HANDBOOK
OF
NEWCASTLE UNIVERSITY COLLEGE
OF
THE UNIVERSITY OF NEW SOUTH WALES

1963

POSTAL ADDRESS: TIGHE’S HILL, 2N, NEWCASTLE
Registered at G.P.O., Sydney for transmission through the post as a book.
# TABLE OF CONTENTS

## Section I — GENERAL

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar of Dates for 1963</td>
<td>6</td>
</tr>
<tr>
<td>Preface</td>
<td>8</td>
</tr>
<tr>
<td>Degrees and Diplomas Granted</td>
<td>10</td>
</tr>
<tr>
<td>The Council of Newcastle University College</td>
<td>13</td>
</tr>
<tr>
<td>Standing Committees of the Council</td>
<td>14</td>
</tr>
<tr>
<td>Staff</td>
<td></td>
</tr>
<tr>
<td>University and External Examiners</td>
<td>15</td>
</tr>
<tr>
<td>Newcastle University College</td>
<td>17</td>
</tr>
<tr>
<td>The Academic Board of Studies</td>
<td>22</td>
</tr>
<tr>
<td>Requirements for:</td>
<td></td>
</tr>
<tr>
<td>Admission</td>
<td>24</td>
</tr>
<tr>
<td>Enrolment</td>
<td>28</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>33</td>
</tr>
<tr>
<td>Fees</td>
<td>34</td>
</tr>
<tr>
<td>Rules on:</td>
<td></td>
</tr>
<tr>
<td>Academic Requirements</td>
<td>38</td>
</tr>
<tr>
<td>Notices</td>
<td>38</td>
</tr>
<tr>
<td>Attendance at Classes</td>
<td>38</td>
</tr>
<tr>
<td>Ownership of Students’ Work</td>
<td>38</td>
</tr>
<tr>
<td>Student Identification</td>
<td>38</td>
</tr>
<tr>
<td>Change of Address</td>
<td>38</td>
</tr>
<tr>
<td>General Conduct</td>
<td>39</td>
</tr>
<tr>
<td>Examinations:</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>40</td>
</tr>
<tr>
<td>Annual</td>
<td>40</td>
</tr>
<tr>
<td>Deferred</td>
<td>41</td>
</tr>
<tr>
<td>Progression in Courses</td>
<td>42</td>
</tr>
<tr>
<td>Re-enrolment in Courses</td>
<td>43</td>
</tr>
<tr>
<td>Conditions for Award of Degrees</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>44</td>
</tr>
<tr>
<td>Bachelor of Science (Technology)</td>
<td>44</td>
</tr>
<tr>
<td>Academic Dress</td>
<td>45</td>
</tr>
<tr>
<td>University Services</td>
<td></td>
</tr>
<tr>
<td>Union</td>
<td>46</td>
</tr>
<tr>
<td>Students’ Association</td>
<td>47</td>
</tr>
<tr>
<td>Sports League</td>
<td>48</td>
</tr>
<tr>
<td>Library</td>
<td>49</td>
</tr>
<tr>
<td>General Counselling</td>
<td>50</td>
</tr>
<tr>
<td>Scholarships, Bursaries and Cadetships</td>
<td>51</td>
</tr>
<tr>
<td>Unisearch Ltd.</td>
<td>51</td>
</tr>
</tbody>
</table>

## Section II — UNDERGRADUATE COURSES OF STUDY

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Science</td>
<td>54</td>
</tr>
<tr>
<td>Chemical Engineering and Industrial Chemistry</td>
<td>55</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>55</td>
</tr>
<tr>
<td>Industrial Arts</td>
<td>63</td>
</tr>
<tr>
<td>Architecture</td>
<td>67</td>
</tr>
<tr>
<td>Arts</td>
<td>70</td>
</tr>
<tr>
<td>Bachelor of Arts</td>
<td>75</td>
</tr>
<tr>
<td>The Diploma in Education</td>
<td>106</td>
</tr>
<tr>
<td>Commerce</td>
<td>83</td>
</tr>
<tr>
<td>Accountancy</td>
<td>86</td>
</tr>
<tr>
<td>Economics</td>
<td>89</td>
</tr>
<tr>
<td>Engineering</td>
<td>92</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>92</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>100</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>106</td>
</tr>
<tr>
<td>Science</td>
<td>115</td>
</tr>
</tbody>
</table>

## Section III — DESCRIPTION OF SUBJECTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Science</td>
<td>121</td>
</tr>
<tr>
<td>Chemical Engineering and Industrial Chemistry</td>
<td>121</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>127</td>
</tr>
<tr>
<td>Industrial Arts</td>
<td>128</td>
</tr>
<tr>
<td>Architecture</td>
<td>129</td>
</tr>
<tr>
<td>Arts</td>
<td>138</td>
</tr>
<tr>
<td>Economics</td>
<td>138</td>
</tr>
<tr>
<td>Education</td>
<td>141</td>
</tr>
<tr>
<td>English</td>
<td>144</td>
</tr>
<tr>
<td>French</td>
<td>145</td>
</tr>
<tr>
<td>Geography</td>
<td>146</td>
</tr>
<tr>
<td>German</td>
<td>148</td>
</tr>
<tr>
<td>Greek</td>
<td>148</td>
</tr>
<tr>
<td>History</td>
<td>149</td>
</tr>
<tr>
<td>Humanities</td>
<td>151</td>
</tr>
<tr>
<td>Latin</td>
<td>152</td>
</tr>
<tr>
<td>Philosophy</td>
<td>153</td>
</tr>
<tr>
<td>Psychology</td>
<td>154</td>
</tr>
<tr>
<td>The Diploma in Education</td>
<td>155</td>
</tr>
<tr>
<td>Commerce</td>
<td>159</td>
</tr>
<tr>
<td>Accountancy</td>
<td>159</td>
</tr>
<tr>
<td>Economics</td>
<td>162</td>
</tr>
<tr>
<td>Engineering</td>
<td>165</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>165</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>171</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>175</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS — continued

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>181</td>
</tr>
<tr>
<td>Chemistry</td>
<td>181</td>
</tr>
<tr>
<td>Geology</td>
<td>183</td>
</tr>
<tr>
<td>Mathematics</td>
<td>185</td>
</tr>
<tr>
<td>Physics</td>
<td>187</td>
</tr>
</tbody>
</table>

Section IV — PRESCRIBED TEXTS FOR 1963

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Science</td>
<td></td>
</tr>
<tr>
<td>Chemical Engineering and Industrial Chemistry</td>
<td>192</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>193</td>
</tr>
<tr>
<td>Industrial Arts</td>
<td>193</td>
</tr>
<tr>
<td>Architecture</td>
<td>194</td>
</tr>
<tr>
<td>Arts</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>196</td>
</tr>
<tr>
<td>Education</td>
<td>196</td>
</tr>
<tr>
<td>English</td>
<td>196</td>
</tr>
<tr>
<td>French</td>
<td>197</td>
</tr>
<tr>
<td>Geography</td>
<td>198</td>
</tr>
<tr>
<td>German</td>
<td>199</td>
</tr>
<tr>
<td>Greek</td>
<td>201</td>
</tr>
<tr>
<td>History</td>
<td>201</td>
</tr>
<tr>
<td>Latin</td>
<td>202</td>
</tr>
<tr>
<td>Philosophy</td>
<td>203</td>
</tr>
<tr>
<td>Psychology</td>
<td>203</td>
</tr>
<tr>
<td>The Diploma in Education</td>
<td>204</td>
</tr>
<tr>
<td>Commerce</td>
<td></td>
</tr>
<tr>
<td>Accountancy</td>
<td>206</td>
</tr>
<tr>
<td>Economics</td>
<td>207</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>208</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>208</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>209</td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>211</td>
</tr>
<tr>
<td>Geology</td>
<td>211</td>
</tr>
<tr>
<td>Mathematics</td>
<td>212</td>
</tr>
<tr>
<td>Physics</td>
<td>213</td>
</tr>
</tbody>
</table>

Section V — POST-GRADUATE STUDY

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conditions for Award of Higher Degrees</td>
<td>217</td>
</tr>
<tr>
<td>Scholarships and Fellowships</td>
<td>232</td>
</tr>
</tbody>
</table>

APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix I — Prizes</td>
<td>239</td>
</tr>
<tr>
<td>Appendix II — Graduates of the University</td>
<td>243</td>
</tr>
<tr>
<td>Appendix III — Timetable for 1963</td>
<td>253</td>
</tr>
</tbody>
</table>
# Calendar of Dates—1963

<table>
<thead>
<tr>
<th>Term</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Term</td>
<td>March 4th to May 11th</td>
</tr>
<tr>
<td>Second Term</td>
<td>May 27th to August 3rd</td>
</tr>
<tr>
<td>Third Term</td>
<td>August 26th to November 2nd</td>
</tr>
<tr>
<td>Annual Examinations</td>
<td>September 21st to October 5th (24 week courses)</td>
</tr>
<tr>
<td>Annual Examinations</td>
<td>November 9th to 30th (30 week courses)</td>
</tr>
</tbody>
</table>

**January**
- Tuesday 29 to Saturday 9 February: Deferred examinations (all courses)
- Thursday 31: Last day for lodging local applications for enrolment

**February**
- Friday 1: Newcastle University College Council
- Tuesday 5: First Term lectures commence
- Monday 11: University Council
- Tuesday 14: Professorial Board
- Tuesday 19: Board of Studies
- Friday 29: Last day for acceptance of enrolments

**March**
- Friday 1: Newcastle University College Council
- Tuesday 5: First Term lectures commence
- Monday 11: University Council
- Tuesday 14: Professorial Board
- Tuesday 19: Board of Studies
- Friday 29: Last day for acceptance of enrolments

**April**
- Friday 5: Conferring of Degrees
- Friday 6: Newcastle University College Council
- Tuesday 9: Professorial Board
- Friday 12 to Monday 15: Easter Holidays
- Thursday 25: Anzac Day — Public Holiday
- Tuesday 30: Board of Studies

**May**
- Friday 3: Newcastle University College Council
- Monday 6: May Day Holiday
- Saturday 11: First Term ends
- Monday 13 to Saturday 25: Vacation (2 weeks)
- Monday 13: University Council
- Tuesday 14: Professorial Board
- Monday 27: Second Term commences

**June**
- Friday 7: Newcastle University College Council
- Monday 10: Queen's Birthday — Public Holiday
- Tuesday 11: Professorial Board
- Saturday 29: Last day for acceptance of applications for examinations—24 week courses

**July**
- Friday 5: Newcastle University College Council
- Monday 8: University Council
- Tuesday 9: Professorial Board
- Tuesday 23: Board of Studies

**August**
- Friday 2: Last day for acceptance of applications for examinations—30-week courses
- Friday 2: Newcastle University College Council
- Saturday 3: Second Term ends
- Monday 5 to Saturday 24: Vacation (3 weeks)
- Tuesday 13: Professorial Board
- Saturday 17 to Saturday 24: Geology II and III Excursion
- Monday 26: Third Term commences

**September**
- Friday 6: Newcastle University College Council
- Monday 9: University Council
- Tuesday 10: Professorial Board
- Saturday 21: Annual Examinations commence—24 week courses

**October**
- Friday 4: Newcastle University College Council
- Saturday 5: Annual Examinations end—24 week courses
- Monday 7 to Friday 11: One-week Survey Camp
- Monday 7 to Friday 18: Two-week Survey Camp
- Tuesday 8: Professorial Board
- Monday 14: Industrial training begins—students attending one-week survey camp
- Tuesday 15: Board of Studies
- Monday 21: Industrial training begins—students attending two-week survey camp

**November**
- Friday 1: Newcastle University College Council
- Friday 1: Last day for acceptance of applications for enrolment in 1964 by overseas students
- Saturday 2: Lectures cease
- Saturday 9: Annual Examinations begin—30 week courses
- Monday 11: University Council
- Tuesday 12: Professorial Board
- Saturday 30: Annual Examinations end—30 week courses

**December**
- Friday 6: Newcastle University College Council
- Tuesday 19: Professorial Board
- Friday 20: Last day for acceptance of applications for enrolment in 1964 with advanced standing or provisional matriculation status

**1964**

**January**
- Tuesday 28 to Saturday 8 February: Deferred examinations (all courses)
- Friday 8: Last day for lodging local applications for enrolment

**February**
- Tuesday 4: Professorial Board
- Monday 24: Enrolment Week commences for finalisation of enrolment

**March**
- Monday 2: First Term lectures commence
PREFACE

Newcastle University College was formally opened as a College of the University of New South Wales on 3rd December, 1951.

The University was incorporated by Act of the New South Wales Parliament on 1st July, 1949 — initially under the name of "The New South Wales University of Technology" — to meet the increasing demands in Australia for graduates in scientific and technological fields.

In 1958, these original projects were extended by the University of New South Wales Act, 1958, which gave the University power to conduct courses and award degrees in the fields of medicine and humane studies and in such other fields as the Council may from time to time determine.

The University is governed by a Council representing the State Parliament, industrial, commercial and agricultural bodies, employee organisations, representatives of educational bodies and members of the academic staff and graduates and undergraduates of the University. The Professorial Board is the main academic body of the University. There are seven Faculties, a Board of Vocational Studies and an Academic Board of Studies whose membership is made up of senior members of the staff.

Newcastle University College is located approximately one hundred miles north of the City of Sydney and presently shares the site of Newcastle Technical College at Tighe's Hill, a Newcastle suburb.

In 1960, the University acquired a site at Shortland, about eight miles from the centre of the City. The site is approximately two hundred acres and is for the future development of university education at Newcastle.

The government of Newcastle University College is vested in the Council of the University of New South Wales which established the College in exercise of its statutory power to establish and maintain branches, departments or colleges of the University at Newcastle or such other place in the State as the Council deems fit.

In 1960, the Council established the Newcastle University College Academic Board of Studies. The Board consists of the senior members of staff of the College together with the Dean or representative of the Dean of each of the Faculties of the University and such other person as the Council may appoint to the Board. The Board supervises the teaching in subjects offered at Newcastle; is responsible, subject to the direction of the Professorial Board, for the conduct of examinations in these subjects; takes cognizance of and encourages research in these subjects, and considers and reports to the Professorial Board upon all matters related to the studies, lectures, examinations and degrees relating to the Newcastle University College.

In March 1962, the Council of the University dissolved the College Advisory Committee and established a Council for Newcastle University College to assist in the development of the College and in particular to initiate and supervise the planning of the Shortland site and to develop proposals under which it could assume a growing responsibility for the present operations of the College, both in the academic and administrative fields.

The Chief Executive Officer and Chairman of the Academic Board of Studies of the College is the Warden. The College is organised under the Warden into five divisions. The divisions are organised into departments. The Professor in charge of the University School in Sydney has a responsibility for assisting his colleagues at Newcastle in all academic matters.

The Newcastle University College offers opportunities to read for bachelor's degrees in the Divisions of Applied Science, Arts, Commerce, Engineering, Science, and Architecture and a post-graduate diploma in Education. In most Divisions opportunities to read for the higher degrees of master and doctor are available. The length of the bachelor degree courses varies from three years of full-time study to eight years of part-time study. The Academic Year begins in March and ends in December.

The principal publication of the University is the University Calendar which is published annually; the principal annual publications of Newcastle University College are the College Handbook and the College Staff Publications and Research Report. Division handbooks and other publications are available. Further information may be obtained through the Registrar, Newcastle University College, Tighe's Hill, N.S.W. (Telephone—61 0461; After hours—61 1822. Telegrams—NEWUNI).
### FULL-TIME COURSES

<table>
<thead>
<tr>
<th>DIVISION</th>
<th>COURSE</th>
<th>DEGREE</th>
<th>DURATION — YEARS</th>
<th>TOTAL FEES £</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pass</td>
<td>Honours</td>
</tr>
<tr>
<td>APPLIED SCIENCE</td>
<td>Chemical Engineering</td>
<td>B.Sc.</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Industrial Chemistry</td>
<td>B.Sc.</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Metallurgy</td>
<td>B.Sc.</td>
<td>4**</td>
<td>4**</td>
</tr>
<tr>
<td></td>
<td>Architecture</td>
<td>B.Arch.</td>
<td>See Part-Time Course</td>
<td>657</td>
</tr>
<tr>
<td>ARTS</td>
<td>Arts</td>
<td>B.A.</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>COMMERCE</td>
<td>Accountancy</td>
<td>B.Com.</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Economics</td>
<td>B.Com.</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>ENGINEERING</td>
<td>Civil Engineering</td>
<td>B.E.</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Civil Engineering (B.Sc.)</td>
<td>B.Sc., B.E.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Mechanical Engineering</td>
<td>B.E.</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mechanical Engineering (B.Sc.)</td>
<td>B.Sc., B.E.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Electrical Engineering</td>
<td>B.E.</td>
<td>4**</td>
<td>4**</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>Science</td>
<td>B.Sc.</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

* The first 2 years only are available in Newcastle. The final years are completed in Sydney.

** The first 3 years are available in Newcastle.

Total fees payable which are subject to alteration without notice are based on fees applicable at the time of publication for course completed in the minimum time. Additional fees are incurred where a course extends beyond the minimum time.
### THE COUNCIL OF NEWCASTLE UNIVERSITY COLLEGE

**Chairman**

**Deputy Chairman**

**The Council**
James Albert Allen, M.Sc.(Qld.), Ph.D.(Bristol), F.R.A.C.I., Professor of Chemistry, Newcastle University College.
The Hon. Francis Joseph Finnan, C.B.E., President, Hunter District Water Board.
Basil Arthur Helmore, LL.B., Ph.D.(Lond.), Solicitor, Newcastle.
Ivan Lincoln Rose, B.E.(Syd.), Ph.D., Senior Lecturer in Mathematics, Newcastle University College.

**Secretary to Council and Registrar**
John Francis Foley, B.Ec.(Syd.).

---

**OBITUARY**

LEICESTER BIRKENHEAD SADDINGTON, O.B.E., M.L.C.
Foundation Member of the Newcastle University College Council
Deceased 25th September, 1962
STANDING COMMITTEES
OF
THE COUNCIL OF NEWCASTLE UNIVERSITY COLLEGE

Planning Committee:
Mr. D. L. McLarty (Chairman)
Professor J. J. Auchmuty (Deputy Chairman)
Mr. K. Booth
The Hon. F. J. Finnan
Mr. A. E. Rogers
Dr. I. L. Rose
Associate Professor E. O. Hall (co-opted)
Associate Professor B. Newton (co-opted)
Mr. E. C. Parker (co-opted)

Operations Committee:
Dr. H. K. Worner (Chairman)
Professor J. A. Allen (Deputy Chairman)
Professor J. J. Auchmuty
Mr. G. A. Edwards
Mr. T. Hamilton
Dr. B. A. Heimere
Dr. I. L. Rose
Associate Professor E. M. Goodger (co-opted)
Associate Professor W. P. Hogan (co-opted)

Members of all Committees (ex officio)
The Council Chairman: Mr. D. L. McLarty
The Council Deputy Chairman: Professor J. P. Baxter
Secretary to all Committees (ex officio)
The Council Secretary: Mr. J. F. Foley

THE UNIVERSITY OF NEW SOUTH WALES

CHANCELLOR
The Hon. Mr. Justice J. S. J. Clancy, LL.B.

DEPUTY CHANCELLOR
R. J. Webster, C.M.G., C.B.E., M.C., F.A.S.A.

VICE-CHANCELLOR
J. P. Baxter, C.M.G. O.B.E., B.Sc., Ph.D., LL.D., F.A.A.

PRO-VICE-CHANCELLORS
J. F. Clark, M.A., B.Sc., Dip.Ed.(Syd.), Ph.D.(Lond.).

REGISTRAR
B. R. L. Macauley, B.Ec.

BURSAR
J. O. A. Bourke, B.A.

DEANS OF THE FACULTIES

Applied Science ...................... Professor M. Chaikin
Architecture ................. ........................................... Vacant
Arts ......................................................... Professor M. S. Brown
Commerce ........................................... Professor E. B. Smyth
Engineering ....................... Professor A. H. Willis
Medicine ........................................... Professor F. F. Rundle
Science ........................................... Vacant

Heads of Schools of which there are Departments at the Newcastle University College

Professor of Architecture
Vacant.

Professor of English
H. J. Oliver, M.A.(Syd.).

Professor of History

Professor of Philosophy
J. B. Thornton, B.A., B.Sc.(Syd.).

Professor of Accountancy

Professor of Economics
M. C. Kemp, B.Com., M.A.(Melb.), Ph.D.(Johns Hopkins).

Professor of Civil Engineering

Professor of Electrical Engineering

Professor of Mechanical Engineering

Professor of Applied Physics
C. J. Milner, M.A., Ph.D.(Cantab.), F.Inst.P.

Professor of Applied Psychology
J. F. Clark, M.A., B.Sc., Dip.Ed.(Syd.), Ph.D.(Lond.).
Professor of Inorganic Chemistry
D. P. Mellor, D.Sc.(Tas.), F.R.A.C.I.

Professor of Chemical Engineering

Professor of Chemical Technology

Professor of Metallurgy

Professor of Mining Engineering

Associate Professor of Industrial Arts
L. M. Haynes, B.A.(Syd.).

EXTERNAL EXAMINERS

Classics
Professor J. H. Bishop, M.A. (Cantab.), The University of New England.

Education
Professor W. F. Connell, Ph.D.(Lond.), A.M. (Ill.), M.A., M.Ed. (Melb.), The University of Sydney.

French
Professor R. F. Jackson, B.A.(Syd.), M.A. (Melb.), The University of Melbourne.

Geography

German
Professor R. H. Samuel, M.A.(Melb.), Dr.Phil.(Berlin), Ph.D. (Cantab.), The University of Melbourne.
EDUCATION
(Offered in association with the Newcastle Teachers' College)

G. H. Duncan, M.A.(Syd.), B.Ed.(Melb.) ... Lectr.
S. Ball, B.A., M.Ed.(Syd.) ... Lectr.
I. D. Renwick, B.Sc., Dip.Ed.(Syd.), M.Ed.(Melb.) ... Lectr.

ENGLISH
D. B. O'D. Biggins, B.A.(Lond.), M.A.(So'ton.) ... Sr. Lectr.
T. M. W. Eaton, M.A.(Oxon.) ... Lectr.
C. Hart, B.A.(W.A.), Ph.D.(Cantab.) ... Lectr.
Robyn K. Iverach, B.A.(Syd.) ... Lectr.
T. H. Jones, M.A.(Wales) ... Lectr.

FRENCH
N. M. Million, M.A.(Oxon.) ... Lectr.
C. B. Thornton-Smith, M.A.(Melb.), B.Ed.(Melb.) ... Lectr.
Kathleen F. Temple, B.A., Dip.Ed. ... Senior Tutor

GERMAN
B. Newton John, M.A.(Can'tab.) ... Assoc. Prof.
J. M. Ritchie, M.A.(Aberdeen), Dr. Phil.(Tubinger) ... Sr. Lectr.
J. D. Stowell, B.A.(Melb.) ... Lectr.

HISTORY
G. A. Cranfield, B.A., Ph.D.(Can'tab.) ... Assoc. Prof.
J. P. S. Bach, M.A.(Syd.) ... Sr. Lectr.
A. H. Anderson, M.A., Ph.D.(Edin.) ... Lectr.
L. E. Fredman, M.A., LL.B.(Melb.), A.M.(Stanford) ... Lectr.
W. G. McMinn, B.A.(N.E.), M.A. ... Lectr.

PHILOSOPHY
A. M. Ritchie, M.A.(Syd.), Ph.D.(Lond.) ... Sr. Lectr.
A. J. Anderson, B.A.(Syd.) ... Lectr.
D. W. Dockrill, B.A.(Syd.) ... Lectr.
W. V. Doniela, M.A.(Syd.), Dr. Phil.(Freiburg) ... Lectr.

PSYCHOLOGY
B. Fenelon, B.A.(Qld.) ... Lectr.
A. C. Hall, B.A.(Edg.) ... Lectr.
I. D. John, B.A.(Adel.), MA.(Melb.) ... Lectr.
J. A. C. Price, B.A.(Qld.) ... Lectr.

COMMERCE

ACCOUNTANCY
R. W. G. Gibbins, B.Com.(Qld.), A.C.A. ... Lectr.
R. A. Woodman, LL.B.(Syd.) ... Lectr.

