

## Engineering

Features of the revisions include: retention of the course on a session basis for all subjects lectured within the School; integration of the sandwich course with the full-time course as a result of the more flexible University policy towards leave of absence for students; elimination of the formally assessed professional training period in the present course; greater numbers of technical electives in the fourth year of study; further development of the Land Studies area: land development, inventory, law, tenure, and utilization, in continuing recognition of the growing importance of this area to surveyors; development of a formal strand to improve students' written and spoken communication skills.

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.

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 is 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.

Students enrolled in the Bachelor of Surveying degree course are required to equip themselves with an electronic calculator. Details of the features required are available from the School.

### 3740 Surveying — Full-time Course

#### Bachelor of Surveying BSurv

##### Year 1

Session 1		Hours Per Week
1.971	Physics I	6
5.0102	Introduction to Engineering Design	2
10.001	Mathematics I	6
29.001	Surveying I	4½
29.800	Survey Draughting	3
29.700	Professional Orientation	1½
29.191	Survey Camp I†	1½
		<hr/>
		24½

##### Session 2

		Hpw
1.971	Physics I	6
5.030	Engineering C*	6
10.001	Mathematics I	6
29.002	Surveying II	5
29.191	Survey Camp I†	1½
		<hr/>
		24½

†Students are required to attend a one week Survey Camp, equivalent to 1½ class contact hours per week in each session.

\*Introduction to Systems and Computers option.

##### Year 2

###### Session 1

1.962	Physics of Measurement	3
10.022	Engineering Mathematics II (1st part)	4
10.341A	Statistics SU	2
27.295	Physical Geography for Surveyors†	4
29.003	Surveying III	5
29.151	Survey Computations I	4
29.192	Survey Camp II*	1½
		<hr/>
		23½

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

###### Session 2

8.711	Engineering for Surveyors I	3
10.022	Engineering Mathematics II (2nd part)	4
10.341B	Statistics SU	2
29.004	Surveying IV	4½
29.801	Cartography I	3
29.701	Seminar I	1
29.121	Electronics for Surveyors	2
29.192	Survey Camp II*	1½
	General Studies Elective	3
		<hr/>
		24

\*Students are required to attend a one-week survey camp, which is equivalent to 1½ class contact hours per week in each session.

##### Year 3

###### Session 1

8.712	Engineering for Surveyors II	3
29.005	Surveying V	5
29.152	Survey Computations II	4
29.651	Land Development I	3
29.661	Cadastral Surveying and Land Law I	2
36.411	Town Planning	2
	General Studies Elective	3
		<hr/>
		22

<i>Session 2</i>		<b>Hpw</b>
29.006	Surveying VI	3
29.211	Geodesy I	4
29.311	Astronomy I	3
29.511	Photogrammetry I	4
29.652	Land Development II	3
29.631	Land Inventory I	2
29.662	Cadastral Surveying and Land Law II	3
29.195	Survey Camp III**	6
		—
		<b>28</b>
		—

\*\*Students are required to attend a two-week survey camp, which is equivalent to 6 class contact hours per week.

**Year 4**

<i>Session 1†</i>		<b>Hours Per Week</b>
29.212	Geodesy II	3
29.312	Astronomy II	2
29.512	Photogrammetry II	3
29.653	Land Development III	3
29.704	Management I	2
29.702	Seminar II	1
	Electives*	6
29.196	Survey Camp IV**	6
		—
		<b>26</b>
		—

\*See Year 4: Electives, immediately below.

\*\*Two weeks of office computations equivalent to 6 class contact hours per week.

**Year 4**

<i>Session 1</i>		
<b>(Part 7 — Old Course)†</b>		
29.193	Professional Training	5 months
29.194	Survey Camp*	2 weeks: Field
		2 weeks: Campus

\*Students are required to attend a four-week survey camp, equivalent to 160 hours of class contact.

†Offered in 1979 only.

<i>Session 2†</i>		
29.705	Management II	2
29.703	Seminar III	1
	Electives*	15
		—
		<b>18</b>
		—

†Available from 1980.

\*See Year 4: Electives, immediately below.

