

## SCHOOL OF SURVEYING

The School of Surveying offers a four year full-time course and a seven year part-time course both leading to the degree of Bachelor of Surveying. The degree is divided into eight parts of one session each and can also be attained through a combination of part-time and full-time study. Part 7 comprises professional training and a survey camp.

The course is designed to provide the appropriate academic training for a professional surveyor working in any of the many branches of surveying. Since these branches cover a wide range, the course is broad in its scope. First and second years are concerned mainly with the basic sciences, but the basic surveying subjects are also included. In the third year the major surveying subjects appear: geodesy, photogrammetry, astronomy and land studies. With the addition of some elective courses these are continued into fourth year. The graduate can take up cadastral or property surveying, engineering surveying, geodetic surveying, photogrammetry, cartography or hydrographic surveying. The course is also an appropriate first qualification for those wishing to specialize in astronomy, satellite geodesy, geodynamics, computing and systems analysis, town and regional planning, land and resources development or environmental sciences.

The full-time and part-time courses have undergone comprehensive revision. Features of the revisions include: decreased lecture time to allow use of teaching methods which involve more student participation; an extended period of professional experience in the final year; Land Studies, a group of subjects designed to provide a broad understanding of the ecology of land and its development; and a survey camp of six weeks in the final year. Throughout the course the theoretical studies are complemented by practical exercises in the field and the laboratory. Students make use of the most modern measuring instruments and computing equipment. As far as possible each stage of the part-time course is equivalent to one part (one session) of the full-time course. However Stage 7 includes the Survey Camp of Part 7 as well as subjects of Part 8.

The existing part-time course will be phased out over the period 1975-1980. It will be replaced by a sandwich course. Students attending the sandwich course will attend full-time for one session per year, and will be free to undertake full-time employment for the remainder of the year, approximately 35 weeks. The minimum time for completion of the sandwich course will be seven years, as for the present part-time course. It will

also be possible for a student in the sandwich course to attend for both sessions in a year, thus decreasing the length of his course by one year.

The transition arrangements are as follows: part-time students who commenced before 1973 will be unaffected. Those who commenced in 1973 will move into the sandwich system in 1975 and each year from then on will attend full-time for one session of each year. Students commencing the part-time course in 1974 will enter the sandwich system in 1976.

The Bachelor of Surveying degree may be awarded as a Pass degree, Honours Class I, or Honours Class II in two divisions. Honours are awarded in recognition of superior performance throughout the course.

Students wishing to become Registered Surveyors after graduation are advised to gain practical experience under a Registered Surveyor. Some reduction in the period of practical experience required before registration may be granted because of practical experience gained during the University course, provided the New South Wales Surveyors' Board has been informed in the prescribed manner. Details are obtainable from the Registrar, Surveyors' Board, Department of Lands, Bridge Street, Sydney 2000.

The degree of Bachelor of Surveying confers exemption from all written examinations of the Surveyors' Board.

### 374. SURVEYING—FULL-TIME COURSE

#### Bachelor of Surveying

YEAR 1—SESSIONS 1 AND 2 (PARTS 1 and 2)	Hours per week	
	Lec.	Tut. Lab.
1.001 Physics I	3	3
5.010 Engineering A*	4	2
5.030 Engineering C†	3	2
10.001 Mathematics I	4	2
29.101 Surveying I	1½	3
29.181 Cartography	0	1½

\*Materials Option (Session 2).

†Introduction to Systems and Computers Option (Session 1).

**YEAR 2—SESSION 1 (PART 3)**

10.022 Engineering Mathematics II	2	2
10.341 Statistics	1½	0
29.102 Surveying II	2	4
29.151 Survey Computations I	3½	2½
31.212 Geometrical Optics	1½	1½
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	10½	10

**YEAR 2—SESSION 1 (PART 4)**

	Hours per week	
	Lec.	Lab. Tut.
6.822 Electronics	1½	1½
8.711 Engineering for Surveyors	3	0
10.022 Engineering Mathematics II	2	2
10.341 Statistics SU	1½	0
29.102 Surveying II	1½	1½
29.192 Survey Camp*	—	
29.611 Land Studies I†	4	2
General Studies Elective	2	1
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	15½	8

\*Students are required to attend a two-week survey camp, held in October, which is equivalent to 80 class contact hours.

†A one-day field tutorial is an essential part of this course.