ECONOMICS
W. P. Hogan, M.A.(N.Z.), Ph.D.(A.N.U.) ... Assoc. Prof.
B. L. Johns, M.A.(Can'tab.) ... Sr. Lectr.
P. W. Sherwood, B.Com.(Lond.) ... Sr. Lectr.
B. J. Gordon, M.Ec.(Syd.) ... Lectr.
T. S. Jilek, B.Ed.(Syd.) ... Lectr.
A. J. Fitzgibbons, B.Com., Teaching Fellow
Vacancy ... Lectr.

CIVIL ENGINEERING
G. J. Haggarty, B.E.(Syd.), S.M.(M.I.T.), A.M.I.E.Aust. ... Sr. Lectr.
A. Herzog, Dipl.Eng.(Budapest), A.M.I.E.Aust. ... Sr. Lectr.
W. G. Field, B.E., A.S.T.C. ... Lectr.
B. S. Heaton, A.S.T.C., B.E. ... Lectr.

ELECTRICAL ENGINEERING

MECHANICAL ENGINEERING
A. K. Johnston, B.E.(Syd.), M.S.(Iowa), Ph.D. ... Assoc. Prof.
A. Betz, M.E., A.S.T.C., A.M.I.E.Aust. ... Sr. Lectr.
L. W. Browne, B.E.(Syd.) ... Lectr.
A. G. Butler, B.E., A.S.T.C. ... Lectr.
M. J. Hallman, A.S.T.C. ... Lectr.

CHEMISTRY
J. A. Allen, M.Sc.(Qld.), Ph.D.(Bristol), F.R.A.C.I. ... Prof.
E. B. Jacobs, B.Sc.(Syd.), A.R.A.C.I. ... Lectr.
K. H. Bell, B.Sc., A.R.I.C., Teaching Fellow
E. A. Magnusson, B.Sc.(Ph.D.), Ph.D., Visiting Lectr.
R. Basden, B.Sc.(Lond.), M.Ed.(Melb.), A.S.T.C., F.R.A.C.I. ... Lectr.
F.I.M.Aust. ... Hon. Res. Fellow
GEOLOGY
Beryl Nashar, B.Sc., Dip.Ed.(Syd.), Ph.D.(Tas.) ... Sr. Lectr.
A. S. Ritchie, M.Sc., A.S.T.C. ... Sr. Lectr.
B. A. Engel, M.Sc.(N.E.) ... Lectr.
C. F. K. Diessel, Dipl.Geol., Dr.rer.nat.(Berlin) ... Sr. Demonstrator

MATHEMATICS
I. L. Rose, B.E.(Syd.), Ph.D. ... Sr. Lectr.
W. Brisley, B.Sc.(Syd.), Dip.Ed.(N.E.), M.Sc. ... Lectr.
J. R. Giles, B.A.(Syd.), Dip.Ed.(Syd.) ... Lectr.
J. A. Lambert, B.Sc.(Syd.) ... Lectr.
M. Temple, M.A.(Dub.) ... Lectr.
I. F. Vivian, B.Sc.(Lond.) ... Lectr.
Vacancy ... Snr. Tutor

PHYSICS
J. D. Balfre, M.Sc.(Qld.), A.Inst.P. ... Lectr.
J. E. Cleary, B.Sc. ... Lectr.
J. A. Ramsey, M.Sc.(Melb.) ... Lectr.
Vacancy ... Snr. Tutor

TECHNICAL STAFF

DEPARTMENT OF CIVIL ENGINEERING
M. G. van Santen, Dipl.Eng.(Utrecht) ... Technical Officer
Vacancy ... Technical Officer

DEPARTMENT OF MECHANICAL ENGINEERING
R. D. Bourne, H.N.C. ... Technical Officer
D. B. Stewart, B.E., A.S.T.C. ... Technical Officer
H. A. Willems, Dipl.Eng.(Dordrecht), B.E., A.S.T.C. ... Technical Officer

DEPARTMENT OF CHEMISTRY
N. G. Keats, B.Sc., A.S.T.C., A.R.A.C.I. ... Technical Officer

DEPARTMENT OF METALLURGY
J. A. Grahame, A.S.T.C. ... Technical Officer
D. D. Todd, B.Sc., A.S.T.C. ... Technical Officer

UNIVERSITY SERVICES STAFF
Assistant to the Registrar: Lorraine Brock, B.A.
Accounts and Purchasing Officer: G. W. Walker.
Examinations Officer: Christina Marquet, B.A.(Tas.).
Senior Student Counsellor: S. G. Alley, B.A.(Syd.), A.S.T.C.(Chem.).
Secretary/Manager, Union: I. H. S. Irwin.
Chaplains:
The Rev. J. E. Helm ... Baptist
The Rev. E. H. V. Pitcher, M.A.(Syd.) ... Church of England in Australia
The Rev. E. Towner ... Methodist
The Rev. H. Barratt, B.A.(Syd.) ... Presbyterian
The Rev. Father J. Carson, B.A.(Syd.), Dip.Soc.Stud.(Syd.) ... Roman Catholic
ACADEMIC BOARD OF STUDIES

CHAIRMAN

MEMBERS EX OFFICIO
The Dean of the Faculty of Applied Science: Professor M. Chaikin, B.Sc., Ph.D.(Leeds), Dip.Eng.(I.I.T.Shanghai), F.T.I.
The Dean of the Faculty of Architecture: Vacant.
The Dean of the Faculty of Arts: Professor M. S. Brown, M.A., Dip.Ed.(Syd.), Ph.D.(Lond.).
The Dean of the Faculty of Commerce: Professor E. B. Smyth, A.S.T.C., F.A.S.A., A.C.I.S.
The Dean of the Faculty of Engineering: Professor A. H. Willis, B.Sc., B.Ec.(Syd.), Ph.D.(Lond.), M.I.Mech.E., A.M.I.E.Aust., Wh.Sc.
The Dean of the Faculty of Medicine: Professor F. F. Rundle, B.Sc., M.D.(Syd.), F.R.C.S., F.R.A.C.S., F.O.A.S.
The Dean of the Faculty of Science: Vacant.
The Registrar: G. L. Macauley, B.Ec.(Syd.).
Secretary: The Registrar, Newcastle University College: J. F. Foley, B.Ec.(Syd.).

APPLIED SCIENCE

ARCHITECTURE
E. C. Parker, A.S.T.C., A.R.A.I.A.

ARTS
Head of the Division: Associate Professor B. Newton John, M.A. (Cantab.).
Classics: R. G. Tanner, M.A. (Melb. and Cantab.).
Education: G. H. Duncan, M.A.(Syd.), B.Ed.(Melb.).
English: D. B. O'D. Biggs, B.A.(Lond.), M.A.(So'vonon).
Geography: Associate Professor A. D. Tweedie, M.A.(N.Z.).
German: J. M. Ritchie, M.A.(Aberdeen), Dr. Phil. (Tubingen).
History: Associate Professor G. A. Cranfield, B.A., Ph.D.(Cantab.).
Philosophy: A. M. Ritchie, M.A.(Syd.), Ph.D.(Lond.).

COMMERCE
Head of the Division: Associate Professor W. P. Hogan, M.A.(N.Z.), Ph.D. (A.N.U.).
Economics: P. W. Sherwood, B.Com.(Lond.).

ENGINEERING
Mechanical Engineering: Associate Professor A. K. Johnston, B.E. (Syd.), M.S.(Iowa), Ph.D.

SCIENCE
Head of the Division: Professor J. A. Allen, M.Sc.(Qld.), Ph.D. (Bristol), F.R.A.C.I.
Geology: Beryl Nashar, B.Sc., Dip.Ed.(Syd.), Ph.D.(Tas.).
Mathematics: I. L. Rose, B.E.(Syd.), Ph.D.
REQUIREMENTS FOR ADMISSION

Candidates may qualify for entry to undergraduate courses by complying with the matriculation requirements set out hereunder at the New South Wales Leaving Certificate Examination, or the University of Sydney Matriculation Examination.

The New South Wales Leaving Certificate Examination is usually held in November and entries must be lodged with the Department of Education during August.

The Matriculation Examination is held in February, and applications must be lodged at the University of Sydney during the first ten days of January except by candidates who have taken the Leaving Certificate Examination in the previous November. The closing date for such candidates will be announced when the Leaving Certificate results are published.

The following matriculation requirements operate from 1st January, 1961, but candidates will be permitted to qualify for entry under the requirements current in 1960 until March, 1964; these requirements are set out below the new requirements.

MATRICULATION REQUIREMENTS

(To operate from 1st January, 1961)

1. (i) A candidate for any first degree of the University must satisfy the conditions for admission set out hereunder before entering upon the prescribed course for a degree. Compliance with these conditions does not in itself entitle a student to enter upon a course.

(ii) A candidate who has satisfactorily met the conditions for admission and has been accepted by the University shall be classed as a “matriculated student” of the University after enrolment.

(iii) A person who has satisfactorily met the conditions for admission may on the payment of the prescribed matriculation fee be provided with a statement to that effect.

2. (i) For the purpose of matriculation, approved subjects* are grouped as follows:—

   A. English;
   B. Latin, Greek, French, German, Italian, Hebrew, Chinese, Japanese, Russian, Dutch, Geography, Ancient History, Modern History, Economics;
   C. Mathematics I, Mathematics II, Mathematics III;
   D. Agriculture, Applied Mathematics, Biology, Botany, Chemistry, Physics, Geology, General Mathematics, Physics and Chemistry, Physiology, Zoology;
   E. Accountancy, Art, Descriptive Geometry and Drawing, Music, Theory and Practice of Music.

(ii) In order to satisfy the conditions for admission to undergraduate courses leading to a degree candidates must pass the New South Wales Leaving Certificate Examination conducted by the Department of Education or the University of Sydney Matriculation Examination, in at least five approved subjects at the one examination; provided that:—

   I. either (a) the five subjects include English and at least one subject from each of Groups B and C, but include not more than one subject from Group E, except that candidates may qualify for admission to the Division of Arts only, by passing in one subject from Group D in lieu of the subject from Group C, or (b) the five subjects include English, and at least one subject from either Group B or Group C, but include not more than one subject from Group E, and provided further that the five passes include either one first class Honours and two A’s or two Honours of which one is first class, and:—

   II. (a) neither Physics nor Chemistry is offered with the combined subject Physics and Chemistry;
   (b) neither Botany nor Zoology is offered with Biology;
   (c) neither Botany nor Zoology nor Biology is offered with Physiology;
   (d) neither Mathematics I nor Mathematics II nor Mathematics III is offered with General Mathematics;
   (e) neither Mathematics I nor Mathematics II is offered with Mathematics III;
   (f) Mathematics I or Mathematics II may be counted as an approved subject only if the candidate presented himself for examination in both Mathematics I and Mathematics II;
   (g) Theory and Practice of Music is accepted only in cases where the pass was obtained at an examination in 1946 or subsequent years;
   (h) Ancient History is accepted only in cases where the pass was obtained at an examination held in 1945 or subsequent years; and further both Modern History and Ancient History may be offered as qualifying subjects at the examinations held at the end of 1951 and subsequent years;
   (i) Agriculture is accepted only in cases where the pass was obtained at an examination held in 1945 or subsequent years;
   (j) Economics is accepted only in cases where the pass was obtained at an examination held in 1947 or subsequent years;
   (k) Descriptive Geometry and Drawing is accepted only in cases where the pass was obtained at an examination held in 1954 or subsequent years.

(iii) Candidates who have satisfactorily met the matriculation requirements of the University of Sydney, but who have not obtained the requisite pass in Mathematics where prescribed for entrance to the University of New South Wales, will be permitted to complete their qualifications to enter the University of New South Wales by passing only in a Mathematics subject from Group C, at a subsequent Leaving Certificate or Matriculation Examination.

3. Notwithstanding the provisions of section (2) above, candidates may be accepted as “matriculated students” of the University under the following conditions subject to the approval of the Professorial Board:—
(i) Any person who holds a diploma from the New South Wales Department of Technical Education, or any other Technical College which may from time to time be recognised by the University, may be admitted to the University as a "matriculated student" with such status as the Board may determine, provided that, in the opinion of the Board, the applicant's qualifications are sufficient for matriculation to the Division nominated.

(ii) The Board may admit as a "matriculated student" in any Division with such status as the Board may determine in the circumstances:—

(a) A graduate of any approved University.

(b) An applicant who presents a certificate from a University showing that he has a satisfactory record and is qualified for entrance to that University, provided that, in the opinion of the Board there is an acceptable correspondence between the qualifying conditions relied upon by the applicant and conditions laid down for matriculation to the nominated Division of the University of New South Wales.

(iii) (a) Any person who has completed the first year of the course at the Royal Military College of Australia and submits a certificate from the Commandant to that effect may be admitted as a "matriculated student" of the University.

(b) Any person who has completed a full course of at least three years' prescribed study at the Royal Military College of Australia and produces a certificate from the Commandant to that effect may be admitted as a "matriculated student" of the University with such status as the Board may determine.

(iv) Any person who has completed satisfactorily the passing out examination of the Royal Australian Navy College and submits a certificate from the Commanding Officer may be admitted as a "matriculated student" of the University.

(v) (a) Any person who has completed the first year of the course at the Royal Australian Air Force College and submits a certificate from the Commandant to that effect, may be admitted as a "matriculated student" of the University.

(b) Any person who has completed two years of the course at the Royal Australian Air Force College and submits a certificate from the Commandant to that effect, may be admitted as a "matriculated student" of the University with such status as the Board may determine.

4. (i) The Professorial Board may in special cases, including persons of other than Australian education, declare any person qualified to enter a Division as a "provisionally matriculated student", although he has not complied with the requirements set out above, and in so doing may prescribe the completion of certain requirements before confirming the person's standing as a "matriculated student." Students who satisfactorily complete these requirements will be permitted to count the courses so passed as qualifying for degree purposes.

(ii) Persons over the age of twenty-five years may be admitted to provisional matriculation status provided that:—

(a) they have a meritorious pass at the Leaving Certificate Examination or an equivalent examination and have passed in at least five subjects at such examination, or

(b) they have satisfactorily completed an approved course of systematic study extending over at least three years after passing the Intermediate Certificate Examination, or

(c) they satisfy the Professorial Board that they reached a standard of education sufficient to enable them profitably to pursue the first year of the proposed course.

(iii) Any applicant for provisional matriculation status may be required to take such examination as the Professorial Board may prescribe before such status is granted.

5. The Professorial Board may at its discretion permit a person who does not satisfy the requirements for admission, to attend lectures in a subject or subjects at the University, on payment of the prescribed fees provided that such person shall not necessarily have the privileges of "matriculated students" and shall not be eligible to proceed to a degree.

ADMISSION REQUIREMENTS CURRENT IN 1960

Compliance with these requirements will qualify for admission to the University in courses other than Arts until March, 1964, but such compliance does not in itself entitle a student to enrol in a course.

I. Applicants for entry to undergraduate courses leading to a degree may satisfy entrance requirements by obtaining the New South Wales Leaving Certificate or equivalent qualification, by passing in at least five subjects, at the one examination of which one must be English and one other must be Mathematics I, or Mathematics II, or Mathematics III, three other subjects being chosen from the following groups, at least one of the three being from Group A:—

Group A.—Latin, French, Greek, German, Italian, Hebrew, Chinese, Japanese, Russian, Dutch, Geology, Geography, Agriculture, Economics, Modern History, Ancient History, Combined Physics and Chemistry, Physics, Chemistry, Physiology, Biology, Botany or Zoology.


II. Candidates who have presented themselves for the Leaving Certificate or equivalent examination in five or six subjects selected in accordance with the requirements prescribed in I and who have passed in English and a Mathematics and two other of the subjects may be granted admission provided that they have been awarded A passes or passes with Honours in at least three of these four subjects.

The other provisions set out in the new requirements above also apply.

* It should be noted that certain subjects taken for the Leaving Certificate are not approved subjects for admission to the University of New South Wales.
INSTRUCTIONS FOR ENROLMENT—1963

1. Enrolment involves:

(a) AN APPLICATION lodged by the prospective student with the Registrar, Newcastle University College, Tighe's Hill, 2N, Newcastle, on the prescribed application form not later than the closing date for application for enrolment.

Before a decision can be made on the student's enrolment application, such application must include the programme of study for the entire academic year for the consideration of the Head of Division.

Those whose plans are indefinite are advised to apply in time and to withdraw later if necessary. Late applications lodged prior to the 31st March, 1963 will be considered only if due to circumstances over which the applicant had no control.

An enrolment application from the student seeking to enrol for the first time will not be accepted unless accompanied by the originals, or preferably certified copies, of previous educational qualifications, excepting that documentary evidence of qualifications obtained at the New South Wales Leaving Certificate Examination held in November, 1962, is not required.

(b) AN OFFER by the University to accept the student in the study programme set down in the enrolment application. This is made by mailing the enrolment application to the student during February, and is conditional upon verification that the student has complied with the requirements for admission and the course proposed.

(c) AN ACCEPTANCE made by the student by paying, within the prescribed time, the appropriate fees.

The student who is unable to make application for enrolment and/or to accept an offer of enrolment by the closing dates prescribed, may make written application to the Registrar for an extension of time. Such application must be made prior to the closing date prescribed and approval will be given only in exceptional circumstances.

The student reading for a Higher Degree must each year complete an enrolment application and pay the prescribed fees prior to the commencement of the third week of First Term. Where a Higher Degree student fails to pay the prescribed fees within six weeks of the commencement of First Term, his registration may be suspended.

The completion of an enrolment does not automatically entitle a student to sit for the annual examinations and a separate application to sit for the examinations must be made.

2. Closing Dates for Applications for Enrolment.

A. First Enrolments.

(a) Local Applications — 31st January, 1963.

The new student or one enrolling in a new course is required to lodge a completed Enrolment Application Form with the Registrar not later than the 31st January, 1963, excepting that the student sitting for the Matriculation Examination of the University of Sydney, is exempt from this provision, but is required to submit an enrolment application within seven (7) calendar days of the publication of the said examination results.

(b) Special Applications.

(i) Application for Admission by an Overseas Student — 1st November, 1962.

(ii) Application for Provisional Matriculation Status — 20th December, 1962.

(iii) Application for Enrolment with Advanced Standing — 20th December, 1962.

The student with educational qualifications from countries other than Australia should submit his application with supporting certificates not later than the 1st November, 1962. An overseas student should ensure that he has an adequate knowledge of English as he will be required to present himself in Australia to pass a special English Test prior to his admission.

An application for enrolment with advanced standing or for provisional matriculation status must be fully completed and submitted together with supporting certificates of educational qualifications, not later than the 20th December, 1962.

A person lodging an application after the due date may expect that, should the application be successful, he will not be permitted to commence an academic course with the College until 1964.

B. Enrolment in second and subsequent years—31st January, 1963

(a) The student enrolling in the second or subsequent year of a course, if not required “to show cause” because of the restrictions on re-enrolment rules, must complete and lodge an Enrolment Application Form with the Registrar not later than the 31st January, 1963.

The student with deferred examinations to complete, is to lodge an Enrolment Application Form by the 31st January, 1963, and assume that he will attain a satisfactory standard in the deferred examinations.

(b) The student required “to show cause” because of the restrictions on re-enrolment is exempt from the above requirement, but must lodge an Enrolment Application Form within seven (7) calendar days of the despatch of a letter advising of permission to re-enrol.

The student who must complete the deferred examinations before a decision on his eligibility to re-enrol is reached is also exempt from the above requirement but must lodge an Enrolment Application Form within seven (7) calendar days of the publication of the results of the examinations—in the case of the student who is successful—or of the despatch of a letter advising of permission to re-enrol.

The student enrolled in a course in 1962 should consult his academic advisers during Third Term, 1962, regarding his proposed course programme for 1963.
3. Information.

Information as to Courses, Examinations, Discipline and other matters are set out in the College Handbook, which may be obtained on application to the Cashier (price 10/-). It is the student's responsibility to be familiar with such information, and to abide by, all University rules.

The student is expected to be in possession of the current Handbook at the time of completing the Enrolment Application Form. Copies are available for consultation in the University Library and in town and secondary school libraries throughout New South Wales.

4. Enrolment Enquiries.

The student with general enquiries about the enrolment procedure should consult the Assistant to the Registrar.

5. Information on Courses and Subjects.

Information on courses and subjects and the pre-requisites and co-requisites which obtain is available in the Handbook, which should be consulted prior to seeking advice from academic staff.

6. Academic Advice on Courses and Subjects.

The student who is uncertain as to which course and/or which subjects he should read; after referring to the information available in the Handbook, should consult a member of the academic staff.

Members of the academic staff will be available for consultation during 1962 up to and including the 21st December, 1962, and during Orientation Week in 1963, namely from the 25th February to the 1st March inclusive.

Appointments and consultations at other times may be arranged by contacting the Secretary to the Division in which the course is being offered.

Members of Academic Staff available for advice on courses:

DIVISION:

Arts .......................... Professor B. Newton John
Architecture ........................ Mr. E. C. Parker
Applied Science ................. Professor E. O. Hall
Engineering ........................ Professor E. M. Gooader
Commerces ........................ Professor W. P. Hogan
Science .......................... Professor J. A. Allen


Students should give serious thought to the possibility of studying for a degree with Honours and eventually for a higher degree.

8. How to Fill In the Enrolment Form.

Before filling in details of your course, please read the appropriate sections of the Handbook and if necessary consult your Head of Division. The completed form or a request for advice must be lodged by the 31st January, 1963.

Please answer ALL questions. After you have filled in your enrolment application, please check carefully to ensure that:

(a) all questions have been answered on each page; and
(b) when the same question appears on different parts of the form you have given the same answer.
(c) the description of subjects and hours of instruction correspond exactly with the information shown in the Handbook.

(d) the timetable of classes for the proposed study programme is complete and accurate.

The student is required to check his proposed course programme to ensure that:

(a) he has completed pre-requisite subjects.
(b) he is satisfying the sequence requirements.
(c) the subjects chosen are being offered in 1963 and there is no timetable clash.

9. Lecture Timetables.

A timetable of lectures for 1963 is published in the Handbook for the guidance of students completing their enrolment.

10. Limitation of Studies.

Part time students are not permitted to enrol in subjects requiring an attendance in excess of that prescribed for a normal stage; part time students in Arts and Science normally are not enrolled for more than two subjects in any one year.

11. Late Applications for Enrolment.

Except in special circumstances, an enrolment application will not be accepted after the 31st January, 1963. Applications lodged after this date will be accepted only if supported by a written explanation showing adequate cause for the delay in applying for enrolment.

12. Amendments to Enrolment.

Only one application form should be submitted by each student each year. If the student wishes to amend his enrolment application he should apply in writing, preferably on the form provided for the purpose, which is available from Division Offices and from the Cashier, requesting that alterations be made to the original enrolment. All amendments to enrolments must be finalised by the 31st March, 1963.

The student must ensure that there is no discrepancy between the course programme he is following and that in which he is enrolled.

A student may not take subjects for which he is not enrolled and may not withdraw from a subject without permission.


The student whose enrolment has been authorised will be advised by mail to this effect by the return of his enrolment application. In cases where an enrolment may be authorized subject to certain amendments, the student concerned may be advised by mail or may be requested to call for an interview.

Where the Head of a Division considers it desirable, or where the student has so requested, an appointment will be made for the student to discuss his enrolment application.

The student whose enrolment cannot be accepted will be notified in writing.

14. Fees.

The student failing to make payment by the due date will be charged a late fee or may be refused permission to enrol.

The student whose fees are met from a scholarship or some other form of financial assistance is required to submit an authorised enrolment application together with a voucher or other documentary evidence accepting liability for his fees, together with payment of
fees not included in such authority, to the Cashier by the due date. Where such documentary evidence is not available, the student is expected to make payment by the due date and to apply for a refund of fees paid when he is in a position to lodge such document.

The closing dates for payment of fees in 1963 are as follows:

- **First Term**: 15th March, 1963
- **Second Term**: 7th June, 1963
- **Third Term**: 6th September, 1963

It is recommended that wherever possible payment of fees be made through the post, by cheque, money order, or postal note.

Payment in person may be made to the Cashier whose ordinary hours of opening are as follows:

- Monday to Friday, 9.00 a.m. to 10.30 a.m.
- 1.00 p.m. to 4.30 p.m.

During enrolment periods the Cashier will be open for additional hours which will be published on the notice boards.

15. **Orientation Programme.**

An orientation programme will be conducted in the week commencing Monday 25th February, 1963, for the purpose of introducing new students to the University.

Members of staff and senior students will be available to provide information; inspections of facilities will be arranged and representatives of clubs and societies will be available.

---

**WITHDRAWAL FROM UNIVERSITY OR DEPARTURE FROM AUTHORIZED PROGRAMME**

A student is required to apply in writing for approval to withdraw from the University during the academic year or to depart from his authorized programme for the academic year. Such application should be lodged with the Registrar.

