's Unit (eg student support groups), Student Union; Library etc. Lasts several weeks.

Faculty of Science Program – Student Transition Workshop and Parents' Program. Run by the Faculty of Science; all incoming students in a BSc degree invited; take up about 30%; staffed by Faculty and with Academic Staff from discipline areas. One-day duration in February each year.

School Program – Biology has a Learning Centre where students can work together or on their own; Chemistry has nothing formalised.

<i>Comparison of Chemistry and Biology</i>				
University of Melbourne			University of Sydney	
	<i>Chemistry</i>	<i>Biology</i>	<i>Chemistry</i>	<i>Biology</i>
Generic name	School of Chemistry	Dept Genetics Dept Botany Dept Zoology 'Biology Unit' (for first year)	School of Chemistry	School of Biological Sciences
No. academic staff (FTE)	22	4 Botany 7 Zoology 2 Genetics 7 tutors	31 (28 teaching in first year program)	32 (18 teach in first year program)
No. research only staff	18	11, not tutors	13	9
No. admin/technical staff	29	5	17 (4.5 involved in first year)	29 (5 involved in first year)
Enrolment numbers: 2003	Year 1 1368 Semester 1 Year 1 1134 Semester 2	Year 1: Semester 1: 1411 (teach into BAg, B Animal Sci etc.,) Semester 2: 1203 Beyond year 1 students go into separate depts	Yr 1 1827 in Semester 1 Yr 2 355 Yr 3 90 Yr 4 18	Yr 1 1760 in Semester 1 Yr 2 188 Yr 3 105 Yr 4 15
<i>First year details:</i> Names of subjects/units of study; streams; nos students in each one	See mapping documents <i>Section 8: General Appendix</i>	See mapping documents <i>Section 8: General Appendix</i>	See mapping documents <i>Section 8: General Appendix</i>	See mapping documents <i>Section 8: General Appendix</i>
Geographic location of first year	Within main School Building; lectures in a variety of locations around main campus	Tutors, technical and Admin staff , tutorial rooms, laboratories within a separate building Academics in their respective departments.	Within main School Building; lectures within School Building	Offices and teaching labs separate from rest of School (10 min walk); lectures in a variety of locations around main campus

Appendix 3A

Benchmarking- Science- Melbourne and Sydney

Dedicated first year personnel	Director of FY (also teaches Yr 2-4) Transition Fellow No tutors 2 teaching staff 0.5 admin	Director of FY *(also teaches 3 rd yr, Hons) 7 X 0.4 continuing tutors	Director FY (also teaches Yr 2-4) Deputy Director FY(also teaches Yr 2-4) + 3 technical + 1.5 admin	Director FY (not teach Yr2-4) Deputy Director FY(also teaches Yr 2-4) + 3 academic staff 4.2 technical/computer support staff 0.8 admin staff
Service teaching: <i>defined as the teaching of students enrolled in other faculties who do a compulsory chemistry or biology subject</i>		Teach students in Institute of Land of Food Resources (278 semester 1) pre Vet year (21) pre Optometry	<i>Course and no. of students:</i> Whole year: Pharmacy - 211 Agriculture - 153 Chem Engineering - 43 Engineering (except Chem Eng) - 154 At Orange – rural pharmacy - 40 Half a year: Vet Science - 93 Half a semester: Education - 140	<i>Course and no. of students:</i> Whole year: Pharmacy 160 Agriculture -100 Nursing - 350 At Orange – rural pharmacy - 40 Half a year: Education - 70 Half a semester: Education - 140
Mid-year enrolments		52	112	40
Fee paying students (2002)		International: Semester 1 – 88 Semester 2 – 144 Local: Semester 1 – 52 Semester 2 – 59	International: Semester 1 – 149 Semester 2 – 74 Local: Semester 1 – 43 Semester 2 – 18	International: Semester 1 – 114 Semester 2 – 114 Local: Semester 1 – 53 Semester 2 – 65

Appendix 3A

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Bridging courses	None	None	7 days in February; \$240 +GST 2003 Enrolment: 250 students	5 days in February; \$210 2003 Enrolment: 140 students
Supporting talented students	Introduction of an advanced chemistry in 2004 By invitation.	Melbourne University Program for High Achieving Students (MUPHAS) Gifted students can complete first year biology while in year 12. Successful completion gives and add on to ENTER. The amount depends on where the student finishes within the class. Students can enter first year and have credit for a subject.	Talented Student Program (TSP) – invited by Dean Special Studies Program (SSP) – invited by School. Advanced units of study –entry by pre-requisites	TSP – invited by Dean Advanced units of study – entry by pre-requisites