**YEAR 3—SESSION 1 (PART 5)**

8.712 Engineering for Surveyors	3	0
29.103 Surveying III	4	3
29.152 Survey Computations II	1	2
29.612 Land Studies II†	4	1
36.411 Town Planning	1½	1½
General Studies Elective	2	1
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	15½	8½

†A one-day field tutorial is an essential part of this course.

**YEAR 3—SESSION 2 (PART 6)**

29.211 Geodesy I	4	2
29.311 Astronomy I	2	1
29.511 Photogrammetry I	3	3
29.613 Land Studies III	2	0
29.614 Land Studies Project	1	2
General Studies Elective	2	1
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	14	9

**YEAR 4—SESSION 1 (PART 7)**

29.193 Professional Training	5 Months
29.194 Survey Camp*	{ 4 Weeks: Field 2 Weeks: Office

\*Students are required to attend a six-week survey camp, equivalent to 40 hours of class contact per week.

**YEAR 4—SESSION 2 (PART 8)**

	Hours per week	
	Lec.	Lab. Tut.
29.212 Geodesy II	2	1
29.312 Astronomy II	2	1
29.512 Photogrammetry II	1½	1½
Management	2	0
General Studies Advanced Elective	2	1
Two Electives†	4	2
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	13½	6½

†Electives chosen from:

29.213 Geodesy III
29.313 Astronomy III
29.513 Photogrammetry III
29.615 Land Studies
29.173 Project

### 374. SURVEYING—PART-TIME COURSE

Bachelor of Surveying

	Hours per week	
	Lec.	Lab. Tut.
<b>STAGE 1</b>		
1.001 Physics I	3	3
10.001 Mathematics I	4	2
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	7	5

**STAGE 2**

5.010 Engineering A*	4	2
5.030 Engineering C†	3	2
29.101 Surveying I	1½	3
29.181 Cartography	0	1½

\*Materials Option (Session 2).

†Introduction to Systems and Computers Option (Session 1).

		Hours per week			
		SESSION 1		SESSION 2	
		Lec.	Lab. Tut.	Lec.	Lab. Tut.
<b>STAGE 3</b>					
10.022	Engineering Mathematics II	2	2	2	2
29.102	Surveying II	1	1½	3	3½
29.151	Survey Computations I	3½	2½	0	0
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		6½	6	5	5½
<b>STAGE 4</b>					
6.822	Electronics	0	0	1½	1½
8.711	Engineering for Surveyors	3	0	0	0
10.341	Statistics SU	1½	0	1½	0
29.192	Survey Camp*	0	0	0	0
29.611	Land Studies I†	0	0	4	2
31.212	Geometrical Optics	1½	1½	0	0
	General Studies Elective	1	½	1	½
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		7	2	8	4

\*Students are required to attend a two-week survey camp, held in October, equivalent to 80 class contact hours.

†A one-day field tutorial is an essential part of this course.

<b>STAGE 5</b>					
8.712	Engineering for Surveyors	1½	0	1½	0
29.103	Surveying III	2	2	2	2
29.152	Survey Computations II	1	2	0	0
29.612	Land Studies II†	0	0	4	1
36.411	Town Planning	1½	1½	0	0
	General Studies Elective	1	½	1	½
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		7	6	8½	3½

†A one-day field tutorial is an essential part of this course.

		Hours per week	
		Lec.	Lab. Tut.
<b>STAGE 6</b>			
29.211	Geodesy I	2	1
29.311	Astronomy I	1	½
29.511	Photogrammetry I	1½	1½
29.613	Land Studies III	1	0
29.614	Land Studies Project	½	1
	General Studies Elective	1	½
	General Studies Advanced Elective	1	½
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		8	5
<b>STAGE 7* §</b>			
29.212	Geodesy II	1	½
29.313	Astronomy II	1	½
29.512	Photogrammetry II	1	½
	Management	1	0
	Two Electives‡	2	1
29.194	Survey Camp†		
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		6	2½

§Students who have completed Stage 6 in 1973 should enrol in this stage, and should consult the School's Enrolment Officer.

\*The academic requirements of the subject, 29.193 Professional Training must be fulfilled normally before a student attempts Stage 7.

‡Electives chosen from

- 29.213 Geodesy III
- 29.313 Astronomy III
- 29.513 Photogrammetry III
- 29.613 Land Studies
- 29.173 Project

†Students are required to attend a six-week survey camp, equivalent to 40 hours of class contact per week. Academic subjects are arranged so as not to clash with the camp.