Permission to withdraw or discontinue may be granted provided written application is lodged with the Registrar prior to the date on which applications to sit for the annual examinations close. Applications lodged after this date will not usually be approved unless due to circumstances over which the student had no control.

Except where permission is granted, withdrawal from the University or discontinuance of enrolment in any subject is recorded as a failure.

The student is responsible for all University charges accruing to the date of application for withdrawal or discontinuance and all accounts due to the University must be settled and all University property returned before any such application is approved.

A partial refund of course fees only, may be made where an application to withdraw is lodged after the commencement of First Term.

Where written application to withdraw from a course is lodged with the Registrar prior to the first day of First Term a refund of all fees paid, other than the matriculation fee, will be made.
FEES

Subject to compliance with the University regulations and conditions, enrolment is completed by the payment of fees. Fees must be paid no later than the last day of the second week of First Term; the student failing to do so may be permitted to enrol on payment of an additional fee of £5. Fees tendered in completion of enrolment after the 31st March normally will not be accepted; enrolment must be finalised not later than the 31st March.

The student who is unable to pay the fees by the year may pay by the term in which they are due, and any term in which the student is enrolled must be faxed at the beginning of each term. The student taking advantage of this arrangement must present (in person or by post) to the Registrar a re-enrolment form accompanied by his Registration Card, if this is not available, by a certificate issued by the Office of the Registrar for a fee of £1/-. The student who is unable to pay fees by the appointed date may apply in writing to the Registrar for an extension of time (a maximum of one month may be allowed), but the application will not secure exemption from late fees unless it is lodged before the date on which the late fee becomes payable.

Any student who is indebted to the University and who fails to make a satisfactory settlement of his indebtedness upon receipt of due notice ceases to be entitled to membership and privileges of the University. Such a student is not permitted to register for a further term, to attend classes or examinations, or to be granted any official credentials.

The student is not eligible to attend the annual examinations in any subject where any portion of his course fees for the year are outstanding as at the 30th June. In very special cases the Registrar may grant exemption from the disqualification referred to in the two preceding paragraphs upon receipt of a written statement setting out all relevant circumstances.

COURSE FEES

Where course fees are assessed on the basis of weekly hours of attendance, the hours for each subject for purposes of fee assessment shall be those prescribed in the Handbook, irrespective of any variation from the prescribed hours which may be necessary in conducting the subject.

The granting of an exemption from portion of any of the requirements of a subject does not carry with it any exemption from the payment of fees.

A. Undergraduate Courses Other than in Arts and Commerce.

For the purpose of fee determination, assessment is on a term basis. A full-time course fee will be charged for any term where more than 15 hours per week instruction, etc., is involved.

(i) Full-time Course Fee—

(a) More than 15 hours' attendance per week—£1.50 per annum or £2.50 per term.
(b) In courses in which the Third Term is limited to four weeks of formal studies the fee for this term is £2.40.

(ii) Part-time Course Fee—

(a) Over 4 hours and up to 11 hours attendance per week—£1.25 per annum or £12 per term.
(b) 4 hours or less attendance per week—£0.75 per annum or £7.50 per term.

B. Bachelor of Commerce Course.

** (i) Full-time Course Fee—

More than 11 hours' attendance per week—£20.00 per annum or £40 per term.

(ii) Part-time Course Fee—

(a) Over 4 hours and up to 11 hours attendance per week—£7.25 per annum or £72.50 per term.
(b) 4 hours or less attendance per week—£12 per annum or £120 per term.

(iii) Thesis Fee—

Undergraduates who have completed the final examinations but have a thesis still outstanding are required to pay £10 per annum (no term payment).

C. Bachelor of Arts Course†

(i) £38 per annum per subject or £12 per term per subject.

(ii) Distinction or Honours—

An additional £12 per annum per subject II or III taken at Pass and Distinction level—£48 per annum per final Honours Year subject.

(iii) For part-time students who have been given approval to extend the Final Honours Year over two successive years the course fee applicable to each year shall be half the normal course fee.

D. Miscellaneous Subjects.

(i) Undergraduate subjects taken as "miscellaneous subjects" (i.e. not for a degree or diploma) or to qualify for registration as a candidate for a higher degree are assessed where they appear only in an Arts course (except where approved as the humanities component in another course) according to paragraph C. "Bachelor of Arts Course", above. Where the distinction section only of an Arts subject is taken the fee payable is the subject fee for a pass Arts subject. All other subjects taken as miscellaneous subjects are assessed according to paragraph A. "Courses other than in Arts and Commerce", above.

In cases where a student takes a programme of miscellaneous subjects from the two categories referred to above the fees are assessed in accordance with paragraph A. "Courses other than in Arts and Commerce", above.

(ii) Fees for a student given approval to enrol in a miscellaneous subject or subjects in addition to being enrolled in a course are assessed according to the total hours of attendance as if the additional subject formed part of the course.

** Students who were enrolled in a full-time Commerce course in 1962 will be allowed a rebate of £10 per term (£30 per annum) for the 1963 and 1964 academic years and in the case of Honours students for the 1965 academic year.

† Students transferring from the Arts course to a course other than Arts shall have their fees for these subjects re-assessed retrospectively to conform to those payable for the course to which they transfer.
A. First Term—
   (i) A late fee of £3 is payable where fees are paid after the end of the second week of term, but not later than 31st March.
   (ii) A late fee of £5 is payable if approval is given for the acceptance of fee payment after the 31st March, 1963.

B. Second and Third Terms—
   (i) A late fee of £3 is payable where fees are paid after the second week, but prior to the end of the fourth week of term.
   (ii) A late fee of £5 is payable where fees are accepted after the fourth week of term.
   (iii) Fees tendered more than two months after the end of the second week of second or third term will not be accepted without special approval which will be given only in exceptional circumstances on written application.

C. Application for Admission to Examinations—
   A late fee of £2 is payable where an application for Admission to Examinations is accepted after the prescribed closing date.

LABORATORY FEES
The student enrolled in Chemistry is required to pay an amount of £4 for each laboratory kit issued each year.

Conditions of Loan
1. The student pays a locker fee of £1 for each kit to cover wear on deprecating items.
2. The student must pay the fee prior to issue of kit or kits. The fee, less the locker fee and any deductions for losses and breakages, is refundable on return of kit.
3. The kit must not be removed from the laboratory in which it is being used and when not in use must be kept in the locker provided.
4. The kit must be returned in good order and condition at any-time required by an authorised University officer.
5. The student must pay for losses and breakages.
6. The student must pay immediately to Cashier any charges in excess of the amount deposited.

OTHER FEES
In addition to the course fees set out above all registered students are required to pay:
   Matriculation Fee—£3 payable at the beginning of first year.
   Library Fee—£5 per annum.
   Newcastle University College Students' Association Fee—£2 per annum.
   Newcastle University College Union Subscription—£7 per annum.
   Newcastle University College Sports League Fee—£1 per annum.
   Deferred Examinations—£2 for each subject.
   Examinations under Special Supervision—£3 per subject.
   Review of Examination Result—£3 for each subject.
   Graduation Fee—£3 payable at the completion of the course.

HIGHER DEGREE FEES†

The Degree of Master.
Registered candidates for the award of the degree of Master of Architecture, Arts, Commerce, Engineering, or Science are required to pay the undermentioned fees:—

   Course and supervision fee:
      £30 per annum if registered as a full-time student.
      £15 per annum if registered as a part-time student.
      £10 per annum if registered as an external student.
   Library Fee*: £5 per annum.
   Newcastle University College Union Subscription*: £7 per annum.
   Newcastle University College Students' Association Fee*: £2 per annum.
   Newcastle University College Sports League Fee*: £1 per annum.
In addition the following fees are payable:
   Registration Fee: £2.
   Qualifying Examination Fee: £5.
   Final Examination and Graduation Fee: £15.

The Degree of Doctor of Philosophy.
Registered candidates for the award of the degree of Doctor of Philosophy are required to pay the undermentioned fees:—

   Course and supervision fee:
      £30 per annum.
   Library Fee*: £5 per annum.
   Newcastle University College Union Subscription*: £7 per annum.
   Newcastle University College Students' Association Fee*: £2 per annum.
   Newcastle University College Sports League Fee*: £1 per annum.
In addition the following fees are payable:
   Registration Fee: £2.
   Qualifying Examination Fee: £5.
   Final Examination Fee: £21.
* External Post Graduate candidates are not obliged to pay these fees.
† Higher Degree candidates are required to pay the whole of the annual fees due not later than the end of the second week of First Term; a late fee is payable if approval is given for the acceptance of fee payment after this date.

RESEARCH.

   (a) One day per week: £10 per annum.
   (b) Two or three days per week: £20 per annum.
   (c) Four or five days per week: £30 per annum.

Candidates who are required to complete prescribed work prior to their acceptance as registered candidates are charged a fee which is assessed according to the nature of the requirement.
GENERAL INFORMATION

ACADEMIC REQUIREMENTS

The student is responsible for informing himself as to, and for complying with, University requirements, especially the requirements relating to Admission and to the award of the degree for which he is reading.

NOTICES

Official University notices are displayed on the notice boards and students are expected to be acquainted with the contents of those announcements which concern them.

ATTENDANCE AT CLASSES

Students are expected to be regular and punctual in attendance at all classes in the course or subject in which they are enrolled. All applications for exemption from attendance at lectures or practical classes must be made in writing to the Registrar. If term examinations have been missed this fact should be noted in the application.

In the case of illness or of absence for some other unavoidable cause a student may be excused by the Registrar for non-attendance at classes for a period of not more than one month, or on the recommendation of the Head of the appropriate Division for any longer period.

Applications to the Registrar for exemption from re-attendance at classes, either for lectures or practical work, may only be approved on the recommendation of the Head of the appropriate Division. The granting of an exemption from attendance does not carry with it exemption from payment of fees.

Where a student has attended less than 80 per cent of the possible classes, he may be refused permission to sit for the examination in that subject.

OWNERSHIP OF STUDENTS' WORK

Unless other arrangements have been agreed on the University reserves the right to retain at its own discretion the original or one copy of any drawings, models, designs, plans and specifications, essays, theses, or other work executed by students as part of their courses, or submitted for any award or competition conducted by the University.

STUDENT IDENTIFICATION

Students are expected to carry their receipt for First Term Enrolment as evidence that they are entitled to the rights and privileges afforded by the University.

Students desiring certification of documents for obtaining travel and other concessions should present such documents to the Cashier.

CHANGE OF ADDRESS

Students are responsible for notifying the Registrar in writing of any change in their address as soon as possible. Failure to do this could lead to important correspondence or course information not reaching the student.
EXAMINATIONS

GENERAL
Examinations and other exercises may be held in any subject and at any time at the discretion of the lecturer or other competent authority, and the results of such examinations may be incorporated with those of the annual examinations in such subjects.

ANNUAL EXAMINATIONS
A student desiring to sit for an annual examination must lodge an application with the Registrar on the appropriate form by the prescribed date.

The annual examinations take place in November-December for students in thirty-week courses, and in September, early in the third term, for students in twenty-four week courses.
Time-tables showing time and place at which individual examinations will be held are posted on the central notice boards. Misreading of the time-table will not under any circumstances be accepted as an excuse for failure to attend an examination.

In the assessment of a student's progress in University courses, consideration is given to work in laboratory and class exercises and to any term or other tests given throughout the year, as well as to the annual examination results.

Any student whose attendance or performance at examinations is affected by serious ill health during the year or at the time of the examination or by other cause outside his control, and who desires these circumstances to be taken into consideration in determining his standing, is required to bring the circumstances to the notice of the Registrar not later than seven days after the date of the examination. A student who attempts an examination, yet claims that his performance is prejudiced by sickness on the day of the examination MUST notify the Registrar or Examination Supervisor before, during or immediately after the examination, and may be required to submit to medical examination. All other medical claims MUST be supported by doctors' certificates, which should be as specific as possible concerning the severity and duration of the complaint.

A student suffering from a physical disability which puts him at a disadvantage in written examinations may apply to the Registrar for special consideration when examinations are taken. The student may be required to support his request with medical evidence.

The prescribed dates by which applications to sit for examinations are to be lodged are:

(a) Annual examinations for 24-week courses—29th June.
(b) Annual examinations for 30-week courses—2nd August.
(c) Annual examinations for other courses—14 weeks prior to date of first examination.

No student is eligible to attend the annual examination in any subject if any portion of fees due by the student is outstanding by the end of the fourth week of Third Term (20th September, 1963).

The Cashier is authorised to receive application forms during the three weeks immediately following the prescribed closing dates if they are accompanied by a late fee of £2. Applications submitted more than three weeks after the closing date will not be accepted except in very exceptional circumstances and with the approval of the Registrar. Where an application is not accepted the student concerned is not eligible to sit for the examination.

DEFERRED EXAMINATIONS
A deferred examination in a subject may be granted by the Examination Committee responsible for the supervision of that subject. When a student is unable, owing to unavoidable circumstances, to sit for an examination in one or more subjects, the Registrar may grant permission for the student to sit for a deferred examination in the subject or subjects.

A student eligible to sit for a deferred examination must, within seven days following the announcement of his results either in the daily press or by notice posted at the University, lodge with the Cashier an application accompanied by the fee of £2 per subject.

Examinations are conducted in accordance with the following:

(a) Candidates are required to obey any instruction given by an examination supervisor for the proper conduct of the examination.
(b) Candidates are expected to be in their places in the examination room not less than ten minutes before the time for commencement.
(c) Candidates shall not bring into the examination room any text books, cases, notes, etc., (other than those aids specified as permissible for the particular examination), and in no case shall any such material be to hand in the course of the examination.
(d) No candidate shall be admitted to an examination after thirty minutes from the time of commencement of the examination.
(e) No candidate shall be permitted to leave the examination room before the expiry of thirty minutes from the time the examination commences.
(f) No candidate shall be re-admitted to the examination room after he has left it unless during the full period of his absence he has been under approved supervision.
(g) A candidate shall not by any improper means obtain or endeavour to obtain assistance in his work, give or endeavour to give assistance to any other candidate, or commit any breach of good order.
(h) Smoking is not permitted during the course of examinations.
(i) A candidate who commits any infringement of the rules governing examinations is liable to disqualification at the particular examination, and if detected at the time, to immediate expulsion from the examination room, and is liable to such further penalty as may be determined.
REGULATIONS AFFECTING THE COMPLETION OF COURSES

The University has introduced a number of regulations affecting the completion of courses as follows:

PROGRESSION IN COURSES

1. The student intending to follow any course leading to the degree of Bachelor in the Divisions of Applied Science and Engineering must have satisfied the examiners in the subjects Chemistry I, Physics I, Mathematics I and Engineering I before progressing in his course.

2. Full time students in the Divisions of Applied Science and Engineering must complete the subjects referred to in (1) above in not more than two (2) years.

Part time students in the Divisions of Applied Science and Engineering must complete the subjects referred to in (1) above in not more than four (4) years.

3. Students in the Division of Science must have satisfied the examiners in the subjects Physics I, Chemistry I, Mathematics I and a fourth subject (elective) chosen from Engineering I, Geology I, Geography I or Psychology I, after two years of full time study or four years of part time study.

4. A student who fails to qualify to progress to the next year of a course where progression is by year, may be granted, by the Head of the Division conducting the course, exemption from further attendance and examination in any subject in which he has achieved a pass at a satisfactory standard.

5. Except as provided in (1) above and (6) below—

A student will not be permitted to proceed to the next year of a course where progression is by year until he has passed in all subjects of the previous year.

6. On application, a student in a course where progression is by year, may be granted permission to progress to the next year and to include in his course for that year one subject only in which he failed in the immediately preceding year; the student must then, during the subsequent year, pass the examination in the subject for which special permission has been granted. A student availing himself of this provision will not be eligible for any prizes or scholarships at the annual examinations.

7. In general, students who fall in full time courses and who transfer to part time courses, shall not be re-admitted with advanced standing to the full time course until they have graduated from the part time course.

8. On enrolment, each student to whom Regulation (1) applies, will be required to nominate and apply for admission to the course which he desires to follow. Although application for transfer from one course to another within these Divisions may be made at any time, students are advised that such transfers are most readily effected prior to re-enrolment in the second year of full time courses and the third stage of part time courses. All such transfers will be subject to the regulations of the relevant Divisions and the concurrence of the Professorial Board.

REGULATIONS GOVERNING RE-ENROLMENT IN COURSES

9. The University Council has adopted the following regulations governing re-enrolment with the object of requiring students with a record of failure to show cause why they should be allowed to re-enrol. These rules will be applied retrospectively from January, 1962.

(i) As from the 1st January, 1962, a student shall show cause why he should be allowed to repeat a subject in which he has failed more than once. (Failure in a deferred examination as well as in the annual examination counts, for the purpose of this regulation, as one failure);

(ii) Notwithstanding the provisions of Clause 9 (i), a student shall be required to show cause why he should be allowed to continue a course which he will not be able to complete in the time set down in the following schedule:

<table>
<thead>
<tr>
<th>Number of years in course</th>
<th>Total time allowed from first enrolment to completion (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

(iii) No part time student shall, without showing cause, be permitted to continue a course unless all subjects of the first two stages of his course are completed by the end of his fourth year of attendance and all subjects of the third and fourth stages of his course by the end of his seventh year of attendance;

(iv) A student who has a record of repeated failures in a course at another University shall be required to show cause why he should be admitted to this University;

(v) Any student excluded under any of the Clauses 9 (i)-(iii) may apply for re-admission after two academic years and such application shall be considered in the light of any evidence submitted by him;

(vi) A student wishing “to show cause” under these provisions shall do so in writing to the Registrar. Any such application shall be considered by the Professorial Board, which shall determine whether the cause shown is adequate to justify his being permitted to continue his course or re-enrol as the case may be.

(vii) The Vice-Chancellor may on the recommendation of the Professorial Board exclude from attendance in any particular course any student who has been excluded from attendance in any other course under the rules governing re-enrolment and whose record at the University demonstrates, in the opinion of the Board and the Vice-Chancellor, the student’s lack of fitness to pursue the course nominated.
CONDITIONS FOR AWARD OF DEGREES

GENERAL

Conditions for the award of degrees generally are to be found in the information set down for each Division in the Courses of Study Section.

REGULATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE (TECHNOLOGY)

The courses leading to the award of the degree of Bachelor of Science (Technology) are normally programmed over six years of part-time study in the University whilst the student is employed in industry. The regulations governing the award of this degree are as follows:

1. A candidate for the degree of Bachelor of Science (Technology) shall
   (i) comply with the requirements for admission;
   (ii) follow the prescribed course of study in the appropriate Division and pass the necessary examinations;
   (iii) complete an approved programme of industrial training over a period of not less than three years concurrently with attendance in the course.

2. During each year a student shall perform laboratory, drawing office and field work, attend demonstrations and excursions to such an extent and in such a manner as is prescribed from time to time by the Professorial Board on the recommendation of the Academic Board of Studies and in addition, undertake industrial training as approved by the Head of the Division.

3. A student shall be required to conform with the general rules relating to progression in University courses.

4. A student may be granted advanced standing by the Professorial Board on the recommendation of the Admissions Committee but in each case a student must follow an approved course for at least three years with concurrent approved industrial training before being eligible for admission to the degree.

5. The degree of Bachelor of Science (Technology) shall not be awarded with Honours, but may be awarded with merit.

6. Students enrolled in courses leading to the degree of Bachelor of Science (Technology) may be permitted to reduce the length of the course provided that
   (i) they comply with the requirements of Clause I (iii) of the regulations (completion of an approved programme of industrial training over a period of not less than three years concurrently with attendance in the course);
   (ii) they complete such additional academic work as may be prescribed by the Professorial Board.

NOTE.—Students who wish to take advantage of Clause 6 are advised that current University regulations allow a course pattern of two years part time study, followed by two years of full time study, and then a final year part time. Students should consult Head of their Division for further information.

ACADEMIC DRESS

The details of academic dress worn by graduates of the University of New South Wales are as follows:

Gowns:

Degree of Bachelor—The gown worn by graduates holding the degree of Bachelor of Arts in the University of Oxford or the University of Cambridge.

Degree of Master—The gown worn by graduates holding the degree of Master of Arts in the University of Oxford or the University of Cambridge.

Degree of Doctor of Philosophy—Festal gown of black cloth faced with scarlet cloth to a width of 6 inches.

Cap:

Degrees of Bachelor, Master and Doctor of Philosophy—Black cloth trencher cap.

Hoods:

Bachelor of Architecture—Hood of black silk lined with white silk and edged with brick-red-coloured silk.

Bachelor of Arts—Hood of black silk edged with white fur.

Bachelor of Commerce—Hood of black silk edged with cream-coloured silk.

Bachelor of Engineering—Hood of black silk edged with light maroon-coloured silk.

Bachelor of Science—Hood of black silk edged with amber-coloured silk.

Bachelor of Science (Technology)—Hood of black silk edged with light maroon-coloured silk and amber-coloured silk.

Master of Arts—Hood of black silk lined with blue silk.

Master of Engineering—Hood of black silk lined with light maroon-coloured silk.

Master of Commerce—Hood of black silk lined with cream-coloured silk.

Master of Science—Hood of black silk lined with amber-coloured silk.

Doctor of Philosophy—Hood of scarlet cloth lined with black silk.
UNIVERSITY SERVICES

THE NEWCASTLE UNIVERSITY COLLEGE UNION

The Constitution of the Union was adopted by the Council of the University in a form which sets out the objects of the Union and establishes its organisation and system of control.

The Union provides premises and amenities for members of the University, to enable them to meet for purposes of social and intellectual intercourse. It is to provide facilities for refreshment, and the normal conveniences of civilised living. It is based on the assumption that all members of a university are responsible persons, capable of free association in the furtherance of their own interests and those of the Union and the University of which they are members.

Control of the Union is vested in the Board of Management, whose chief executive officer is the Secretary-Manager.

The Board of Management consists of:
(a) three persons appointed by the Council;
(b) the Registrar of Newcastle University College;
(c) one member elected by graduates;
(d) two members of the College Students' Association appointed by the Students' Association;
(e) three additional members appointed by the Council of the Students' Association, at least one of whom shall be a woman;
(f) two persons elected biennially by staff members giving full time instruction who are members of the Union;
(g) the Secretary-Manager.

Membership of the Union is obligatory on all registered students of the College, and is open, on payment of fees, to non-registered students, members of the University Council, members of the College Council, members of the teaching and administrative staffs, to graduates of the University of New England who were registered students of the College and to such other persons as the Board of Management may decide.

OFFICE BEARERS:
President: Dr. A. M. Ritchie.
Treasurer: Professor J. J. Auchmuty.
Secretary-Manager: Mr. I. H. S. Irwin.
Board Members: G. R. Bentley; J. F. Foley; Dr. T. Hamilton; E. A. Jones; J. A. Lambert; D. L. McLarty; R. J. Petherbridge; D. A. Rushton; Miss P. Smith; P. F. Walmsley.

NEWCASTLE UNIVERSITY COLLEGE STUDENTS' ASSOCIATION

Membership of the Newcastle University College Students' Association (N.U.C.S.A.) is open to all students of the College and is compulsory for registered students proceeding for a degree or diploma within the College. The governing body of the Association, the Council, is the recognised student representative body and consists of an Executive and Representatives of the Divisions, the number of Representatives being determined by the enrolments within the various Divisions.

The President, Secretary and Treasurer are elected by the total membership of the Association, and the Representatives by their respective Divisions during August of each year. The full Council then chooses from amongst its members two executive officers, Vice-President and Local N.U.A.U.S. Secretary. The Council may also appoint officers of committees to carry out its work particularly in such fields as student accommodation, health, education and publications. The Council also elects the five student members of the Board of Management of the University Union, two of whom must be members of the Council.

Most undergraduate clubs and societies with academic, cultural and recreational aims (with the exception of sporting clubs) are affiliated with the Association from which they obtain financial and administrative support.

The Council is a constituent member of the National Union of Australian University Students (N.U.A.U.S.) which is the national undergraduate organisation, constituted on a federal basis and comprising all but two of the Australian undergraduate representative bodies.

The official journal of the Association is "Opus."

OFFICE BEARERS:
President: P. F. Walmsley.
Vice-President: D. A. Rushton.
Secretary: B. E. Niland.
Treasurer: M. J. O'Neile.
Local N.U.A.U.S. Secretary: T. Cootes.