**Year 4: Electives**

Total of two General Studies Advanced Electives and five technical electives in any combination which results in 6 hours for Session 1 and 15 hours for Session 2. Technical electives (of 3 hours per week each, except 29.174) are chosen from:

- 29.031 Electronic Distance Measurement
- 29.032 Precise Surveying in Industry and Engineering
- 29.033 Characteristics of Modern Theodolites and Levels
- 29.034 Mine Surveying
- 29.035 History of Surveying
- 29.153 Adjustment of Control Surveys
- 29.161 Hydrographic Surveying I
- 29.162 Hydrographic Surveying II
- 29.173 Project
- 29.174 Major Project (6 hours per week)
- 29.213 Geodesy III
- 29.231 Geophysics for Surveyors
- 29.232 Atmospheric Effects on Geodetic Measurement
- 29.313 Astronomy III
- 29.513 Photogrammetry III
- 29.514 Remote Sensing Principles
- 27.043 Remote Sensing Applications
- 29.654 Land Development IV
- 29.632 Land Inventory II
- 29.663 Cadastral Surveying and Land Law III
- 29.664 Modern Title Concepts
- 29.802 Cartography II
- 29.803 Mapping Technology

<i>Session 2</i>		
<b>(Part 8 — Old Course)*</b>		
29.704	Management I	2
29.212	Geodesy II	3
29.312	Astronomy II	3
29.512	Photogrammetry II	3
	General Studies Advanced Elective	3
	Two Electives†	6
		—
		<b>20</b>
		—

\*Offered in 1979 only.

†See Year 4: Electives (Part 8 — Old Course), immediately below.

**Year IV: Electives (Part 8 — Old Course)**

- 29.162 Hydrographic Surveying II
- 29.183 Cartography Advanced Elective
- 29.213 Geodesy III
- 29.313 Astronomy III
- 29.513 Photogrammetry III
- 29.173 Project
- 29.623 Land Development III
- 29.632 Land Inventory II
- 29.642 Land Law and Tenure II

# Engineering

**3750**

## Surveying — Sandwich Course

### Bachelor of Surveying

#### BSurv

The Sandwich Course from 1979 has been integrated with the full-time course. The School encourages students to take leave of absence for one or more sessions, as desired, to obtain professional experience. The following transitional arrangements are offered in 1979 and Session 1, 1980 only:

Part 6†		Hours Per Week
29.005	Surveying V	5
29.152	Survey Computations II	4
29.661	Cadastral Surveying and Land Law I	2
	General Studies Electives	6
29.211	Geodesy I	4
29.511	Photogrammetry I	4
		—
		25
		—

†Offered in Session 1, 1979 only.

### Part 7 (Old Course)\*\*

29.193	Professional Training	
29.194	Survey Camp*	2 weeks: Field 2 weeks: Campus

\*Students are required to attend a four-week survey camp, equivalent to 160 hours of class contact.

\*\*Offered in Session 1, 1979 only.

### Part 8 (Old Course)††

29.704	Management I	2
29.212	Geodesy II	3
29.312	Astronomy II	3
29.512	Photogrammetry II	3
	General Studies Advanced Elective	3
	Two Electives†	6
		—
		20
		—

†See Electives (Part 8 — Old Course), immediately below.

††Offered in Session 2, 1979 only.

### Electives (Part 8 — Old Course)

29.162	Hydrographic Surveying II
29.183	Cartography Advanced Elective
29.213	Geodesy III
29.313	Astronomy III
29.513	Photogrammetry III
29.173	Project
29.623	Land Development III
29.632	Land Inventory II
29.642	Land Law and Tenure II

### Part 8†

Part 8†		Hpw
29.006	Surveying VI	3
29.212	Geodesy II	3
29.312	Astronomy II	2
29.512	Photogrammetry II	3
29.653	Land Development III	3
29.704	Management I	2
	Two Electives*	6
		—
		22
		—

†Offered in Session 1, 1980 only.

### Electives (Part 8)

29.161	Hydrographic Surveying I
29.173	Project
29.514	Principles of Remote Sensing
29.802	Cartography II

## Sandwich Course — Stages 1 and 2

Students commencing the course on a sandwich course basis in 1979 may also take the First Year of the course by part-time study in two stages over a period of two years, as shown below:

Stage 1		Hours Per Week	
		S1	S2
1.001	Physics I	6	6
10.001	Mathematics I	6	6
		—	—
		12	12
		—	—

### Stage 2

5.0102	Introduction to Engineering Design	2	
29.001	Surveying I	4½	
29.700	Professional Orientation	1½	
29.800	Survey Draughting	3	
5.030	Engineering C*		6
29.002	Surveying II		5
29.191	Survey Camp**	1½	1
		—	—
		12½	12
		—	—

\*Introduction to Systems and Computers Option.

\*\*Students are required to attend a one week survey camp which is equivalent to 1½ class contact hours per week in each session.