OFFICE BEARERS:
President: Dr. A. M. Ritchie.
Treasurer: Professor J. J. Auchmuty.
Secretary-Manager: Mr. I. H. S. Irwin.
Board Members: G. R. Bentley; J. F. Foley; Dr. T. Hamilton; E. A. Jones; J. A. Lambert; D. L. McLarty; R. J. Petherbridge; D. A. Rushton; Miss P. Smith; P. F. Walmsley.

NEWCASTLE UNIVERSITY COLLEGE STUDENTS' ASSOCIATION

Membership of the Newcastle University College Students' Association (N.U.C.S.A.) is open to all students of the College and is compulsory for registered students proceeding for a degree or diploma within the College. The governing body of the Association, the Council, is the recognised student representative body and consists of an Executive and Representatives of the Divisions, the number of Representatives being determined by the enrolments within the various Divisions.

The President, Secretary and Treasurer are elected by the total membership of the Association, and the Representatives by their respective Divisions during August of each year. The full Council then chooses from amongst its members two executive officers, Vice-President and Local N.U.A.U.S. Secretary. The Council may also appoint officers of committees to carry out its work particularly in such fields as student accommodation, health, education and publications. The Council also elects the five student members of the Board of Management of the University Union, two of whom must be members of the Council.

Most undergraduate clubs and societies with academic, cultural and recreational aims (with the exception of sporting clubs) are affiliated with the Association from which they obtain financial and administrative support.

The Council is a constituent member of the National Union of Australian University Students (N.U.A.U.S.) which is the national undergraduate organisation, constituted on a federal basis and comprising all but two of the Australian undergraduate representative bodies.

The official journal of the Association is "Opus."

OFFICE BEARERS:
President: P. F. Walmsley.
Vice-President: D. A. Rushton.
Secretary: B. E. Niland.
Treasurer: M. J. O'Neile.
Local N.U.A.U.S. Secretary: T. Cootes.
NEWCASTLE UNIVERSITY COLLEGE SPORTS LEAGUE

In December, 1960, the University Council approved the establishment of the Newcastle University College Sports League as the organisation to promote and control sporting activities within the College. Prior to the establishment of this organisation, the control of sporting activities had been vested in the Students’ Association.

The governing body of the League is comprised of a President, Vice-President, Secretary, Treasurer, a Representative of the University Council and one delegate from each of the affiliated Clubs.

The affiliated Clubs provide a wide range of sporting activities for members of the League. Membership of the League is compulsory for all registered students whilst associate membership for University personnel who are not registered students, is also available.

OFFICE BEARERS:

President: K. Bell.
Vice-President: K. Pilgrim.
Secretary: M. O’Neile.
Treasurer: G. Stephenson.

Members of the Executive: S. Algie; G. Deitz; J. Gardiner; S. Hely; N. Jarrett; W. Jonas; K. Pilgrim; J. Rosenthal; M. Williams; N. Wilson; R. Woodman.

THE LIBRARY

The Library consists of the main reading-room for books and other non-serial publications on the first floor, and the periodicals reading-room on the ground floor, containing all bound periodicals, all loose periodicals, all periodical abstracts and indexes. In both reading-rooms there is almost complete freedom of access to the collections.

LENDING

Borrowing conditions vary according to the material. Students may borrow some books for a week, others only for the weekend, and others, such as reference books and periodicals, not at all. Books set for essays and essential reading are kept behind the reference desk, and are issued for use in the library under such conditions as will enable use of them by the greatest number of students. Copies of essay lists and reading guides may be consulted near the main catalogue. Books which are not in the library may be borrowed for honours students and post-graduate students, from Sydney or interstate libraries.

Applications for inter-library loans should be made to—

The Inter-Library Loans Officer,
Periodicals Reading Room.

PHOTOGRAPHIC DEPARTMENT

Reproduction of articles or sections of books may be obtained, the usual price being 1/6d. per quarto page. Enquiries should be made at the reference desk in the periodicals reading-room.

Microfilm and microcard readers are available in a specially equipped room on the ground floor. Material which the Library has on micro-copy is recorded in the main catalogue.

LIBRARY HOURS

Unless otherwise notified, the Library is open throughout the academic year:

Academic Year: Monday–Friday — — — — 9.00 a.m. — 9.30 p.m.
Saturday — — — — 9.30 a.m. — 12.30 p.m.

All Vacations: Monday, Wednesday, Friday — 9.00 a.m. — 5.00 p.m.
Tuesday, Thursday — — — 9.00 a.m. — 7.00 p.m.

The Library is closed on Public Holidays.

The Librarian is available by appointment to discuss with students matters relating to library service.
COUNSELLING AND WELFARE SERVICES

GENERAL COUNSELLING

The Newcastle University College provides a Counselling Service to assist prospective and enrolled students with any problems relating to study methods, library usage, general adjustment to University life and factors of personality or environment. Courses for the improvement of reading skills and tests of ability and personality will be arranged on request. All interviews are completely confidential.

The Counsellor’s Office is located on the first floor of the Main University Building. Appointments may be made personally or by telephone (61 0461).

Senior Student Counsellor: S. G. Alley, B.A.(Syd.), A.S.T.C.(Chem.).

CHAPLAINS

A Counselling Service is provided by the official Chaplains who are on duty in the Chaplain’s Room (M213) which is situated on the second floor of the Main University Building. The Chaplains are available for interview by students seeking guidance, counsel and assistance, especially in spiritual and religious problems; appointments may readily be arranged with any Chaplain. Appointments may also be made through the office of the Senior Student Counsellor.

The Rev. J. E. Helm . . . . . . . . . . . . . . . . . . . . . . . . . Baptist
The Rev. E. H. V. Pitcher, M.A.(Syd.) . . . . . Church of England
in Australia
The Rev. E. Towner . . . . . . . . . . . . . . . . . . . . . . . . . Methodist
The Rev. H. Barratt, B.A.(Syd.) . . . . . . . . . . Presbyterian
The Rev. Father J. Carson, B.A.(Syd.),
Dip.Soc.Stud.(Syd.) . . . . . . . . . . . . . . . . . . . . . . . . . . . Roman Catholic

SCHOLARSHIPS, BURSARIES AND CADETSHPES

Particulars of scholarships, bursaries and cadetships tenable at the University are published in the University Calendar, which may be inspected at the Office of the Registrar or in the library.

Members of staff are pleased to give intending students advice regarding scholarships, bursaries and cadetships. Arrangements to interview members of staff may be made through the Office of the Registrar.

UNISEARCH LIMITED

Unisearch Ltd. was established by the Council of the University on the 1st April, 1959, for the purpose of assisting Australian industry in the solution of its research and development problems and to provide testing services in a wide variety of industrial fields. The Company is also responsible for the exploitation of patents of inventions arising out of the work of the University.

The Articles of Association of the Company, which is limited by guarantee and does not have a capital divided into shares, provide that only members of the Council of the University may be appointed members of the Company, of which there are nine. The business of the Company is conducted by four directors, one of whom is the Vice-Chancellor of the University. The members and directors receive no payment for their services and all profits from the Company’s operations are given to the University to further its objects and work in the community.

Unisearch Ltd. has available to it the services of some 200 senior members of the academic staff of the University who have been appointed Honorary Consultants to the Company and also research equipment and machinery in the University's well equipped laboratories valued at more than £1,000,000. Unisearch Ltd. has already carried out a substantial number of research projects and is undertaking testing services for industry, particularly for small organisations which are unable to afford research facilities of their own.

Enquiries in the Newcastle area should be addressed to Professor J. J. Auchmuty, Warden, Newcastle University College, Tighe’s Hill, (telephone: 61 0461).
SECTION II
UNDERGRADUATE COURSES 
OF STUDY
DIVISION OF APPLIED SCIENCE

The Division of Applied Science comprises the Departments of Metallurgy, Chemical Engineering and Industrial Chemistry and Industrial Arts. Full-time and part-time courses are available within the Division, leading to the degrees of Bachelor of Science (B.Sc.) and Bachelor of Science (Technology) (B.Sc.(Tech.)) respectively, in Metallurgy, Chemical Engineering and Industrial Chemistry. A part-time course in Industrial Arts leading to the award of Bachelor of Science (Technology) is also offered.

The B.Sc.(Tech.) is basically a six-year part time course, and the B.Sc. a four-year full time course; however, subjects are common to both degree patterns and limited interchange of courses is permitted within the framework of the regulations of the University. Further, the first year is common to all three courses, so that ready transfer is possible up to the end of this stage, not only within the courses themselves, but to other Divisions of the College. Full-time students are required to obtain four months' approved industrial experience before completing their course; for part-time students, the period is three years, taken concurrently.

Facilities are also available for proceeding to the degree of Master of Science or Doctor of Philosophy by research, and further details may be obtained from the appropriate Head of Department.

* The student who wishes to read an accelerated course for the award of B.Sc. (Tech.) following a course programme which is different from the approved programme set down in this Handbook should consult his Head of Division; the formal approval of the Professorial Board must be obtained prior to undertaking any such course.

BACHELOR OF SCIENCE COURSE
IN
CHEMICAL ENGINEERING

YEAR I
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term 1 Hours per week</th>
<th>Term 2 Hours per week</th>
<th>Term 3 Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

YEAR II
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term 1 Hours per week</th>
<th>Term 2 Hours per week</th>
<th>Term 3 Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry II</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Physics II</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td>Mathematics II</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chemical Engineering I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>26½</td>
<td>26½</td>
</tr>
</tbody>
</table>

YEAR III
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term 1 Hours per week</th>
<th>Term 2 Hours per week</th>
<th>Term 3 Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering (6.801)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chemical Engineering IIA</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Structural Engineering (8.112)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities II +</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Chemical Engineering IIB</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>27</td>
</tr>
</tbody>
</table>

YEAR IV
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term 1 Hours per week</th>
<th>Term 2 Hours per week</th>
<th>Term 3 Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Engineering IIIA</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Chemical Engineering IIIB</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Projects</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
## Bachelor of Science (Technology) Course in Chemical Engineering

### Stage I

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>12</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Stage II

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>12</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Stage III

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry II</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Physics II</td>
<td>4½</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13½</strong></td>
<td><strong>13½</strong></td>
<td><strong>13½</strong></td>
</tr>
</tbody>
</table>

### Stage IV

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics II</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chemical Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td><strong>13</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

### Stage V

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>(6.601)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Engineering IIA</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Structural Engineering</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>(6.112)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities II +</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>15</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

### Stage VI*

*(30 weeks part-time course)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Engineering IIB</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36</strong></td>
<td><strong>36</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

*Note: Students in the B.Sc. (Tech.) course in Chemical Engineering are required to pass a combined Chemical Engineering Principles and Design examination in addition to examinations in each of these subjects separately.

+ A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
BACHELOR OF SCIENCE (Technology)
IN
CHEMICAL ENGINEERING
ACCELERATED COURSE.

The student reading for the degree of B.Sc. (Tech) in Chemical Engineering may reduce the time required to complete the academic requirements by undertaking the following programme of combined part-time/full-time study.

Stage 1 - 30 weeks Part-time Course (as for Stage 1 B.Sc. (Tech.) Course above).

Stage 2 - 30 weeks Part-time Course (as for Stage 2 B.Sc. (Tech.) Course above).

Stage 3A - 30 weeks Full-time Course (as for Year II of Full-time B.Sc. Course above).

Stage 4A - 30 weeks Full-time Course (as for Year III of Full-time B.Sc. Course above).

Stage 5A - 30 weeks Part-time Course (as set out below).

STAGE 5A.
30 WEEKS PART-TIME COURSE.

A programme of 6-9 hours per week selected from the following options:

Either Industrial Chemistry IT
or any other subject(s) and/or project(s) approved by the Professorial Board on the recommendation of the Head of Department. Students are required to consult the Head of Department before the final term of Stage 4A.

PRE-REQUISITES AND CO-REQUISITES FOR THE COURSES
IN CHEMICAL ENGINEERING

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pre-requisite</th>
<th>Pre- or Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Engineering I</td>
<td>Maths I</td>
<td>Physical I Engineering I</td>
</tr>
<tr>
<td>Chemical Engineering IIA</td>
<td>Physics I</td>
<td>Chemistry II</td>
</tr>
<tr>
<td>Chemical Engineering IIB</td>
<td>Physics IIT</td>
<td>Structural Engineering (8.112)</td>
</tr>
<tr>
<td>Chemical Engineering IIIA</td>
<td>Chemical Engineering I</td>
<td>Chemical Engineering IIA</td>
</tr>
<tr>
<td>Chemical Engineering IIIIB</td>
<td>Chemical Engineering IIB</td>
<td>Chemical Engineering IIIA</td>
</tr>
</tbody>
</table>

* Physical and Organic Modules.

BACHELOR OF SCIENCE COURSE
IN
INDUSTRIAL CHEMISTRY

YEAR I
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Term 2</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
</tr>
<tr>
<td>Physics I</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
</tr>
</tbody>
</table>

YEAR II
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Term 2</td>
</tr>
<tr>
<td>Chemistry II</td>
<td>9</td>
</tr>
<tr>
<td>Physics IIT</td>
<td>4½</td>
</tr>
<tr>
<td>Mathematics IIT</td>
<td>2</td>
</tr>
<tr>
<td>Humanities I</td>
<td>3</td>
</tr>
<tr>
<td>Chemical Engineering I</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>24½</td>
</tr>
</tbody>
</table>

YEAR III
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Term 2</td>
</tr>
<tr>
<td>Industrial Chemistry I</td>
<td>9</td>
</tr>
<tr>
<td>Humanities II + Chemical Engineering IIA(T)</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry IIIT*</td>
<td>5</td>
</tr>
<tr>
<td>Chemical Engineering IIB(T)</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
</tr>
</tbody>
</table>

YEAR IV
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Term 2</td>
</tr>
<tr>
<td>Industrial Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>Industrial Seminar</td>
<td>3</td>
</tr>
<tr>
<td>Chemical Engineering IIIB(T)</td>
<td>7</td>
</tr>
<tr>
<td>Research Project</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
</tr>
</tbody>
</table>

* A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
## BACHELOR OF SCIENCE (Technology) COURSE

### IN

#### INDUSTRIAL CHEMISTRY

**STAGE I**

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STAGE II**

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STAGE III**

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry II</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Physics IIT</td>
<td>4½</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>13½</td>
</tr>
</tbody>
</table>

**STAGE IV**

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics IIT +</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chemical Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

**STAGE V**

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Chemistry I</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Humanities II +</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STAGE VI**

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Engineering IIT (T)</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry III +</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

*Physical and Organic Modules.

+ A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
BACHELOR OF SCIENCE (Technology)  
IN  
INDUSTRIAL CHEMISTRY  
ACCELERATED COURSE.

The student reading for the degree of B.Sc. (Tech.) in Industrial Chemistry may reduce the time required to complete the academic requirements by undertaking the following programme of combined part-time/full-time study.

Stage 1 — 30 weeks Part-time Course (as for Stage 1 B.Sc. (Tech.) Course above).

Stage 2 — 30 weeks Part-time Course (as for Stage 2 B.Sc. (Tech.) Course above).

Stage 3A — 30 weeks Full-time Course (as for Stage II of Full-time B.Sc. Course above).

Stage 4A — 30 weeks Full-time Course (as for Year III of Full-time B.Sc. Course above).

Stage 5A — 30 weeks Part-time Course (as set out below).

STAGE 5A.  
30 WEEKS PART-TIME COURSE.

A programme of 6-9 hours per week selected from the following:

Any subject(s) and/or project(s) approved by the Professorial Board on the recommendation of the Head of Department. Students are required to consult the Head of Department before final term of Stage 4A.

PRE-REQUISITES AND Co-REQUISITES FOR THE COURSES IN INDUSTRIAL CHEMISTRY

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pre-requisite</th>
<th>Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Chemistry I</td>
<td>Chemistry II</td>
<td></td>
</tr>
<tr>
<td>Industrial Chemistry II</td>
<td>Industrial Chemistry I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering IIA(T)</td>
<td></td>
</tr>
</tbody>
</table>

BACHELOR OF SCIENCE  
IN  
METALLURGY

YEAR I
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

YEAR II
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics IIT</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Chemistry IIT</td>
<td>3</td>
<td>7</td>
<td>5.5</td>
</tr>
<tr>
<td>Mathematics IIT</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Metallurgy I</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Geology I</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Humanities I+</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>28.5</td>
<td>27.5</td>
<td>25</td>
</tr>
</tbody>
</table>

YEAR III
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy IIA</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Electrical Engineering (6.801)</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities II +</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Metallurgy IIB</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>25</td>
<td>22</td>
</tr>
</tbody>
</table>

YEAR IV**
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy III</td>
<td>17</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>Metallurgy Project</td>
<td>5</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>25</td>
<td>18</td>
</tr>
</tbody>
</table>

+ A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

** First 3 years only available at Newcastle.
# BACHELOR OF SCIENCE (Technology) COURSE

## IN

### METALLURGY

#### STAGE I

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

#### STAGE II

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

#### STAGE III

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics II</td>
<td>4½</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td>Chemistry II</td>
<td>5</td>
<td>7</td>
<td>5½</td>
</tr>
<tr>
<td>Mathematics II</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>14½</td>
<td>13½</td>
<td>12</td>
</tr>
</tbody>
</table>

#### STAGE IV

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy I</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Geology II</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>14</td>
<td>13</td>
</tr>
</tbody>
</table>

#### STAGE V

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy IIA</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>(6.801)</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities II +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
<td>9</td>
</tr>
</tbody>
</table>

---

+ A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
BACHELOR OF SCIENCE (Technology)

IN

METALLURGY

ACCELERATED COURSE.

A student reading for the degree of B.Sc. (Tech.) in Metallurgy may reduce the time required to complete the academic requirements by undertaking the following programme of combined part-time/full-time study.

Stage 1 — 30 weeks Part-time Course (as for Stage 1 B.Sc. (Tech.) Course above).

Stage 2 — 30 weeks Part-time Course (as for Stage 2 B.Sc. (Tech.) Course above).

Stage 3A — 30 weeks Full-time Course (as for Year II of Full-time B.Sc. Course above).

Stage 4A — 30 weeks Full-time Course (as for Year III of Full-time B.Sc. Course above).

Stage 5A — 30 weeks Part-time Course (as set out below).

STAGE 5A.

30 WEEKS PART-TIME COURSE.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours per week Term 1</th>
<th>Hours per week Term 2</th>
<th>Hours per week Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy IIIC</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Seminar</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Report and/or Project</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Details of Subjects.

Metallurgy IIIC — a course of lectures and practical work, principally in industrial metallurgy, with additional topics appropriate to the centre.

Seminar — as in Metallurgy IIIB.

Report and/or Project — Project may involve laboratory work or a report on a literature survey or a combination of these by arrangement with the Head of Department.

In the event that it is elected to make a report on the literature survey, this is to be submitted not later than the end of the fifth week of third term. The survey is to be of approximately 10,000 words on a topic of relevance to the student's employment and which has been approved by the Head of Department. The topic proposed must be submitted to the Head of Department for approval before the end of the third week of first term.

PRE-REQUISITES AND CO-REQUISITES FOR THE COURSES IN METALLURGY

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pre-requisite</th>
<th>Pre- or Co-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metallurgy II (A &amp; B)</td>
<td>Metallurgy I</td>
<td>Physics IIT, Chemistry IIT, Geology IIT</td>
</tr>
<tr>
<td>Metallurgy III</td>
<td>Metallurgy II</td>
<td></td>
</tr>
</tbody>
</table>

DEPARTMENT OF INDUSTRIAL ARTS

A part-time degree course in Industrial Arts will be available at the College from 1963. This course is designed to provide a training at University level for teachers of industrial arts in secondary schools, and is a part-time course of six years leading to the degree of Bachelor of Science (Technology).

The stages of this course will be implemented in successive years at Newcastle University College, and intending students should note that the core subjects, Industrial Arts I and II, will not be available in Newcastle until 1966 at the earliest, and then only if a sufficient number of students offer themselves. The course may therefore need to be completed in Kensington. This, together with the number of options available in the course, makes it necessary for intending students to seek the advice of the Head of the Division of Applied Science before enrolling.
### BACHELOR OF SCIENCE (Technology) COURSE

#### IN

#### INDUSTRIAL ARTS

**STAGE I**

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Chemistry</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>*Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

**STAGE II**

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>*Psychology I</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

**STAGE III**

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>*Psychology II</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

**STAGE IV**

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.011 Industrial Arts I</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>**Either <em>Mathematics II</em> )</td>
<td>4 - 9</td>
<td>4 - 9</td>
<td>4 - 9</td>
</tr>
<tr>
<td>or *Physics II )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or *Chemistry II )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

**STAGE V**

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.012 Industrial Arts II</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4.922 Materials Science</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>11.131B Drawing I (Design I)</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>**Either <em>Education I</em> )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or Arts Elective )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or Humanities I (+)</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>or Humanities II +</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

**STAGE VI**

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.013 Industrial Arts III</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Materials Technology</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>21.211 Drawing and Design</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities II (+)</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14</td>
<td>14</td>
<td>11</td>
</tr>
</tbody>
</table>

* (+) Unless taken in previous stage. Normal Arts/Science subject.

+ A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

---

**Note:**

- Hours per week are listed for each term, with Term 1, Term 2, and Term 3 specified.
- The courses are organized by stage, with each stage having a specific number of weeks part-time.
DEPARTMENT OF ARCHITECTURE

COURSE STRUCTURE, TIMETABLES AND GRADINGS

The subjects of the course are divided into study units each of which is related to an annual stage of part-time study.

Three basic timetable arrangements operate:

(i) Full-time Pass Degree Course: 1st, 2nd and 3rd years each of 30 weeks full-time study (Units 1A to 3B inclusive), plus two annual 30 week stages of part-time study (Units 4 and 5).

(ii) Part-time Pass Degree Course: 1st year of 30 weeks full-time study (Units 1A and 1B), plus six annual 30 week stages of part-time study (Units 2A to 5 inclusive).

(iii) Honours Degree Course: Units 1A to 4 inclusive by either route (i) or (ii) above, and a final year of 30 weeks full-time study (Units 5 and 6).

A student may obtain approval to transfer from the Full-time Course to the Part-time Course or vice-versa after the first two study units (1A and 1B) have been successfully completed.

On application to the Head of the Department, a student may be permitted to take the two study units (1A and 1B) of the 1st year by two annual stages each of 30 weeks part-time study.

A student may apply to the Head of the Department to enter the final year of Honours provided he has successfully completed all the subjects of the study units 1A to 4 inclusive with, in addition, credit grades in at least seven of these subjects.

A student in the Honours Course who does not reach the standard for Honours at the end of his final year may be awarded a pass degree.

COMPLEMENTARY EMPLOYMENT

All students when not engaged in full-time study are required to be employed in an approved occupation and on request shall submit to the Head of the Department a statement certified by the employer/s.

PROGRESSION

1. Progression shall be from year to year or stage to stage. A student shall be required to pass all subjects of any year or stage before proceeding to the next year or stage, except that subject to 2 below, one subject only may be carried with the subjects of the next following year or stage.

2. No two Design subjects may be taken concurrently, except that Design I and Design II may be taken concurrently.

3. A student who fails in two or more subjects of a year or stage will be required to repeat all subjects of that year or stage, save that the Faculty Examinations Committee may exempt a student from repeating a subject in which he has reached an acceptable level of attainment. This rule shall apply also to all students enrolled in previous syllabai of the degree courses in Architecture as from and including 1961 examinations.

4. With the approval of the Head of the Department, a student who has failed in more than one subject may be enrolled in certain subjects of the following year or stage, subject to 2 and 3 above and provided that the total number of prescribed hours of attendance per week for all subjects for which he is enrolled does not exceed twenty (20) if he is studying full-time and nine (9) if he is studying part-time.

5. A student may be enrolled concurrently in the subjects of no more than two consecutive years except in the case of students admitted to the course with advanced standing, for whom special programmes which do not accord with this rule may have to be arranged.

6. All students shall be subject to the general rules of the University governing re-enrolment.

70
YEAR IV  
(30 weeks part-time course)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.114 Design IV</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11.214 Construction IV</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.224 Structures IV</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.234 Building Science IV</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.124 History of Architecture IV</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11.242 Building Services B</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11.011 Painting, Sculpture and Allied Arts</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

YEAR V  
(30 weeks part-time course)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.115 Design V</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11.225 Structures V</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.141 Arch'I Research</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>11.311 Specifications</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.723 Estimating</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.321 Professional Practice</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11.411 Town Planning I</td>
<td>2</td>
<td>2</td>
<td>—</td>
</tr>
</tbody>
</table>

HONOURS  
YEAR V  
(30 weeks full-time course)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.311 Specifications</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.723 Estimating</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.321 Professional Practice</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11.225 Structures V</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.141 Arch'I Research</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>11.411 Town Planning I</td>
<td>2</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>11.115 Design V (first 15 weeks)</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>11.116 Design VI (last 15 weeks)</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.412 Town Planning II</td>
<td>—</td>
<td>—</td>
<td>6</td>
</tr>
<tr>
<td>11.322 Architectural Administration</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11.142 Research Thesis (elective)</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

COURSE XIP  
BACHELOR OF ARCHITECTURE COURSE  
STAGE I (UNIT 1A)  
(30 weeks part-time course)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.111 Design I</td>
<td>Term 1: 1</td>
</tr>
<tr>
<td>11.121 History of Architecture I</td>
<td>Term 2: 1</td>
</tr>
<tr>
<td>11.131 Drawing I (B) Freehand (C)</td>
<td>Term 3: 1</td>
</tr>
</tbody>
</table>

STAGE II (UNIT 1B)  
(30 weeks part-time course)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.211 Construction I</td>
<td>Term 1: 3</td>
</tr>
<tr>
<td>11.221 Structures I</td>
<td>Term 2: 3</td>
</tr>
<tr>
<td>11.231 Building Science I</td>
<td>Term 3: 3</td>
</tr>
<tr>
<td>11.131 Drawing I (A) Architectural</td>
<td></td>
</tr>
<tr>
<td>11.611 Building Trades Workshop</td>
<td></td>
</tr>
</tbody>
</table>

STAGE III (UNIT 2A)  
(30 weeks part-time course)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.112/1 Design IIA</td>
<td>Term 1: 4</td>
</tr>
<tr>
<td>11.212/1 Construction IIA</td>
<td>Term 2: 4</td>
</tr>
<tr>
<td>11.222 Structures II</td>
<td>Term 3: 4</td>
</tr>
<tr>
<td>11.232 Building Science IIA</td>
<td></td>
</tr>
<tr>
<td>11.122 History of Architecture II</td>
<td></td>
</tr>
<tr>
<td>11.132 Drawing II (A) Architectural</td>
<td></td>
</tr>
</tbody>
</table>

STAGE IV (UNIT 2B)  
(30 weeks part-time course)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.112/2 Design IIB</td>
<td>Term 1: 2</td>
</tr>
<tr>
<td>11.212/2 Construction IIB</td>
<td>Term 2: 2</td>
</tr>
<tr>
<td>8.211 Building Science IIB</td>
<td>Term 3: 2</td>
</tr>
<tr>
<td>11.132 Drawing II (B) Freehand Humanities I</td>
<td></td>
</tr>
</tbody>
</table>

— A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts, substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
STAGE V (UNIT 3A)
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.113/1 Design IIIA</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11.223 Structures II</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>11.233 Building Science III</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8.411 Surveying Humanities II+</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>

STAGE VI (UNIT 3B)
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.113/2 Design IIIB</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>11.213 Construction III</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11.123 History of Architecture III</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.241 Building Services A</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

STAGE VII (UNIT 4)
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.114 Design IV</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11.214 Construction IV</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.224 Structures IV</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.234 Building Science IV</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.124 History of Architecture IV</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.242 Building Services B</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.011 Painting, Sculpture and Allied Arts</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

STAGE VIII (UNIT 5)
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.115 Design V</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11.225 Structures V or 11.141 Arch'l Research</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>11.311 Specifications</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.723 Estimating</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.321 Professional Practice</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11.411 Town Planning I</td>
<td>2</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10</td>
<td>8</td>
</tr>
</tbody>
</table>

---

A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

DIVISION OF ARTS

1. The courses offered in the Division of Arts lead to the award of:
   (1) Bachelor of Arts (B.A.).
   (2) Master of Arts (M.A.).
   (3) Doctor of Philosophy (Ph.D.).
   (4) Diploma in Education (Dip.Ed.).

2. All candidates for these awards shall be required to pass such examinations and to satisfy such other conditions as the Council of the University of New South Wales may from time to time prescribe.

3. The degree of Bachelor of Arts is awarded in two grades, namely, the degree and the degree with Honours. Candidates for the degree of Bachelor of Arts shall, before beginning courses qualifying (or called courses or qualifying courses), produce evidence of having qualified to matriculate.

4. Candidates for the degree of Bachelor of Arts shall be required to pursue qualifying courses for not less than three years.

5. Candidates for the degree of Bachelor of Arts with Honours shall be required to pursue qualifying courses for not less than four years.

6. The degree of Master of Arts may be conferred upon:
   - Bachelor of Arts of the University of New South Wales;
   - Bachelor of Arts of any other approved University;
   - Graduates in Faculties other than Arts of the University of New South Wales and of other approved Universities.

7. The courses of study for the Diploma in Education may be so arranged that they can be taken in preparation for infant, primary or secondary teaching.

8. Candidates for the Diploma in Education must be University graduates. They shall be required to reach a qualifying level of skill in teaching, and to satisfy such further conditions as the Council may from time to time prescribe.

9. The conditions applicable to the awards in courses offered are set out hereunder.

CONDITIONS FOR THE AWARD OF THE DEGREE OF BACHELOR IN THE DIVISION OF ARTS

1. A qualifying course shall consist of lectures together with such tutorial instruction and such exercises or laboratory work, or both, as may be prescribed. In these Conditions "to complete a course" means:
   (a) to attend the lectures and the classes, if any, for tutorial instruction;
   (b) to perform satisfactorily the exercises and laboratory work, if any, and;
   (c) to pass the examinations of the course.

2. In these Conditions the Roman numeral I, II, III or IV, placed immediately after the name of a subject, means the First, Second, Third, or Fourth Year course respectively in that subject. For the purposes of these Conditions the courses in Education I, II, and III shall nevertheless be regarded as Second, Third and Fourth Year courses respectively except in the special sequences listed in Condition 19b and 19e.

3. A "major sequence" means a subject studied in three consecutive qualifying courses. A "minor sequence" means a subject studied in two consecutive qualifying courses.

4. Except with the special permission of the Newcastle Academic Board of Studies (hereinafter called the Board), no candidate for the degree may take Course II or a higher qualifying course in any subject
Examination of that course. A successful candidate in a Deferred
examination may be awarded only the grade of Pass in that course.

Examinations on application to the Registrar, may be granted a
Deferred Examination. Third Term and shall be conducted by means of written examinations
which may be supplemented by such oral testing as the examiners
think fit.

(ii) Course I in every subject shall be a Pass Course. In all Pass
Courses successful candidates for examination shall be classified in two grades: “pass with merit” or “pass.”

(iii) Candidates attempting Distinction papers who achieve a
sufficient standard may be awarded a Pass with Distinction, or Credit, in the appropriate subject. Such candidates who
do not achieve a sufficient standard shall be graded as Pass candidates or failed.

7. The Annual Examinations shall normally be held at the end of
Third Term and shall be conducted by means of written examinations
which may be supplemented by such oral testing as the examiners
think fit. If the Head of the Department so wishes additional tests may be prescribed for any candidate and be regarded as part of his Annual Examination.

8. (i) An examination called the “First Examination” shall be
held at the end of each first year qualifying course, and candidates who pass shall be held to have qualified so far
for the degree.

(ii) An examination called the “Second Examination” shall be
held at the end of the second year qualifying courses of a sequence. The Second Examination shall be a test not
merely of the Course II work in that course, but also of the
general standard reached by the student in the course.

(iii) An examination called the “Third Examination” shall be
held at the end of the third year qualifying course of a major sequence. The Third Examination shall be a test not
merely of the Course III work in that course but also of the
general standard reached by the student in the course as a
whole.

9. A candidate who has been prevented through illness or other
unavoidable circumstances from satisfactorily completing an Annual
Examination, on application to the Registrar, may be granted a Special
Examination. A candidate granted a Special Examination may be awarded the same grades of pass as are awarded in the Annual Examination in that course.

10. A Deferred Examination in any course may be granted at the
discretion of the Board to a candidate who has failed the Annual
Examination of that course. A successful candidate in a Deferred
Examination may be awarded only the grade of Pass in that course.

Only under exceptional circumstances shall candidates be granted more
than four Deferred Examinations during their undergraduate courses
in the Division of Arts.

11. Undergraduates from other universities entering the Division
of Arts at Newcastle University College may be given credit for not
more than four courses provided that those courses have a reasonable
correspondence with courses given at Newcastle University College.

12. A graduate of another University, or of another Faculty of
this University wishing to proceed to a B.A. degree in this University
shall submit to the Board a proposed course of study approved by the
Head of the Department in which he intends to study a major sequence. The Board may, at its discretion, grant credit for not more than two courses included in his previous degree; provided that those
courses are included in the list set out in Condition 14 and that the
candidate shall not take as a qualifying course any course equivalent
to one included in his previous degree.

12A. That notwithstanding the provisions of Conditions 11 and 12,
undergraduates and graduates of other Universities may be given credit
for acceptable subjects which are not in the course leading to the
Degree of Bachelor in the Division of Arts offered at Newcastle
University College provided that:—

(i) Such concession is limited to first courses in any subject.

(ii) Such concession allows of the design of a course which
conforms to the grouping and sequence requirements of
these conditions.

(iii) The proposed course to qualify for the Degree is nominated
at the time the concession is sought, and, when approved,
may not be departed from without the prior approval of the
Professorial Board.

13. (i) Subject to general University regulations, no student who
has twice failed the Annual Examination of any course shall
be enrolled again in that course unless by special leave of the
Board.

(ii) No student who has been thus excluded from two courses
shall be enrolled again in the Division unless by special
leave of the Board, and under such conditions as it may
determine.

14. The qualifying courses for the Degree of Bachelor of Arts
are the courses set out in the following groups:

<table>
<thead>
<tr>
<th>GROUP I</th>
<th>GROUP II</th>
<th>GROUP III</th>
<th>GROUP IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>History</td>
<td>Economics</td>
<td>Chemistry</td>
</tr>
<tr>
<td>French</td>
<td>Philosophy</td>
<td>Education</td>
<td>Geology</td>
</tr>
<tr>
<td>German</td>
<td>Mathematics</td>
<td>Geography</td>
<td>Physics</td>
</tr>
<tr>
<td>Greek</td>
<td>Pure Mathematics</td>
<td>Psychology</td>
<td>Applied Mathematics</td>
</tr>
<tr>
<td>Latin</td>
<td>Latin</td>
<td>Theory of Statistics</td>
<td>Engineering I</td>
</tr>
</tbody>
</table>

15. Candidates for the Pass degree of Bachelor of Arts shall comply
with the following conditions:

(a) Nine qualifying courses shall be taken, and not more than
four of these may be taken in any one year.

(b) The nine qualifying courses shall be selected from the groups
set out in Condition 14, provided that:

(i) Courses selected shall include courses from at least two
of Groups I, II and III.

(ii) Not more than three qualifying courses may be taken
from Group IV.

DEGREE OF BACHELOR OF ARTS
(c) The nine qualifying courses shall be made up of either:

(i) two major sequences, one minor sequence, and one other course; or

(ii) three major sequences, provided that no candidate may take three third year courses in the one year without special permission from the Board; or

(iii) one major sequence and three minor sequences, but only on the recommendation of the Head of the Department concerned with the major sequence, and with the approval of the Board; or

(iv) two major sequences and three first year courses; or one major sequence, two minor sequences, and two first year courses. Either of these plans shall require the recommendation of the Head of Department concerned with the major sequence or the sessions and the permission of the Board. The fifth first year course may not be taken until the candidate has passed in four first year courses.

(d) Candidates shall be held to have qualified for the Pass Degree of Bachelor of Arts if they (i) have completed with the approval of the Head of the Division of Arts, seven qualifying courses for that degree, and (ii) have subsequently passed in the subjects Constitutional Law I, Roman Law, Legal History and Introductory Jurisprudence as prescribed for four-year or five-year candidates in the Faculty of Law at the University of Sydney. The seven qualifying courses must be chosen from at least two of the groups specified in Regulation 14 in accordance with the conditions governing the Pass Degree of Bachelor of Arts, and shall include three minor sequences.

16. In addition to the courses specified in Condition 14 there shall be elementary courses in Greek and German which presuppose no previous acquaintance on the part of the student with the languages in question.

An Elementary Course followed by Course I and II of that subject shall form a major sequence. An elementary course shall count as a qualifying course only when studied as part of a major sequence, and in no case shall more than one elementary course be so counted for the Pass degree of B.A.

17. Except with the permission of the Head of the Department concerned, no candidate for the degree may attend a qualifying course in Greek, Latin, French or German unless he has already passed the Matriculation Examination in that subject or an equivalent examination; provided that, for the purposes of this condition, the Annual Examination of the elementary courses in Greek and German, together with such supplementary examinations as may be prescribed, shall be regarded as an equivalent examination.

18. (i) A qualifying course in Education shall not be taken by a candidate until he has completed two other courses, one of which shall be either Philosophy I or Psychology I.

(ii) The qualifying courses in Pure Mathematics II and Applied Mathematics II, Theory of Statistics I shall not be taken by a candidate until he has completed Mathematics I.

(iii) The qualifying course Mathematics II shall not be taken if Pure Mathematics I is taken.

*—It is anticipated this condition may be amended in 1966.

19. Provided that no course may be counted twice in reckoning sequences, the following may form major sequences:

(a) Philosophy I, Education I, and Education II.
(b) Philosophy I, Philosophy II, and Education I.
(c) Philosophy I, Education I, and Philosophy II.
(d) Psychology I, Education I, and Education II.
(e) Psychology I, Psychology II, and Education I.
(f) Mathematics I, Pure Mathematics II, Pure Mathematics III.
(g) Any first qualifying course, Applied Mathematics II.

Applied Mathematics III.

and the following may form minor sequences:

(i) Mathematics I and Pure Mathematics II.
(m) Mathematics I and Theory of Statistics I.
(n) Any first course and Applied Mathematics II if the major sequence (f) above is taken.

DEGREE OF BACHELOR OF ARTS WITH HONOURS

20. Except in special cases where the Board may determine by resolution that these conditions shall not be followed, a candidate for the degree of Bachelor of Arts with Honours shall complete the qualifications for the Honours Degree within five years from the beginning of his studies to qualify for the degree in the Division of Arts, provided that where it is deemed practicable to allow a part-time student to become a candidate for the Honours degree, the corresponding period shall be six years.

20A. A part-time student for the degree with Honours may with the approval of the Head of the Division and the Head of the School, acting on the recommendation of the Head of the Department concerned, be permitted to complete the requirements of the final Honours year over two successive years.

21. At the end of the Fourth year, Honours shall not be awarded to any candidate in more than two courses; but a candidate who has completed a major sequence in a third course having passed the Honours examinations in second and third year may be permitted by the Board, on the recommendation of the Head of the Department concerned, in the Honours course in that course also after a further year of study, with attendance at lectures.

22. There shall be three classes of Honours, namely Class I, Class II, and Class III. Class II shall have two divisions, namely division I and division II.

23. Candidates for Honours shall notify their intention to the Head of the Department in which they wish to proceed to Honours at such time as the Head of the Department shall determine, but in no case later than the beginning of their study in Course III in that Department.

24. In order to qualify for admission to the Final Honours year candidates must have completed seven qualifying courses in accordance with the relevant provisions of Condition 18, except that, in special cases, on application to the Board, a candidate who has completed six qualifying courses may be allowed to take the seventh qualifying course concurrently with the Honours course or courses.
25. Candidates for Honours shall, save at the discretion of the Head of the Department, be required to have obtained a Pass with Merit in the First Examination of the course or courses in which they seek Honours; provided that candidates for Honours in Classics shall be required to have obtained a Pass with Merit in Latin I together with either a Pass with Merit in Greek I or a Pass in Elementary Greek satisfactory to the Head of the Department; and candidates for Honours in Education shall be required to have obtained a Pass with Merit in Psychology I or Philosophy I.

26. Candidates who have not satisfied the requirements of Condition 25 may be allowed to become candidates for Honours provided they make written application to the Board not later than the beginning of the Final Honours year and have completed one of the following major sequences:

- Two major sequences ending in Pure Mathematics III and Applied Mathematics III, at least one of these major sequences to be an Honours course.
- Undergraduates from other Universities, declared by the Board to be suitably qualified, may be admitted to the Honours course of any Department at the stage declared by the Board to be appropriate.
- An Honours graduate who subsequently satisfies the requirements of an Honours School shall be granted a certificate of Honours in that subject.

Courses taken in addition to those required for the degree of Bachelor of Arts.

28. Candidates for Honours who have (i) qualified to enter the Final Honours year and have obtained Distinction in such examinations as are required at the end of Course III of a major sequence or (ii) qualified to enter the Final Honours year and have passed in one additional course, and have obtained credit in such examinations as are required at the end of the Course III of a major sequence, on application to the Board, be held to have qualified for the Pass Degree.

29. Candidates for Honours who fail to obtain Honours at the Fourth Year examination may at the discretion of the Board be awarded a Pass Degree. There shall be no re-examination for Honours.

30. There shall be Honours Schools in the following subjects:

- Classics, Economics, Education, English, Psychology
- French, Geography, German, Greek
- History, Latin, Mathematics, Philosophy

There shall also be combined Honours in certain combinations of two of the above subjects, as approved by the Board.

31. The grouping of subjects laid down in Condition 15 (b) and 14 shall not necessarily apply to the curriculum for the Honours degree. Any condition in order to provide for exceptional circumstances arising in particular cases.

32. Candidates who seek Combined Honours, Honours in Classics or Honours in two Schools shall take one pass course in addition to their courses in the Honours Schools. Candidates who seek Honours in a single School shall take at least four qualifying courses, including at least one minor sequence.

33. Candidates for Honours in Education shall, before proceeding to the Final Honours year, have completed one of the following major sequences:

(a) Psychology I, Education I, Education II
(b) Philosophy I, Education I, Education II

34. Before admission to the final year in the Honours School of Classics, a candidate shall be required to complete the major sequence in Latin and a major sequence in Greek.

A candidate for Honours in Classics shall be ineligible for Honours in Latin and Greek.

35. Candidates for Honours in Latin shall be required to pass in Elementary Greek or Greek I.

36. Candidates for Honours in Mathematics shall have completed the two major sequences ending in Pure Mathematics III and Applied Mathematics III, at least one of these major sequences to be an Honours course.

37. Undergraduates from other Universities, declared by the Board to be suitably qualified, may be admitted to the Honours course of any Department at the stage declared by the Board to be appropriate.

38. An Honours graduate who subsequently satisfies the requirements of an Honours School shall be granted a certificate of Honours in that subject.

CONDITIONS FOR THE AWARD OF THE DIPLOMA IN EDUCATION IN THE DIVISION OF ARTS.

A. The courses for the Diploma in Education shall be: Division I: Foundation Courses.

1. Foundations of Education.
   (a) Theory of Education, including History of Education or Comparative Education.
   (b) General Principles of Teaching Practice.
   (c) Educational Psychology and Child Development.
   (d) Measurement and Research in Education.

2. Health and Physical Education.

   Separate courses for those preparing to teach English and for those not so preparing. Both courses include a section on dramatic work.

Division II: Method and Teaching Skill Courses.

4. (a) Secondary Field.
   (i) English Method.
   (ii) History Method.
   (iii) Geography Method.
   (iv) Latin Method.
   (v) Modern Languages Method.
   (vi) Commercial Method.
(vii) Mathematics Method.
(viii) Junior Science Method.
(ix) Senior Science Method (Physical).
(x) Biological Science Method.
(xl) Guidance Method.

(b) Primary Field.
   Either (i) Primary Methods.
   or (ii) Infants Methods.

5. Either
   Part A: Biological Science
   or
   Part B: Special Thesis.

6. Practical Teaching and Demonstrations.

B. (1) Candidates for the Diploma in Education must be University
   graduates.
   (ii) Where a candidate has already completed courses in
   Education, the Head of the Department, with the appro
   val of the Board, may vary the requirements of Division
   I Part I in Condition A.
   (iii) Candidates must satisfy the Head of the Department that
   they have a reasonable university background in the subjects
   selected for Division II Part I in Condition A.

C. All candidates for the Diploma shall take part in such superv
   ised practice teaching as the Head of the Department shall require,
   reach a qualifying level of skill in teaching, and satisfy such further
   conditions as the Council may from time to time prescribe.

D. Notwithstanding the generality of any of these conditions, the
   Council on the recommendation of the Board may relax any Condition
   in order to provide for exceptional circumstances arising in particular
   cases.

**DIPLOMA IN EDUCATION**

(A one year full-time post graduate day course of 30 weeks)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations of Education</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Health Education and Physical Education</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Speech Training and Drama</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Methods**

(a) Secondary Field
   Special Methods I
   3 or 4
   3 or 4
   3 or 4
   OR
   Special Methods II
   3
   3
   3

(b) Primary Field
   Primary Method
   6
   6
   6

(c) Infant Field
   Infant Method
   6
   6
   6
   Biological Science
   4
   4
   4
   OR
   Special Thesis
   1
   1
   1
   Practical Teaching and Demonstrations
   1
   1
   1
   * 8 weeks full-time teaching.

---

**DIVISION OF COMMERCE**

**CONDITIONS, COURSES AND SUBJECTS FOR 1963**

The Division of Commerce at the Newcastle University College comprises two departments, Economics and Accountancy. Courses are given at the undergraduate level for the Bachelor of Commerce degree and the Bachelor of Arts degree. Candidates may undertake post-graduate work for the degree of Master of Commerce or, in the case of Arts graduates majoring in Economics, the degree of Master of Arts. Candidates may also prepare for the degree of Doctor of Philosophy.

At present the only specialisations available at Newcastle University College in the Bachelor of Commerce degree are Accountancy and Economics. With the introduction of the revised courses for the Commerce degree in 1963, undergraduates wishing to advance in other specialisations available at the University of New South Wales, Kensington are advised to consult the University Calendar, or the Faculty of Commerce Handbook. Undergraduates preparing for the Statistics specialisation may take their first year at Newcastle University College.

**Course Revision.**

During 1962 the Council of the University of New South Wales approved revised courses for the Bachelor of Commerce degree at Newcastle University College. The professional accountancy subjects offered by the Department of Accountancy are the same as those given by the School of Accountancy in the Faculty of Commerce. However, the economics course differs both in content and structure from that offered in Kensington.

Undergraduates proceeding in the existing courses will be given advanced standing in the new courses. Each undergraduate will be advised of his position prior to the commencement of the 1963 academic year. Only in those cases where results of deferred examinations are pending might there be some delay.

It is not suggested that the range of Economics Options and other subjects will all be available in any one year. The subjects being offered in any one year will be announced prior to the commencement of that academic year.

**Conditions for the Award of the Degree of Bachelor of Commerce at Newcastle University College:**

1. A candidate for the degree of Bachelor of Commerce is required to select his course from those contained in the Appendix, provided that the various subjects are being offered in the given year.

2. A candidate desiring admission to an Honours course should apply to the Head of the appropriate Department at the commencement of the academic year immediately following the successful completion of Accounting I or Economics I. Candidates who do not apply at this time may nevertheless be admitted to an Honours course. In these circumstances the Head of the appropriate Department may require such candidates to reach a satisfactory standard in such supplementary work as may be determined.

3. In order to qualify for admission to the degree of Bachelor of Commerce at pass or Honours standard, a candidate must attend the classes, tutorials and seminars, complete assignments and satisfy
the examiners in the subjects listed in one of the courses contained below.

4. Progression in the courses is by subject except that:
   (a) a candidate for the degree with Honours may not proceed to an Honours year subject unless all the requirements laid down for the preceding years have been met;
   (b) a candidate in a part-time course may not take concurrently subjects from more than two stages of the course without the permission of the Head of the Division of Commerce.

5. (a) Accountancy I is a general pre-requisite for all other Accounting subjects.
   (b) Economics I is a general pre-requisite for all other Economics and Statistics subjects.
   (c) Other subject pre-requisites are as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics III</td>
<td>Economics II</td>
</tr>
<tr>
<td>Economic Fluctuations and Growth</td>
<td>Economics II</td>
</tr>
<tr>
<td>Economics Options II and III</td>
<td>Economics II</td>
</tr>
<tr>
<td>Statistical Analysis I</td>
<td>Mathematics I or Mathematics for Commerce</td>
</tr>
<tr>
<td>Statistical Analysis II</td>
<td>Statistical Analysis I</td>
</tr>
<tr>
<td>Mathematical Economics I</td>
<td>Mathematics I or Mathematics for Commerce</td>
</tr>
<tr>
<td>Mathematical Economics II</td>
<td>Mathematical Economics I</td>
</tr>
<tr>
<td>Accounting IV</td>
<td>Accounting II</td>
</tr>
<tr>
<td>Commercial Law II</td>
<td>Commercial Law I</td>
</tr>
</tbody>
</table>

   (d) Candidates are required to take in the same year or an earlier year certain co-requisite subjects listed below:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Co-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical Analysis I</td>
<td>Mathematics II or Pure Mathematics II or Theory of Statistics I*</td>
</tr>
<tr>
<td>Mathematical Economics I</td>
<td>Mathematics II or Pure Mathematics II*</td>
</tr>
<tr>
<td>History of Economic Thought</td>
<td>Economic Fluctuations and Growth</td>
</tr>
<tr>
<td>Seminars in Economic Theory and Problems</td>
<td>Economics III</td>
</tr>
</tbody>
</table>

* Co-requisite not applicable where undergraduate has taken Mathematics for Commerce.

   (e) The conditions on pre-requisites and co-requisites may be relaxed only with the approval of the Newcastle Academic Board of Studies.

6. (a) The subject chosen as the General Option shall be approved by the Head of the Department in which the candidate is specialising for the degree of Bachelor of Commerce.
   (b) A candidate may, with the permission of the Head of the Division of Commerce, substitute another subject for the Humanities I (Commerce) and another subject for Humanities II.

7. Commerce Statistics and Statistical Analysis I may not both be taken to qualify for the degree of Bachelor of Commerce.
### BACHELOR OF COMMERCE COURSE IN ACCOUNTANCY

#### YEAR I
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting I</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Economics I</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Humanities I (Commerce)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Commercial Law I</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

#### YEAR II
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting II</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Economics II</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Commercial Law II</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Commerce Statistics</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Taxation</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Humanities II (a) +</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>16</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

(a) At present lecture requirements are three hours per week for two terms.

#### YEAR III
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting III</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Accounting IV</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Economics III</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Auditing and Internal Control</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Business Finance</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>General Option (b)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

(b) The General Option may, with the permission of the Head of the Department of Accountancy, be taken in the second year.

+-A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

### BACHELOR OF COMMERCE COURSE IN ACCOUNTANCY

#### STAGE I
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting I</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Economics I</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

#### STAGE II
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce Statistics</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Accounting II</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Commercial Law I</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

#### STAGE III
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting III</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Economics II</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities I (Commerce)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

#### STAGE IV
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Law II</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Taxation</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Economics III</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Business Finance</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

#### STAGE V
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting IV</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Auditing</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Humanities II (a) +</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>General Option</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>11</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

(a) At present lecture requirements are three hours per week for two terms.

+-A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
### BACHELOR OF COMMERCE WITH HONOURS IN ACCOUNTANCY

**FULL-TIME COURSE**

**YEAR IV**

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>3</td>
</tr>
<tr>
<td>Term 2</td>
<td>3</td>
</tr>
<tr>
<td>Term 3</td>
<td>3</td>
</tr>
</tbody>
</table>

- Accounting Seminar III
- Cost Accounting
- Thesis

Honours Seminars will be taken in Years II and III.

### BACHELOR OF COMMERCE WITH HONOURS IN ACCOUNTANCY

**PART-TIME COURSE**

**STAGE VI**

(30 weeks part-time course)

As for Year IV of the full-time course, but undergraduates may submit the thesis in the subsequent academic year. Two Honours Seminars will be taken during the 2nd to 5th Stages of the course.

### BACHELOR OF COMMERCE COURSE IN ECONOMICS

**YEAR I**

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>4</td>
</tr>
<tr>
<td>Term 2</td>
<td>4</td>
</tr>
<tr>
<td>Term 3</td>
<td>4</td>
</tr>
</tbody>
</table>

- Economics I
- Accounting I
- Humanities I (Commerce)

**One of:**

- Mathematics I
- Psychology I
- Mathematics for Commerce
- History I
- Geography I
- Constitutional Law
- Commercial Law I

**YEAR II**

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>2</td>
</tr>
<tr>
<td>Term 2</td>
<td>3</td>
</tr>
<tr>
<td>Term 3</td>
<td>2</td>
</tr>
</tbody>
</table>

- Commerce Statistics OR Statistical Analysis I
- Economics II
- Humanities II (a) + Economics Option I
- Money, Credit and Financial Institutions

(a) At present lecture requirements are three hours per week for two terms.

**YEAR III**

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>3</td>
</tr>
<tr>
<td>Term 2</td>
<td>2</td>
</tr>
<tr>
<td>Term 3</td>
<td>2</td>
</tr>
</tbody>
</table>

- Economics III
- Economic Fluctuations and Growth
- Economics Option II
- Economics Option III
- General Option (b)
- Thesis (c)

(b) The General Option may, with the permission of the Head of the Department of Economics, be taken in Year II.

(c) Honours candidates prepare a thesis in Year IV.

---

A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
### Bachelor of Commerce Course in Economics

#### Stage I

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics I</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Accounting I</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

#### Stage II

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics II</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Commerce Statistics OR</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities I (Commerce)</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>One of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Psychology I</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics for Commerce</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>History I</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Geography I</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Constitutional Law</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Commercial Law I</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Stage III

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities I (Commerce) OR</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Statistical Analysis I</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Economics III</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Economics Option I</td>
<td>2/3</td>
<td>2/3</td>
<td>2/3</td>
</tr>
</tbody>
</table>

#### Stage IV

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Fluctuations and Growth</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities II (a) +</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Money, Credit and Financial Institutions</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Economics Option II</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>(a) At present lecture requirements are three hours per week for two terms.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Stage V

(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics Option III</td>
<td>2/3</td>
<td>2/3</td>
<td>3</td>
</tr>
<tr>
<td>General Option</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Thesis (b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Honours candidates prepare a thesis in Stage VI.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts, substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

---

### Bachelor of Commerce with Honours in Economics

#### Year IV

FULL-TIME COURSE

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics IV</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>(a) Advanced Economic Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Thesis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Honours work will be taken in Years II and III.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Year IV (Part-Time Course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Fluctuations and Growth</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities II (a) +</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Money, Credit and Financial Institutions</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Economics Option II</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
DIVISION OF ENGINEERING

The Division of Engineering offers a four year full-time course leading to the degrees of Bachelor of Engineering and Bachelor of Engineering with Honours and a six year part-time course leading to the degree of Bachelor of Science (Technology). Students may specialise in Mechanical, Civil or Electrical Engineering.

In addition, a five year full-time course leading to the combined degrees of Bachelor of Science and Bachelor of Engineering is offered in Mechanical and in Civil Engineering. Approval to follow the combined degree course must be obtained from the Head of the Division of Engineering before commencing the second year of the course. No degree is awarded until the successful completion of the final year.

Full-time courses require approximately 24 hours' attendance per week and part-time courses approximately 12 hours per week. Most local industries provide day release for part-time students.

DEPARTMENT OF CIVIL ENGINEERING

Civil Engineering is broad in its scope, utilising and constructing national works such as water supply and conservation projects, hydroelectric development, roads, railways, bridges, tunnels, large buildings, irrigation, sewerage, and harbour and river development. The Civil Engineer adapts the forces of nature for the use and convenience of mankind. His academic training includes the study of science and engineering practice. He must combine this with experience and judgment, and the knowledge and personality necessary to control large organisations of workers. This profession offers to a young man a considerable variety of types of work ranging from specialised research and investigations, through routine design and construction work to higher positions which are largely managerial and organisational in their nature.

The courses in Civil Engineering are arranged so that all students receive training in the basic principles of mathematics and science, and in the fundamentals of engineering applications of such work to surveying, hydraulics, foundation engineering, structural design, and constructional work in the field. Ancillary subjects from other branches of engineering are also included, such as electrical engineering and mechanical engineering.

During the course each full-time student is required to complete 36 weeks of industrial training, which are usually made up of 10, 10, and 16 weeks after the first, second, and third years respectively, and to submit detailed reports on these training periods. In the final year, the full-time student prepares a thesis covering some aspect of supervised research, and delivers a seminar paper on some selected topic. Additional study is prescribed in the fourth year for those students reading for the B.E. with Honours degree.

BACHELOR OF ENGINEERING COURSE

IN

CIVIL ENGINEERING

YEAR I

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

YEAR II

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics II</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Descriptive Geometry</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.501: Fluid Mechanics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.701: Thermodynamics</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Geology III</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.112: Materials and Structures</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>8.421: Surveying</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics II</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>26</td>
<td>23</td>
</tr>
</tbody>
</table>

YEAR III

(24 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.801S: Electrical Engineering</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8.122S: Structures</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>8.221S: Engineering Materials</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>8.423 Surveying</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.611S: Civil Engineering</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Humanities II +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24</td>
<td>21</td>
</tr>
</tbody>
</table>
### YEAR IV
(24 weeks full-time course)

<table>
<thead>
<tr>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.132S: Structures</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>8.142S: Engineering Computations</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.222S: Engineering Materials</td>
<td>5½</td>
<td>5½</td>
</tr>
<tr>
<td>8.522S: Hydraulics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.613S: Civil Engineering</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td>Minor Thesis</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

honours Additional.

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics (Civil Engineering IV)</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3 from Structures, Hydraulics, Surveying or Materials</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Thesis</td>
<td>2</td>
<td>2</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>27</td>
</tr>
</tbody>
</table>

+—A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

### BACHELOR OF SCIENCE/BACHELOR OF ENGINEERING COMBINED COURSES

#### IN CIVIL ENGINEERING

#### YEAR I
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
</tr>
<tr>
<td>24</td>
</tr>
<tr>
<td>24</td>
</tr>
</tbody>
</table>

#### YEAR II
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure Mathematics II</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Physics II</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>5.301 Engineering Mechanics*</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.501 Fluid Mechanics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.701 Thermodynamics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.112 Materials and Structures</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.421 Surveying</td>
<td>2½</td>
<td>2½</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>25½</td>
</tr>
<tr>
<td>25½</td>
</tr>
<tr>
<td>25½</td>
</tr>
</tbody>
</table>

* or Descriptive Geometry.

#### YEAR III
(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure Mathematics III</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Physics III</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Geology IE</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
</tr>
<tr>
<td>23</td>
</tr>
<tr>
<td>20</td>
</tr>
</tbody>
</table>

+—A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
<table>
<thead>
<tr>
<th>YEAR IV</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.801S Electrical Engineering</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8.122S Structures</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>8.221S Engineering Materials</td>
<td>5½</td>
<td>5½</td>
<td>5½</td>
</tr>
<tr>
<td>8.423S Surveying</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.611S Civil Engineering</td>
<td>2½</td>
<td>2½</td>
<td>2½</td>
</tr>
<tr>
<td>Humanities II +</td>
<td>3</td>
<td>3</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24</td>
<td>21</td>
</tr>
</tbody>
</table>

---

A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts, substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

<table>
<thead>
<tr>
<th>YEAR V</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.132S Structures</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>8.142S Engineering Computations</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.223S Engineering Materials</td>
<td>5½</td>
<td>5½</td>
<td>5½</td>
</tr>
<tr>
<td>8.522S Hydraulics</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.613S Civil Engineering</td>
<td>4½</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td>Minor Thesis</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

Honours Additional:

<table>
<thead>
<tr>
<th>Mathematics (Civil Engineering IV)</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>3 from Structures, Hydraulics, Surveying or Materials</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Thesis</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

---

BACHELOR OF SCIENCE (Technology) COURSE IN CIVIL ENGINEERING

<table>
<thead>
<tr>
<th>STAGE I</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STAGE II</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STAGE III</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics IIT</td>
<td>3½</td>
<td>3½</td>
<td>3½</td>
</tr>
<tr>
<td>Descriptive Geometry</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.112: Materials and Structures</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.421: Surveying</td>
<td>1½</td>
<td>1½</td>
<td>1½</td>
</tr>
<tr>
<td>Mathematics II Part I</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>11½</td>
<td>11½</td>
<td>11½</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STAGE IV</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.701: Thermodynamics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.501: Fluid Mechanics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.121: Structures</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Geology I</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>13</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>
STAGE V
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.131: Structures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.251: Hydraulics</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>8.422: Surveying</td>
<td>11</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>8.221: Engineering Materials</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

STAGE VI
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.801: Electrical Engineering</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.141: Engineering Computations</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8.222: Engineering Materials</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.611: Civil Engineering</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.612: Civil Engineering</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities II +</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>

DIVISION OF ENGINEERING

Below is set out the normal pattern of pre-requisites in B.Sc.(Tech.) course in Civil Engineering:

<table>
<thead>
<tr>
<th>Stage</th>
<th>SUBJECT</th>
<th>PRE-REQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>Physics IIT</td>
<td>Physics I: Mathematics I</td>
</tr>
<tr>
<td>VI</td>
<td>Engineering Computations</td>
<td>Mathematics I: Physics I</td>
</tr>
<tr>
<td></td>
<td>8.222 Engineering Materials</td>
<td>Mathematics I: Physics I</td>
</tr>
<tr>
<td></td>
<td>8.612 Civil Engineering</td>
<td>Mathematics I: Physics I</td>
</tr>
<tr>
<td></td>
<td>5.701 Thermodynamics</td>
<td>Physics I: Mathematics II Part I</td>
</tr>
<tr>
<td></td>
<td>5.501 Fluid Mechanics</td>
<td>Physics I: Mathematics II Part I</td>
</tr>
<tr>
<td></td>
<td>8.121 Structures</td>
<td>8.112 Materials and Structures</td>
</tr>
<tr>
<td>VI</td>
<td>8.131 Structures</td>
<td>8.121 Structures</td>
</tr>
<tr>
<td></td>
<td>8.521 Hydraulics</td>
<td>8.501 Fluid Mechanics</td>
</tr>
<tr>
<td></td>
<td>8.422 Surveying</td>
<td>8.421 Surveying</td>
</tr>
<tr>
<td></td>
<td>8.221 Engineering Materials</td>
<td>8.112 Materials and Structures</td>
</tr>
<tr>
<td></td>
<td>5.501 Fluid Mechanics</td>
<td>8.112 Materials and Structures</td>
</tr>
<tr>
<td></td>
<td>8.611 Civil Engineering</td>
<td>Mathematics II Part I</td>
</tr>
<tr>
<td></td>
<td>8.612 Civil Engineering</td>
<td>Mathematics II Part I</td>
</tr>
<tr>
<td></td>
<td>6.801 Electrical Engineering</td>
<td>Physics IIT.</td>
</tr>
</tbody>
</table>

A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

BACHELOR OF SCIENCE (Technology)
IN CIVIL ENGINEERING
ACCELERATED COURSE

The student reading for the degree of B.Sc. (Tech.) in Civil Engineering may reduce the time required to complete the academic requirements by undertaking the following programme of combined part-time/full-time study.

Stage 1 — 30 weeks Part-time Course (as for Stage 1 B.Sc. (Tech.) Course above).

Stage 2 — 30 weeks Part-time Course (as for Stage 2 B.Sc. (Tech.) Course above).

Stage 3A — 30 weeks Full-time Course (as for Year II of full-time B.E. Course above).

Stage 4A — 24 weeks Full-time Course (as for Year III of full-time B.E. Course above).

Stage 5A — 30 weeks Part-time Course (as set out below).

STAGE 5A
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.131 Structures</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.141 Engineering Computations</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8.222 Engineering Materials</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.521 Hydraulics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.612 Civil Engineering</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
In preparation for a career in any branch of Electrical Engineering, the student must acquire a knowledge of the basic sciences of Mathematics and Physics. Electrical Engineering, perhaps more than most other branches of engineering, is closely linked with the pure sciences, and requires a scientific outlook and approach for the proper understanding of the problems involved.

In the full-time degree course, the first two years only are taken at Newcastle. The student must transfer to the University of New South Wales at Broadway, Sydney, in order to take the remaining two years of the course. The part-time degree of B.Sc(Tech.) is offered wholly at Newcastle.

In the early stages of the courses, students concentrate on acquiring a knowledge of the basic science subjects of mathematics, physics and chemistry together with an introduction to engineering. Advanced students study a common subject of electrical engineering, which includes such topics as measurements, electron-physics, servo-mechanisms, electric circuit and field theory, and electronics. Advanced full-time students also elect to study one of the following three branches:

(a) Power Apparatus and Systems—concerned mainly with electrical machinery, power generation, transmission and power systems;
(b) Utilisation and control—concerned with the utilisation and control of electrical plant and applied electronics;
(c) Communications—concerned with radio and line communications, radar and other navigational aids, and television.

Advanced part-time students study the branch currently available at Newcastle.

During the course each full-time student is required to complete 28 weeks of industrial training, which are normally made up of 10 and 18 weeks after the second and third years respectively, and to submit detailed reports on these training periods. In the final year, the full-time student prepares a thesis covering some aspect of supervised research, and delivers a seminar paper on some selected topic. A course of specialist external lectures is given by senior practising engineers in order to acquaint the student with current projects and problems. An opportunity is given to final year students to attend practical wiring classes towards qualifying for an Electrician's licence.

---

<table>
<thead>
<tr>
<th>BACHELOR OF ENGINEERING COURSE IN ELECTRICAL ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR I  (30 weeks full-time course)</td>
</tr>
<tr>
<td>Term 1</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Physics I</td>
</tr>
<tr>
<td>Chemistry I</td>
</tr>
<tr>
<td>Mathematics I</td>
</tr>
<tr>
<td>Engineering I</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR II (30 weeks full-time course)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Physics II</td>
</tr>
<tr>
<td>Mathematics II</td>
</tr>
<tr>
<td>Descriptive Geometry</td>
</tr>
<tr>
<td>4.922: Materials Science</td>
</tr>
<tr>
<td>5.701: Thermodynamics</td>
</tr>
<tr>
<td>6.101: Electric Circuit Theory</td>
</tr>
<tr>
<td>6.112: Materials and Structures</td>
</tr>
<tr>
<td>Humanities I +</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

---

A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

NOTE.—The student may elect to include 5.501 Fluid Mechanics in his programme for the second year of the course which is taken at Newcastle in lieu of being required to complete such subject or 10.351S Statistics in the third year of the course which is taken at Kensington.
YEAR III**
(24 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Term 2</td>
</tr>
<tr>
<td>5.304S Theory of Machines</td>
<td>2</td>
</tr>
<tr>
<td>5.501S Fluid Mechanics OR 10.301S Statistics</td>
<td>6</td>
</tr>
<tr>
<td>6.102S Electric Circuit Theory</td>
<td>6</td>
</tr>
<tr>
<td>6.201S Electric Power Engineering</td>
<td>6</td>
</tr>
<tr>
<td>6.301S Electronics</td>
<td>6</td>
</tr>
<tr>
<td>10.333S Mathematics †</td>
<td>2</td>
</tr>
<tr>
<td>51.011S History OR †</td>
<td>1½</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>27</td>
</tr>
</tbody>
</table>

† Students who have taken the subjects Physics III and Mathematics III in the Science course are exempt from this subject.

YEAR IV*
(24 weeks full-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Term 2</td>
</tr>
<tr>
<td>6.001S Electrical Engineering</td>
<td>10</td>
</tr>
<tr>
<td>Advanced Elective, Humanities ‡</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus one of the following options:

Option I—
Power Apparatus and systems—
6.202S Power Systems | 7 | 7 | 7 |
6.212S Electrical Machines | 7 | 7 | 7 |
Option II—
Utilisation and Control of Electrical Plant—
6.401S Utilisation and Control of Electrical Plant | 7 | 7 | 7 |
6.322S Applied Electronics | 7 | 7 | 7 |
Option III—
Communications—
6.302S Communications A | 7 | 7 | 7 |
6.312S Communications B | 7 | 7 | 7 |

27 27 24

* Lectures cease at the end of the 4th week of third term.
‡ Terms 1 and 2 (30 weeks) only.
** Years 3 and 4 of this course are not offered at Newcastle but may be completed with the University of New South Wales in Sydney.

BACHELOR OF SCIENCE (Technology) COURSE

IN

ELECTRICAL ENGINEERING

STAGE I
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Term 2</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>—</td>
</tr>
</tbody>
</table>

STAGE II
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Term 2</td>
</tr>
<tr>
<td>Physics I</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>—</td>
</tr>
</tbody>
</table>

STAGE III
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Term 2</td>
</tr>
<tr>
<td>Mathematics IIIE Part I</td>
<td>2</td>
</tr>
<tr>
<td>Physics IIIT</td>
<td>5½</td>
</tr>
<tr>
<td>Descriptive Geometry</td>
<td>2</td>
</tr>
<tr>
<td>6.101S Electric Circuit Theory</td>
<td>3</td>
</tr>
<tr>
<td>12½</td>
<td>12½</td>
</tr>
</tbody>
</table>
## DIVISION OF ENGINEERING

Below is set out the normal pattern of pre-requisites in B.Sc(Tech.) Course in Electrical Engineering:

<table>
<thead>
<tr>
<th>Stage</th>
<th>SUBJECT</th>
<th>PRE-REQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>Physics IIT</td>
<td>Physics I: Mathematics I</td>
</tr>
<tr>
<td></td>
<td>Mathematics IIE Part I</td>
<td>Mathematics I</td>
</tr>
<tr>
<td></td>
<td>6.101 Electric Circuit Theory</td>
<td>Physics I: Mathematics I</td>
</tr>
<tr>
<td>IV</td>
<td>5.701: Thermodynamics</td>
<td>Physics IIT: Mathematics II Part I</td>
</tr>
<tr>
<td></td>
<td>8.112 Materials and Structures</td>
<td>Mathematics I: Physics I: Engineering I</td>
</tr>
<tr>
<td></td>
<td>Mathematics IIE Part II</td>
<td>Mathematics IIE Part I</td>
</tr>
<tr>
<td>V</td>
<td>4.922: Materials Science</td>
<td>Physics IIT</td>
</tr>
<tr>
<td></td>
<td>6.251 Electric Power Engineering</td>
<td>Mathematics IIE Part II</td>
</tr>
<tr>
<td></td>
<td>6.351: Electronics</td>
<td>Mathematics IIE Part II</td>
</tr>
<tr>
<td></td>
<td>6.252 Power Systems</td>
<td>6.351: Electronics</td>
</tr>
<tr>
<td></td>
<td>6.262: Electrical Machines</td>
<td>6.251: Electric Power Engineering</td>
</tr>
</tbody>
</table>

### Notes

—A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
DEPARTMENT OF MECHANICAL ENGINEERING

The courses in Mechanical Engineering are designed to provide a foundation of basic science, together with sufficient application in engineering practice to prepare the graduate to enter any industry dealing with heat, power, materials and machinery. Specialised knowledge of industrial techniques and products is gained by direct service in industry.

The subjects studied develop from the purely basic type through those of an applied nature to reach the professional level in such engineering topics as design, thermodynamics, and fluid mechanics. In addition to lectures, the courses comprise tutorial classes and laboratory work so that the student is given opportunities to apply theoretical knowledge to practical problems, and to familiarise himself with equipment.

During the course each full-time student is required to complete 36 weeks of industrial training, which are normally made up of 8, 8 and 20 weeks after the first, second and third years respectively. The first two periods are spent in engineering workshops and the third in an engineering drawing office. These students are required to submit detailed reports on their industrial training. In the final year, the full-time student prepares a thesis covering some aspect of supervised research, and delivers a seminar paper on some selected topic. Additional study is prescribed in the third year and an alternative study course in the fourth year, for those students reading for the B.E. with Honours degree.

### BACHELOR OF ENGINEERING COURSE

#### IN MECHANICAL ENGINEERING

**YEAR I**

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

**YEAR II**

(30 weeks full-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics IIIT</td>
<td>4½</td>
<td>4½</td>
<td>4½</td>
</tr>
<tr>
<td>4.922: Materials Science</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.202: Mechanical Technology</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Descriptive Geometry</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.501: Fluid Mechanics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.701: Thermodynamics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.112: Materials and Structures</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics II</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23½</td>
<td>23½</td>
<td>23½</td>
</tr>
</tbody>
</table>

**YEAR III**

(24 weeks full-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.101S: Mechanical Engineering Design</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5.204: Mechanical Technology</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.302S: Theory of Machines</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.502S: Fluid Mechanics</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.702S: Thermodynamics</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6.801S: Electrical Engineering</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8.133S: Structures</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.142: Engineering Computations</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities II +</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28</td>
<td>28</td>
<td>25</td>
</tr>
</tbody>
</table>

**Honours Additional:**

| Mathematics (Mechanical Engineering III) | 2      | 2      | 2      |

---A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
### YEAR IV

**Degree candidates only.**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.103/5.103S: Mechanical Engineering Design</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.321S: Auto Control</td>
<td>1½</td>
<td>1½</td>
<td>1½</td>
</tr>
<tr>
<td>5.304S: Theory of Machines</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.503S: Fluid Mechanics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.703S: Thermodynamics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6.802S: Electrical Engineering</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>18.121S: Engineering Administration Seminar</td>
<td>1½</td>
<td>1½</td>
<td>1½</td>
</tr>
<tr>
<td>Minor Thesis</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

22 22 22

### YEAR IV

**Degree with Honours candidates only.**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.305S: Theory of Machines</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.322S: Auto Control</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.103/5.103S: Mechanical Engineering Design</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.601S: Mechanical Engineering</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>6.802S: Electrical Engineering</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (Mechanical Engineering IV) Seminar</td>
<td>1½</td>
<td>1½</td>
<td>1½</td>
</tr>
<tr>
<td>Thess</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

25½ 25½ 25½ 28

---

---

**BACHELOR of SCIENCE/BACHELOR of ENGINEERING IN MECHANICAL ENGINEERING**

### YEAR I

**30 weeks full-time course**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

24 24 24

### YEAR II

**30 weeks full-time course**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure Mathematics II</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Physics II</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>5.201 Mechanical Technology</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5.301 Engineering Mechanics*</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.501 Fluid Mechanics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.701 Thermodynamics</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.112 Materials and Structures</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

24 24 24

### YEAR III

**30 weeks full-time course**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours per week</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure Mathematics III</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Physics III</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>4.922 Materials Science</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities I +</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

22 22 22

* or Descriptive Geometry.

+—A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.
### BACHELOR OF SCIENCE (Technology) COURSE

#### IN MECHANICAL ENGINEERING

##### YEAR IV

<table>
<thead>
<tr>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.101S Mechanical Engineering Design</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>5.204S Mechanical Technology</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.302S Theory of Machines</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.502S Fluid Mechanics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.702S Thermodynamics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6.801S Electrical Engineering</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8.112S Structures</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8.142S Engineering Computation</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Honours Additional:—

- Mathematics (Mechanical Engineering III) | 2 | 2 | 2

—A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.

##### YEAR V

<table>
<thead>
<tr>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.103/5.1038: Mechanical Engineering Design</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.321S Auto Control</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5.304S Theory of Machines</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.503S Fluid Mechanics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.703S Thermodynamics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6.802S Electrical Engineering</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>18.121S Engineering Administration</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Seminar</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Minor Thesis</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

---

### STAGE I (30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

### STAGE II (30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

### STAGE III (30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics II</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Descriptive Geometry</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8.112: Materials and Structures</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4.922: Materials Science</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics II Part I</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

### STAGE IV (30 weeks part-time course)

<table>
<thead>
<tr>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.133: Structures</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.202: Mechanical Technology</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8.501: Fluid Mechanics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.701: Thermodynamics</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics II Part II</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities I</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>
STAGE V
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.101: Mechanical Engineering Design</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5.302: Theory of Machines</td>
<td>2½</td>
<td>2½</td>
<td>2½</td>
</tr>
<tr>
<td>5.204: Mechanical Technology</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6.801: Electrical Engineering</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities II +</td>
<td>3</td>
<td>3</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13½</strong></td>
<td><strong>13½</strong></td>
<td><strong>10½</strong></td>
</tr>
</tbody>
</table>

*A student in any course offered by any Division or Department at Newcastle may, with the permission of the Head of the Division of Arts, substitute one Arts subject for either Humanities I or Humanities II or two Arts subjects for Humanities I and Humanities II.*

STAGE VI
(30 weeks part-time course)

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Term I</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.103: Mechanical Engineering Design</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5.321: Auto Control</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5.302: Fluid Mechanics</td>
<td>2½</td>
<td>2½</td>
<td>2½</td>
</tr>
<tr>
<td>5.702: Thermodynamics</td>
<td>2½</td>
<td>2½</td>
<td>2½</td>
</tr>
<tr>
<td>6.802: Electrical Engineering</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5.303: Mechanical Vibrations Seminar</td>
<td>1½</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12½</strong></td>
<td><strong>12½</strong></td>
<td><strong>12½</strong></td>
</tr>
</tbody>
</table>

BACHELOR OF SCIENCE (Technology)
IN
MECHANICAL ENGINEERING

ACCELERATED COURSE

The student reading for the degree of B.Sc. (Tech.) in Mechanical Engineering may reduce the time required to complete the academic requirements by undertaking the following programme of combined part-time/full-time study.

Stage 1 — 30 weeks Part-time Course (as for Stage 1 B.Sc. (Tech.) Course above).

Stage 2 — 30 weeks Part-time Course (as for Stage 2 B.Sc. (Tech.) Course above).

Stage 3A — 30 weeks Full-time Course (as for Year II of full-time B.E. Course above).

Stage 4A — 24 weeks Full-time Course (as for Year III of full-time B.E. Course above).

Stage 5A — 30 weeks Part-time Course (as set out below).
DIVISION OF ENGINEERING

Below is set out the normal pattern of pre-requisites in B.Sc.(Tech.) Course in Mechanical Engineering:

<table>
<thead>
<tr>
<th>Stage</th>
<th>SUBJECT</th>
<th>PRE-REQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>Physics IIT</td>
<td>Physics I: Mathematics I</td>
</tr>
<tr>
<td></td>
<td>Mathematics II Part I</td>
<td>Mathematics I</td>
</tr>
<tr>
<td></td>
<td>8.112 Materials and Structures</td>
<td>Mathematics I: Physics I: Engineering I</td>
</tr>
<tr>
<td>IV</td>
<td>8.133 Structures</td>
<td>8.112 Materials and Structures</td>
</tr>
<tr>
<td></td>
<td>5.501 Fluid Mechanics</td>
<td>Physics IIT: Mathematics II Part I</td>
</tr>
<tr>
<td></td>
<td>5.701 Thermodynamics</td>
<td>Physics IIT: Mathematics II Part I</td>
</tr>
<tr>
<td></td>
<td>Mathematics II Part I</td>
<td>Mathematics II Part I</td>
</tr>
<tr>
<td>V</td>
<td>5.101 Mechanical Engineering Design</td>
<td>5.202 Mechanical Technology</td>
</tr>
<tr>
<td></td>
<td>6.801 Electrical Engineering</td>
<td>8.112 Materials and Structures.</td>
</tr>
<tr>
<td></td>
<td>Mathematics II: Physics IIT.</td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td>5.103/5.103S Mechanical Engineering Design</td>
<td>5.101 Mechanical Engineering Design</td>
</tr>
<tr>
<td></td>
<td>5.502 Fluid Mechanics</td>
<td>5.501 Fluid Mechanics</td>
</tr>
<tr>
<td></td>
<td>5.702 Thermodynamics</td>
<td>5.701 Thermodynamics</td>
</tr>
<tr>
<td></td>
<td>6.802 Electrical Engineering</td>
<td>6.801 Electrical Engineering</td>
</tr>
<tr>
<td></td>
<td>5.303 Mechanical Vibrations</td>
<td>5.302 Theory of Machines</td>
</tr>
</tbody>
</table>

DIVISION OF SCIENCE

The Division of Science comprises the Departments of Chemistry, Geology, Mathematics and Physics. At the beginning of 1960 the various courses then administered by the Division were consolidated and since that time the Division has been responsible for the Science Course only. This course had been offered under the regulations published in the Calendar of the University of New South Wales, 1960, p.333, modified in various ways to suit local conditions. It comprised eight science subjects chosen in accordance with the regulations together with prescribed studies in the Humanities.

During 1960 the Council of the University resolved that henceforth the Science course would comprise nine science subjects including Chemistry I, Mathematics I and Physics I, with prescribed Humanities. The regulations set out below implement this decision and have been approved specifically for implementation in Newcastle from the beginning of 1961.

Students who were enrolled in 1960 and had completed one Group I subject before 1st March, 1961, will be permitted to complete the course in accordance with the previously existing regulations.

SCIENCE COURSE

In addition to the courses in Applied Science which are described elsewhere, the University offers a more broadly based course leading to the Degree of Bachelor of Science.

No industrial experience is required. A Pass degree may be awarded after three years, or an Honours degree after four years, of full-time study. The course may be taken by part-time study.

Students are required to discuss the choice of their subjects with the Head of the Division of Science.

B.Sc. COURSE IN SCIENCE:

1. A student is required to select his course from the following groups of qualifying subjects in accordance with the provisions set out in subsequent clauses.*

<table>
<thead>
<tr>
<th></th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities I</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Humanities II</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group I:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Physics I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Geology I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Geography I</td>
<td>5</td>
<td>(Plus 4 days field work)</td>
<td>5</td>
</tr>
<tr>
<td>Psychology I</td>
<td>5</td>
<td>(Plus 4 days field work)</td>
<td>5</td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

* A student who selects an unusual combination of subjects or subjects chosen from more than one group in one year may be required, owing to the exigencies of the timetable to attend for more than the minimum number of years and/or at evening classes.
### Group II:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry II</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Pure Mathematics II</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Applied Mathematics II</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Theory of Statistics I</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Mathematics II</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Physics II</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Geology II</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Psychology II: 7

Geography II: 5

(plus 8 days field work)

(plus 7 days field work)

### Group III:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography III</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Psychology III</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Chemistry III</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Chemistry IIIIN</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Pure Mathematics III</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Applied Mathematics III</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Geology III</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

Geology IIIA: 12

Physics III: 12

(plus 10 days field work)

(plus 10 days field work)

2. In order to qualify for admission to the degree of Bachelor of Science under these regulations a candidate must attend the classes, complete laboratory and other assignments and satisfy the examiners in the following subjects:

(a) The Humanities listed under Section I (a), provided that a student may, with the permission of the Head of the Division of Arts, substitute one Arts subject for Humanities II or two Arts subjects for Humanities I and II.

(b) Nine subjects selected from the Science subjects listed under Section I (b) to include four subjects from Group I, three subjects from Group II and two subjects from Group III, provided that

(i) a student may substitute a subject from Group I for a subject from Group II; and/or

(ii) a student may substitute a subject from Group II for a subject from Group III;

(iii) the proposed course must be approved by the Warden or his representative during enrolment;

(iv) the selected course includes Chemistry I, Physics I, Mathematics I;

(v) the requirements of Section 4, with respect to pre-requisite and co-requisite subjects are satisfied;

3. Progression in the course is by subject except that Chemistry I, Physics I, Mathematics I and one other Group I subject must be completed within the first two years (full-time) or four years part-time of the course. In general, a full-time student should complete his course as follows:

**First Year Programme:**

- Chemistry I, Physics I, Mathematics I and one other Group I subject.

**Second Year Programme:**

- (a) Humanities I

- (b) Three subjects from Group II OR

  Two subjects from Group II and one from Group I.

**Third Year Programme:**

- (a) Humanities II

- (b) Two subjects from Group III OR

  One subject from Group III and one from Group II.

In general a part-time student should complete his course by spreading each of the suggested full-time yearly programmes over two successive part-time years.

4. (a) Before enrolling for any subject listed in Group II, the student shall have attended the classes, completed laboratory and other assignments and satisfied the examiners in the corresponding subject in Group I and before enrolling for any subject listed in Group III; the student shall have attended classes, completed laboratory and other assignments and satisfied the examiners in the corresponding subject listed in Group II.

(b) Before enrolling in any subject listed in the left-hand column below, the student shall have attended the classes, completed laboratory and other assignments and satisfied the examiners in the subjects indicated as pre-requisites.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pre-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics II</td>
<td>Mathematics I</td>
</tr>
<tr>
<td>Theory of Statistics I</td>
<td>Mathematics I</td>
</tr>
<tr>
<td>Chemistry III</td>
<td>Pure Mathematics II or Applied Mathematics II</td>
</tr>
<tr>
<td>Physics III</td>
<td>Geology III</td>
</tr>
<tr>
<td>Geology IIII</td>
<td>Mathematics I and Physics I</td>
</tr>
<tr>
<td>Geology IIIIA</td>
<td>Mathematics I and Physics I</td>
</tr>
</tbody>
</table>

(c) Enrolment in the subject in the left-hand column shall not be approved unless the corresponding subject listed in the right-hand column is taken concurrently or has been completed.

**Subject**

- Applied Mathematics II
- Applied Mathematics III
- Chemistry III
- Geology IIIA

**Co-requisites**

- Pure Mathematics II
- Pure Mathematics III
- Chemistry III
- Geology III
5. (a) Where any alteration in the course approved at enrolment is desired the student must obtain the approval of the Warden or his representative for the new course.

(b) A student who wishes to attempt an Honours degree should seek the advice of the Head of the appropriate Department at the end of his first-year programme. (See 3 above).

(c) A student wishing to enrol in an Honours course in a Department may be required to complete extra work concurrently with the Pass degree work.

HONOURS.

6. (a) A suitable qualified candidate may be admitted to an Honours course in one of the following subjects requiring an extra year of full-time or two extra years of part-time work.

(i) Chemistry
(ii) Geography
(iii) Geology
(iv) Mathematics*
(v) Physics
(vi) Psychology

(b) A student desiring admission to the Honours course must apply to the Head of the appropriate Department on completion of the Pass degree requirements.

(c) A student proceeding to Honours in any subject must attend lectures, read and engage in laboratory work as may be required.

(d) A student proceeding to Honours in Geography or Mathematics* will be required to undertake additional work during his Pass degree course.

* The fourth year of the Honours course in Mathematics is not available in Newcastle at present.
DESCRIPTION OF SUBJECTS

The description of subjects offered in the various Divisions and Departments is set out in the following pages:

The order of contents is as follows:

**Applied Science:**
- Chemical Engineering and Industrial Chemistry
- Metallurgy
- Industrial Arts

**Architecture:**
- Economics
- Education
- English
- French
- Geography
- German
- Greek
- History
- Humanities
- Latin
- Philosophy
- Psychology
- The Diploma of Education

**Arts:**
- Accountancy
- Economics

**Engineering:**
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

**Science:**
- Chemistry
- Geology
- Mathematics
- Physics

DIVISION OF APPLIED SCIENCE

DEPARTMENT OF CHEMICAL ENGINEERING AND INDUSTRIAL CHEMISTRY

**CHEMICAL ENGINEERING I**

**Principles I: Fluid Statistics and Dynamics**

**Pumps and Pumping** — Theory and practice. Blow cases, air lift pumps, centrifugal pumps, rotary pumps, reciprocating pumps, air blowers.


**Corrosion and Materials** — An elementary course in corrosion theory. Cathodic and anodic protection. Surface coatings. Materials of construction for particular chemical plants.

**CHEMICAL ENGINEERING IIA/IIAT**

**Chemical Engineering Thermodynamics and Kinetics:**


Batch reactors. Isothermal and non-isothermal operation. Stirred tank and flow reactors. Tubular reactors, rate equations, design under isothermal and non-isothermal conditions. Comparison with tank flow reactions. Tank flow reactors in single and series.


Management and Data Processing*:

Methods Engineering — Introduction to the organisation of physical facilities in preparation for manufacture, work simplification, incentive principles and practice.

Data Processing — Economic usage, basic methods of computation, use of digital and analogue computers.

Administration — Introduction to the principles of management, sales, finance, personnel.

Development — Plant location, layout, feasibility studies.

Marketing — Introduction to problems relating to the product and sales analysis.

Industrial and Commercial Law — Elements of Mercantile and Industrial Law, employers' and employees' associations.

Chemical Engineering Design I:

Costing — Costing as relevant to plant design, optimising, steam and other running costs versus capital cost of a stripping column.

Power and Process Reticulation — Design of piping systems for steam, water, compressed air, refrigerated brine and process fluids, trapping and drainage, underground and overhead piping in non-ferrous, wrought iron and steel, steam tracing, towns and safety water services.

Structures — Code design of beams, columns and simple trusses leading to the design of a simple structure, simple rigid structure, elementary concrete design (beam, column base or slab).

Process Vessels — Code design of pressure vessels in both mild steel and non-ferrous construction, compensation and code, appurtenances and accessories.

Power Transmission — Bearings and shafting, vee belt and flat belt drives, variable speed drives, seals and stuffing boxes, gear drives.

Heating and Cooling — Construction and design of shell and tube heat exchangers for liquids, condensing vapours and boiling liquids.

Distillation and Absorption — Construction and design of bubble plate, sieve tray and packed towers.

Elementary Instrumentation — Qualitative treatment of instrumentation for temperature, pressure, flow, level and pH, types of controllers (briefly), types of control valves.

Process Engineering — Flowsheets, etc.

Fuel Science:

Characterisation and classification of fuels. The origin, nature and properties of fuels, physical properties and chemical constitution. Sampling, testing and evaluation — significance of tests; introduction to standard specifications. Types of coal commercially available in Australia. Processing of primary fuels and the utilisation of primary fuels.
and secondary solid, liquid and gaseous fuels. Flames and flame reactions: Special fuels, nuclear and high energy fuels.

**CHEMICAL ENGINEERING IIIA**

**Principles III:**


**CHEMICAL ENGINEERING IIIB/IIIBT**

**Chemical Engineering Design II:**

Development of Design — Review of Chemical Engineering Design I — process representation, models, etc. Effect of plant location on design and layout — topography, climate, zoning, waste disposal. Process design principles — continuous and batch operation, services reticulation, storage, instrumentation, materials handling, Equipment selection — fields of application and preparation of specifications.


Cost Engineering — Feasibility study — market evaluation, profitability. Process research — selection and development of most suitable processes, thermodynamic feasibility, outline design, preliminary costing, product and market testing. Development of manufacturing process — material properties and special plant characteristics, control requirements, operating procedures, detailed design, manufacturing costs estimate, capital requirements.

Instrumentation and Automatic Control:

Instrumentation — A discussion of some of the more important types of measuring instruments, principles governing their operation, selection and installation, mainly concerned with pressure, temperature, and flow measuring devices, and some of the means of measuring process variables and chemical composition. Indicating and recording instruments. Pneumatic and electric controllers. Control valves and actuators, and control valve sizing.

Process Dynamics — A discussion of the dynamics of flow processes, thermal processes, mass transfer processes and chemical processes. This would include the use of block diagrams and signal flow diagrams, and of the mathematical techniques for handling the equations involved.

Automatically-controlled Processes — A discussion of the fundamental principles of automatic control, and of the mathematical techniques for solving automatic-control problems.

* Chemical Engineering IIIBT only.

**Laboratory** — Aimed at introducing some of the problems associated with measuring instruments (calibration, errors, installation, etc.) and a study of the properties of some of the components in controlled systems (lags, performance characteristics, valve characteristics, etc.). Other work involves the use of electronic and other types of analogue equipment for simulating controlled processes, and perhaps the use of the digital computer in similar problems.

**CHEMICAL ENGINEERING PROJECTS**

The design project will consist of the design of plant for the production of chemicals and the estimation of product costs. The experimental project will consist of the investigation of some aspect of chemical engineering.

**INDUSTRIAL CHEMISTRY I**

**Processes:** Services in the Chemical Industry (water, waste, disposal, steam, D.C. power, refrigeration, fuels — solid, liquid, gaseous); sulphuric acid; lime cement and plaster; alkanes (soda ash, caustic soda, ammonia); nitric acid; industrial gases; electric furnace products; phosphates, superphosphates and aluminium; glass; coal carbonisation; coal tar refining; petroleum refining; industrial fermentation (industrial alcohol, acetone and butanol); cellulose industries; acetylene and acetylene chemicals; chemicals from ethylene and propylene; synthetic methanol and formaldehyde; sugar.

**Equipment:** Principles of operation, construction and fields of application of equipment used to carry out the following operations: size reduction; particle classification; separation of solids from liquids; separation of liquids from liquids; separation of liquids from solids; propulsion of liquids and gases including production of vacua; conveying of solids.

**Production Control:** Purchase, storage, routing, scheduling and shipping of materials. Study of the batch system of production, semi-continuous and continuous production. Co-ordination of production control, quality control and costing.

**Methods Engineering:**

(i) Organisation of physical facilities for chemical production; selection and layout of equipment; use of process flow charts and diagrams.

(ii) Work simplification; detailed analysis of operations and the use of operation-process charts and analysis sheets; time study.

**Cost Control:** Cost components in industrial chemical processes; economic analysis of processes from the point of view of volume production, choice of materials, process conditions and process equipment.

**Operations Research:**

(i) Definition and history.

(ii) Functions of research in relation to decision-making.

(iii) Structure of research groups and research management.


(v) Techniques of operations research. Reference to statistical methods. Theory of Feedback, applications of principles of game theory and linear programming to production control and managerial decisions.
DEPARTMENT OF METALLURGY

METALLURGY I

General Metallurgy
An introductory survey to the whole field, and dealing in a descriptive manner with ore dressing, hydrometallurgy, and extractive processes for the more common metals; the origin of metallic structures and their characteristics, mechanical deformation and industrial methods of shaping metals.

Properties of Materials
The engineering approach to materials testing. Tension and compression, hardness, impact tests, creep and fatigue, bending and shear testing.

Physical Metallurgy
(i) The properties of metals and alloys. Phase equilibria in unary and binary systems. Eutectic, eutectoid, peritectic, peritectoid and syntectic reactions, with examples, and experimental methods of investigating phase equilibria. Iron alloys: the iron-carbon diagram, alloy steels, the formation of pearlite and the decomposition of martensite. Copper and bronzes, and other light alloys as examples of these systems. The thermodynamics of phase transformations and the physical factors determining phase boundaries. Generation of microstructures and the influence of surface tension. Relation between structures and properties.
(ii) Elementary crystallography and the structure of the elements. The structure of typical alloy phases, and the factors affecting solid solubility.
(iii) The metallurgical approach to physical properties. Elastic and plastic behaviour, thermal fatigue and anisotropy. Strain hardening, fracture, complex stress systems, creep, and fatigue. Effect of temperature on these properties.

Metallurgical Engineering
Mass and energy balances, with emphasis on principles common to all metallurgical processes involving chemical reactions. Momentum, heat and mass transfer in gaseous and liquid systems. Metallurgical fuels, their properties and uses. Refractories, their structures, properties and uses.

Introduction to metallurgical thermodynamics. Detailed consideration of gas/solid equilibria, particularly in relation to the gaseous reduction of metal oxides. The gaseous, molten, and solid states, their structure and physical properties.

METALLURGY II — METALLURGY IIA — METALLURGY IIB
A more advanced treatment of the properties and behaviour of metals and the unit metallurgical processes which form the basis of metal extraction, refining, and fabrication. To facilitate the inclusion of this subject in the part-time course, the subject is divided into two sections — Metallurgy IIA being the Physical Metallurgy component and Metallurgy IIB the remainder.

Physical Metallurgy
(ii) The stereographic projection. X-ray diffraction and application to metallurgical problems. The electron theory of metals, Fermi-Dirac statistics, and the zone theory applied to an explanation of conductors, semiconductors, and insulators. Ferromagnetism and antiferromagnetism.

Metallurgical Engineering
Metallurgical thermodynamics—a more advanced treatment with special attention to reactions involving complex solutions. Metallurgical kinetics—an introductory treatment of the rates of heterogeneous reactions.
Metallurgical electrochemistry—fundamentals of electrode processes and applications to corrosion, electrolysis, slag/metal reactions. Engineering principles of the unit processes of extractive metallurgy, equilibria and rate considerations as considerations in design. Physico-chemical unit processes of extraction metallurgy.

Industrial Metallurgy
A course of lectures on the applications of metallurgical principles to industrial practice, combined with a series of work visits. The lecture topics are selected from foundry techniques and control, electroplating, the joining of metals, machinability, powder metallurgy, and industrial alloys.

Metallurgy Seminar
A series of lectures on the presentation of verbal reports and papers. Each student will deliver a paper on a topic of his choice, followed by a discussion of its technical aspects.

METALLURGY III*
* Subject to approval.

An advanced course of lectures and practical work together with a thesis of a substantial nature on a topic determined by the Head of Department. The formal lectures are composed as follows:—

Physical Metallurgy

Metallurgical Engineering
An advanced treatment of such topics as solidification, surface chemistry and theories of metal oxidation. Irreversible thermodynamics. Engineering principles in plant design.

Industrial Metallurgy
The shaping of metals under complex stresses: rolling, forging, extruding, wire-drawing, deep-drawing and pressing, and stretch forming. Non-destructive testing: radiography, ultrasonic and magnetic testing.

4.22 MATERIALS SCIENCE
A course of basic metallurgy for engineering students. The atomic structure of metals. The grain structure of metals. The structure of alloys, and the properties and heat treatment of commercially important alloys, principally those based on aluminium, copper and iron. Corrosion, fuels and refractories.

DEPARTMENT OF INDUSTRIAL ARTS
Stages I and II only will be available in 1963. Students should consult the sections dealing with the Divisions which offer the subjects required for these stages. The student requiring further information should consult the Head of the Division of Applied Science.
11.113 DESIGN III

Lectures on the material factors influencing architectural design: people, climate, topography, materials, economics, social system, etc. Atmosphere and character. Expression of function, structure and materials. Relationship in massing and detail. The importance in architecture of space as well as mass. Design of external space.

The detailed equipment of space; street furniture, site furniture, paving and flora; elementary study of landscape. The design of building groups.

Approach to an architectural problem, from simple to complex; planning analysis.

Design for climate*
Sun control, natural lighting*

*See also Building Science II

Architectural detailing; shop and assembly techniques and the aesthetic problems involved.

The studio work follows the earlier studies in structures, construction and aesthetics; the student is in a position to attempt the application of these faculties in the design of buildings, firstly in the imaginative solution of architectural problems along the broadest functional, structural and aesthetic lines; that is, in search of the essence of architecture. As the course proceeds, more precise and complete solutions are expected in all these fields.

The essential relationship between environment, site and building is emphasised from the beginning, as is also a sensitivity to appropriate form for purpose and structure and the development of architectural character.

At the end of the year, an “integration problem” is undertaken in which the design of a simple building is taken on into working drawings.

In this year an imaginative approach to all problems is encouraged and theoretical justification for structure is not necessarily expected. Application of the fundamentals of architectural “presentation” covered in previous years is aimed at in the presentation of all submissions.

11.114 DESIGN IV

Studio assignments on the design of buildings a little more intricate in planning and taken to a further stage of completeness in overall design, detailed planning and a consideration of structure, construction and materials.

Imaginative approach to all problems is sought, though by the end of the year, structures are expected to be reasonably sound in concept, and construction and materials may need to be clarified in large-scale details.

In the third term, a series of lectures is given on furniture and interior decoration, including the aesthetics of interior finishes, furniture and furnishings, colour and texture, and a design problem is undertaken in this field.

Where possible, actual sites are chosen for projects set in this and succeeding years.

11.115 DESIGN V

In the first part of the year, problems are given in advanced planning, involving considerable traffic, both vehicular and pedestrian; planning for typical industrial processes, commercial buildings, housing, etc. Associated questions of economics, structure, mechanical equipment and services are studied. Some of the problems given serve to introduce group building design, urban design and elementary town planning.

In the latter part of the year the problems consist of large architectural projects which are related to actual sites and involve considerable research into human and community requirements and to the problems of structure and mechanical and other equipment associated with large buildings; problems in specialised buildings to fit the present and future needs of the developing community.

Throughout this year, the aim is the correlation of all major aspects of the design of buildings, that is practical planning, structure, construction, economy and the provision of a fine human environment.

11.116 DESIGN VI

In this subject, research and practical problems are carried out, relating to improvement and re-development from a planning and architectural point of view, of parts of existing cities, such as Sydney and Newcastle and large country towns.

Civic surveys are made of the selected areas and all relative information is obtained by the students in groups, generally with the support of town planning officials in the city or town concerned, who indicate the basic economic, social and industrial conditions within which the student may have to re-plan and re-design the particular street or area.

A limited number of tutorials and criticisms by visiting specialists are arranged.

BUILDING CONSTRUCTION

11.211 CONSTRUCTION I


Practical: Details of construction illustrating selected work in lectures. Methods of transmitting requirements by detailed drawings and specification clauses.

11.212 CONSTRUCTION II

Lectures: Requirements of buildings of two-storey load-bearing construction, domestic and industrial, in masonry and structural timber. Basement construction; elementary construction in structural steel and concrete.

Practical: Drawn details and contract drawings of work treated in lectures. Design of elements of construction with specifications. Details of selected work designed in Structures II.

11.213 CONSTRUCTION III


Practical: Problems involving the investigation, design and detail of constructions treated in lectures. Details of selected work designed in Structures III.
11.214 CONSTRUCTION IV

The study of constructional systems and requirements for planning, detail, fabrication and erection of special types of buildings. Investigation of building function, structure and construction. Analysis of size, time and cost factors to permit selection of best system for given planning requirements. Control and supervision of the job from the office and on the site. Methods of controlling costs. Schedules of construction.

STRUCTURES

Structures I to IV are taken by all students. Structures V is taken by those students who elect to do so.

The first four years cover the major portion of the field of structures as it affects the architect.

Supplementing the theoretical work there will be exercises in structural design and testing work in the laboratory.

11.221 STRUCTURES I

Elements of structural design, equilibrium, graphical and analytical methods of analysis of forces in pin jointed structures. Simple beams, moments and shear.

11.222 STRUCTURES II

Theory of beams, analysis of moments and shear, properties of sections, deflection and bending moment, factor of safety.

Theories of columns, slenderness ratio, bending and direct stress.

Properties of structural timber, permissible stresses and design.

Design of simple footings and gravity retaining walls.

11.223 STRUCTURES III

Theory of design and its application to structures of steel (riveted and welded construction) and re-inforced concrete.

Influence on design of Building Regulations and Codes.

Free ended and restrained structures: determination of moments in continuous structures by moment coefficients and simple examples in moment distribution.

Steel: simple and compound beams and columns, design of joints, and connections, base plates and splices. Bending and direct stress and limiting load conditions. Roof truss arrangement, design of members, joints and bracing.

Reinforced concrete: stresses in concrete and steel, design of columns, deflection ratio. Bending and direct stress and limiting load conditions. Roof truss arrangement, design of members, joints and bracing.

Shop details and bar lists are prepared in Construction III practical work.

11.224 STRUCTURES IV

Design of rigid frames and portals by moment distribution; continuity in frames.

Flat slab and flat plate design applications. Comparison of different design methods. Prestressing in structures. Structural considerations of special building types integrated with Construction IV. Problems in foundations and soil mechanics.

11.225 STRUCTURES V: ELECTIVE

Selected examples from work treated in fourth year are calculated and designed in detail and shop drawings prepared. Special problems associated with high buildings.

Study report of structural requirements of a selected building type is prepared.

BUILDING SCIENCE

This subject deals with the application of the methods and findings of science as applied to the problems of the building industry in two principal fields:

1. Materials

   The properties, uses, testing and selection of materials.

2. Services

   The analysis of human requirements and methods for their satisfaction in such fields as heating, ventilation, lighting and acoustics.

At the commencement, emphasis is placed on broad general principles, whilst at later stages certain aspects are studied in more detail and at greater depth.

11.231 BUILDING SCIENCE I

The porosity of common building materials, and its effects on water absorption, capillarity, permeability, weathering, efflorescence and decay. The effects of physical and chemical agencies on materials: movement, resistance to fire, corrosion, acids and alkalis. Properties and uses of stone, brick, limes, cements and mortars, timber and the common metals. Introduction to the functional needs of humans in terms of the artificial environment within buildings.

11.232 BUILDING SCIENCE II


11.233 BUILDING SCIENCE III


Principles of lighting and vision.

Methods of design for artificial and natural lighting.

11.234 BUILDING SCIENCE IV


Building research. A review of recent research into new materials and methods. Lectures on special topics of current interest by visiting lecturers, when appropriate.

HISTORY OF ARCHITECTURE

This is one of the basic subjects leading to Architectural Design. Students of architecture should obtain some knowledge of past systems of building, the use of materials, and the principles for purpose and beauty. The subject is treated in a general manner, but certain buildings and other works of construction are studied analytically, the approach being critical rather than archaeological. Research assignments and/or examinations are required in each term of each year.

11.121 HISTORY OF ARCHITECTURE I

A general outline survey of construction and architecture from the earliest times to the present day, related to chronological periods, countries and styles — from ancient Egyptian up to modern architecture.
11.132 HISTORY OF ARCHITECTURE II

Beginning with the Graeco-Roman classic period the pagan precedents of Christian architecture are examined, then the following periods or styles in convenient order: Early Christian, Byzantine, Romanesque and Gothic. The major points for analysis are: the abstract beauty of Greek architecture; the building methods and monumental works of the Romans; the rise and evolution of Christian ecclesiastical buildings from early Christian to Gothic. Analytical consideration will be given to walls, columns, piers, arches, vaults, domes, buttresses, towers, spires, the mediaeval "unit-bay" system of design, decoration, monasteries, churches, castles, manors and other dwellings.

11.133 HISTORY OF ARCHITECTURE III

The architecture of Europe from the Renaissance to the present day.

Beginning with the revival of antique art in Italy, the course of the Renaissance is traced through Europe to England.

The period of revivals, mediaevalism, and the eclectics.

The development of town planning.

11.134 HISTORY OF ARCHITECTURE IV

The history of architecture in Australia, particularly the evolutionary development of regional architectural expression.

The search for a new architecture in Germany, France and America in the last quarter of the 19th Century and its fulfilment in the 20th Century. Particular emphasis is placed on developments during the period following the Second World War to the present time.

DRAWING

11.131 DRAWING I

The subject encompasses all types of drawing used in the practice of architecture. Practical work in various media is given to develop perception and observation and skill in depiction. For purposes of teaching and studio arrangements the subject matter is dealt with under three main categories:

(a) Architectural: This range of work introduces the student to the conventional forms of architectural drawing: scale drawing, architectural sketching, presentation, rendering, sciencegraphy, etc.

The student will have the discipline of drawing and rendering precisely architectural forms that are themselves precise, e.g., one or more of the Orders of architecture. He will be taught the different drawing techniques of the esquisse, the more formal sketch design, correct presentation, working drawing conventions and indications, detailed drawing, and architectural perspective, techniques and effects in presentation. There will be some elementary exercises in general design.

(b) Freehand: The range of work covers elementary freehand drawing and includes quick sketching, outdoor sketching, memory drawing and free perspective drawing.

(c) Descriptive Geometry: This subject provides an introduction to general draughtsmanship and consists of lecture-demonstrations followed by drawing in the following: Exercises in line drawing and plane geometry; lettering; orthographic, isometric, oblique, and axonometric projection; theory of perspective, interiors, inclined planes; shadows cast by geometrical features and simple architectural subjects on vertical and horizontal planes; shadows in perspective; solid geometry; development of intersections and surfaces; roof developments and layout; graphic symbols.

11.132 DRAWING II

A continuation and extension at a higher level of the methods, media and techniques begun in Drawing I in (a) Architectural Drawing, concentrating on architectural sketch presentation; and (b) Freehand.

MISCELLANEOUS

11.241 BUILDING SERVICES A.

Principles and practice as controlled by regulation for domestic and commercial building services including drainage, sanitary plumbing, water supply and reticulation, fire services, gas services, hot water service heaters and tanks. Efficiency of units and relative costs are considered.

11.242 BUILDING SERVICES B.

Design principles and practical requirements of the following services and their application to buildings are studied to provide the architect with sufficient information for sensible selection and inclusion in building projects. Heating, ventilating, air conditioning, electrical services, call systems, fire protection, lifts, steam.

11.411 TOWN PLANNING I

The course consisting of one term of lectures and one term of studio work provides an outline of the aims of town and country planning and its relationship to the techniques of architecture, civil engineering, geography, sociology, land economics and land surveying. The course also is preparatory to the post-graduate Diploma course in Town and Country Planning conducted by the University of Sydney. The course touches on the history, theory and practice of town and country planning and includes considerations of traffic and transportation, elements of civic design, the planning of residential areas and principles of regional planning.

11.412 TOWN PLANNING II

An extension of the subject matter of Town Planning I, emphasising the architectural aspects of town planning with particular reference to requirements in community planning, Government housing, residential and estate development.

11.611 BUILDING TRADES WORKSHOP

The general purpose of this subject is to familiarise the student with the materials, tools and terms used by the building craftsmen and the interworking of building trades.

Specialist trade teachers give short lectures and demonstrations in the techniques of bricklaying, carpentry and joinery, plastering, plumbing, drainage and painting.
Each student is required to do some practical work which will include:

Preparation and mixing of materials; setting out work; laying bricks; jointing and bonding; construction of simple timber frames and methods of "building in"; plain cement rendering to wall surface and "running" a plastered mould; identification of fittings used by the drainer and plumber; practical drain-pipe laying; soldering and riveting metal joints; fixing lead flashings; colour mixing; brushwork techniques for applying paint to different surfaces.

11.141 ARCHITECTURAL RESEARCH

Architectural research is concerned with the study of buildings of architectural merit and of historic significance, and with the planning of buildings for contemporary needs.

Working in a group the student is called upon to do field investigations and prepare measured drawings. Concurrently with historical research the students prepare submissions which are intended to be lodged with a Reference Library.

In the third term considerable freedom is allowed the student in investigating subjects concerned with the graphic arts, philosophy of art and related interests, evidence being required of his own studies and reading. One or two advanced exercises in individual research may be given.

Each student is also required to conduct an investigation and present an address to his fellow students and to take part in general discussion.

11.311 SPECIFICATIONS

This subject extends over three terms with lectures in terms 1 and 2, and a specification assignment in the third term.

Details of lecture subjects are as follows:

Definitions: historical notes; purpose; legal significance; relationship to building contract; types, uses; aids; sources of information; language; format; reproduction; binding; methods of preparation; schedules; abstracts; "Master" and "Standard" specifications; comparative Australian, British and American examples; supplementary general conditions of "Master" and "Standard" specifications of individual "Trades"; specifications for demolitions, alterations, additions and new works, individual and group.

11.723 ESTIMATING

Methods used for estimating; standard mode of measurement; profit, establishment and other on-costs charges; awards, insurance, taxes, etc., scale of fees and charges by local and other authorities.

The subject matter for each trade or operation includes: current material prices; schedule of labour units. Memoranda in respect to; weights, mixing proportions and yields of materials, waste allowances, working costs and depreciation of plant, scaffolding, etc., examples of "building up" the elements of a unit cost for pricing a bill of quantities; problems to work out using class examples for reference.

Measuring and methods of adjusting variations; grouping of unit item to obtain a bulked cost rate for different structural parts of buildings; comparison of costs for alternative methods of construction related to structural parts of buildings; preparation of preliminary estimates from sketch plans; tenders.
DIVISION OF ARTS

DEPARTMENT OF ECONOMICS

In 1963 revised course structures will be introduced for the Economics units in the Bachelor of Arts degree. However, the transition from the old to the new structure will involve adjustments in the composition of units during 1963 and 1964. Accordingly, the revised courses shown in Section I will not operate fully until 1963.

1. Revision of Courses.

Economics I:
(a) Microeconomics.
(b) Elementary Economic Statistics.
Excel I:
(a) Macroeconomics, plus one of:
(b) Money, Credit and Financial Institutions
Commerce Statistics*
Statistical Analysis II
Mathematical Economics II
Elementary Mathematical Economics.
(Five hours of lectures and tutorials per week).
(c) Distinction Course: undergraduates proceeding to a degree with Honours will be required to investigate more intensively the subjects listed above.

Economics III:
(a) Economic Fluctuations and Growth.
(b) Public Economics.
(c) International Economics
Except that an undergraduate may, with the permission of the Head of the Department of Economics, substitute Money, Credit and Financial Institutions, Statistical Analysis II or II, Mathematical Economics II or II, Commerce Statistics* or Elementary Mathematical Economics for one of the three subjects listed.
(d) Undergraduates proceeding to a degree with Honours, other than those attempting two Stage III Distinction units in the one year, are required to take an additional subject from: History of Economic Thought; Industry Economics, and Seminars in Economic Theory and Problems.
(Five hours of lectures and tutorials per week).
(e) Distinction Course: Undergraduates proceeding to a degree with Honours will be required to investigate more intensively the subjects listed above.

Economics IV:
(a) Advanced Economic Analysis.
(b) Thesis.

*An undergraduate taking Commerce Statistics may not subsequently take Statistical Analysis II.
†Mathematics I is a prerequisite and Pure Mathematics II or Theory of Statistics I a co-requisite for Statistical Analysis II.
‡Mathematics I is a prerequisite and Pure Mathematics II a co-requisite for Mathematical Economics I.

1963:
Economics I: As shown in Section I.
Economics II: As shown in Section I.
Economics III: As shown in Section I.
Economics IV: As shown in Section I.

1964:
Economics I: As shown in Section I.
Economics II: As shown in Section I.
Economics III: As shown in Section I.
Economics IV: As shown in Section I.

Description of Subjects

Microeconomics
This subject is concerned with microeconomics. It begins with a brief introductory account of the major problems of economics and with the methods of economic analysis. It then covers the theory of demand and the theory of the firm, examining price and output policies in different market situations. Attention will be devoted in this section to a consideration of the results of empirical studies into business behaviour, and of the impact of government policy. The final section will deal with the analysis of distribution.

Elementary Economic Statistics
An introduction to the use and interpretation of economic statistics. Main emphasis is on descriptive methods — sources and collection of data; graphs, diagrams and tables; and an elementary treatment of index numbers, time series and Social Accounting.

Macroeconomics
This subject deals with macroeconomics. It is concerned with the theory of income and employment and an elementary appraisal of the trade cycle. The application of theory to policy will be treated in the spheres of inflation, monetary and financial control and internal and external balance.
Economic Fluctuations and Growth

An analysis of the theories of fluctuations and growth and their application to studies of problems of developing countries. An examination of development programmes in Asia, Africa and the Middle East will complete the subject.

Commerce Statistics

This is a terminal course in Statistical Methods for those students who do not intend to specialise in Statistical Analysis.

The basic ideas of probability and statistical inference are developed and the application of sampling techniques is studied in such fields as market research, quality control and auditing. The course also includes a discussion of regression and correlation techniques and statistical decision-making.

Public Economics

This subject covers the theory of fiscal policy and government intervention in economic activity. Under this heading Australian Federal State financial relationships are examined as well as comparisons of fiscal techniques between various countries. The problems of policy in underdeveloped countries are also examined.

Money, Credit and Financial Institutions

This subject covers a theoretical and empirical assessment of the financial organisation of the economy. The first part of the course covers a detailed treatment of credit and money in the modern economy including the role of non-banking financial intermediaries. In the latter part of the course there is an assessment of the policy problems in the financial sector of the economy.

International Economics

Major topics in this series of lectures are:

- The pure theory of international trade — the doctrine of comparative cost, the theory of international values, and gains from trade.
- Balance of payments analysis and policy — adjustments via price and income changes, devaluation, tariffs, quantitative restrictions and international agreements.
- Postwar foreign trade policies — the I.M.F. and I.B.R.D. and other international institutions, the sterling and dollar areas, the common market, international investment.

Advanced Economic Analysis

A survey of advanced economic theory and applications in the quantitative and policy fields.

Elementary Mathematical Economics

This course deals with the application of some elementary mathematical techniques in economic theory.

Industry Economics

Developments in the theory of the firm. The course deals with theoretical problems and specific issues related to the Australian economy.

History of Economic Thought

This subject treats the development of economic ideas and analysis. Economic thinking prior to the 18th century is considered as preliminary to Physiocratic ideas and the work of Adam Smith. The progress of society is examined in the light of contributions by Ricardo, Malthus, Senior, Marx and J. S. Mill. Subsequent developments by Alfred Marshall and the critiques of classical economics are then reviewed.

DEPARTMENT OF EDUCATION

EDUCATION I (Pass and Distinction — 3 hours per week).

Theoretical Bases of Educational Practice

This course is intended to be a first and broad view both of some major problems of modern educational practice and of the theoretical and historical bases underlying those problems. Emphasis is placed on the relevance of these problems to New South Wales. Emphasis is also placed on the interrelatedness of educational theory and educational practice.

Some Theories of Education

Historically important theories: Plato, Comenius, Locke, Rousseau, Herbart.

Traditionalist theories: Livingstone, Hutchins.

Supernaturalist theories: Jeffrey, Maritain, McGucken.

Progressivist theories: Dewey, Bode, Kilpatrick.

Education and the Planned Society: Mannheim, Clarke.

Educational Practice

An historical account of the development of education in England, U.S.A., N.S.W.

The position of Church and State in education.

Problems of secondary education.

Problems of tertiary education.

Examinations and education.

The administration of education.

Technical education.

Educational Psychology

This course aims at developing in the student a basic fund of psychological data concerned with the broad field of child growth and development up to late adolescence and with the outcomes and conditions of learning.

Throughout, emphasis will be placed upon the significance of the findings to the teacher in the classroom.

Research in Education

The principal methods of research in Education

An examination of the principal methods of research and their use in making decisions on policy and procedure. Illustrations to be given from current journals.

The principal methods of experimentation in Education

A consideration of the design and conduct of common educational experiments with illustrations drawn from current journals.

The evaluation of the results of educational researches

A brief treatment of elementary statistical procedures leading to the critical examination of the significance of reported results of educational researches.

Additional for Distinction (3 hours per week).

Theoretical Bases of Educational Practice (1 hour per week)

The course will consist of an intensive, critical study of the Traditionalist and Progressivist Theories of Education, and their implications for curriculum construction, school administration, and teaching methodology.

The works of Dewey, Bode, Raup, Benne, Axtelle, Kilpatrick, Livingstone, Arnold, Donham and Hutchins will be studied in detail.
Educational Psychology (1 hour per week)
This course will seek to examine selected topics of the pass course at greater depth and in so doing to develop a critical approach to educational practice.

EDUCATION II (Pass and Distinction — 4 hours per week).

Comparative Education
A study will be made of the education systems of four countries, U.S.A., England, France and U.S.S.R. — and each of the systems studied will be compared with that of N.S.W.
In addition each student will be expected to choose a country other than those studied in lectures and prepare an independent report on an aspect of the education system of the country chosen. This independent report must be submitted as a class exercise (approximately 5,000 words) on the 1st September.

The Theory of Curriculum Construction
In this course the factors underlying the construction of the secondary school curriculum will be considered.
An historical introduction showing how the present curriculum was constructed.
Social changes and their influence on the curriculum.
Schools of thought in curriculum construction.
(a) Traditional Theories.
(b) Progressive Theories.
(c) Social Theories.

Problems of Curriculum Construction
N.S.S.E. 44th Year Book. Pt. 1.
Caswell & Campbell. Readings in Curriculum Division.
(a) Content Selection.
(b) Grade Placement.
(c) Sequence and Scope.
(d) Patterns of Curriculum Organisation.

Selected Curriculum Reports
Norwood, Scottish, Crowther, Wyndham, Thomas, W.A., Harvard, Butts, F. Conant. These reports to be read and discussed.

Research and Curriculum Construction

Educational Psychology
The principal theoretical approaches to behaviour will be considered as attempts to formulate an account of personality structure and development. Some attention will be paid to personality measuring devices.
Children's thinking will be examined in some detail, with special reference to Piaget's contributions.

Additional for Distinction (2 hours per week).

Educational Developments in the Fields of Secondary and University Education:
Secondary Education.
This part of the course will consist of a study of some of the current problems besetting secondary education. The theoretical setting and proposed practical solutions of these problems will be investigated. The type of problem to be investigated will be:
Which type of secondary school is best for N.S.W.?
What are the aims of a secondary school course?
What can we do to overcome the problems associated with the Twentieth Century development of secondary education for all adolescents?
What should be taught in the secondary schools and how should it be taught?
What is the relationship between secondary education and tertiary education?

University Education
This section of the course will include:
a study of the historical background of the modern university.
a critical comparison and evaluation of the university systems of Britain, England, the U.S.A., and Australia.
an evaluation of the concepts of a university and of university education put forward by such theorists as Newman, Ortega Y, Gasset, Moberly.

Research in Education
The designing, planning, carrying out and reporting of educational research; a detailed course preparing the student to carry out an independent piece of research in the following year.

EDUCATION III (Honours Year — 6 hours per week)
The candidate for honours in Education will be expected to attend lectures and/or seminars as follows:
Part B: Research in Education.
Part C: Independent study of a field of education chosen in consultation with the Head of the Department of Education within the University College.
In addition the student must submit two major pieces of written work:
i) An investigation of a special problem chosen in consultation with the Head of the Department of Education.
ii) A Critical Survey of the work of one educator.

The greater part of the work will consist of the reading and discussion of modern books and research dealing with the theory and practice of education.
Part B: Research in Education.
Experimental investigation in education; a detailed treatment of the main methods of experimental design, the construction and calibration of measuring instruments, sampling, control and the statistical treatment of results.
Part C: The Minor and Major theses will be decided for each candidate after discussion with the Head of the Department.
DEPARTMENT OF ENGLISH

ENGLISH I (Pass — 3 hours per week)

English I is planned as an introductory course. Students who complete it should be equipped to read more widely and intelligently on their own and to undertake the more specialised studies of English II. The course is divided into two parts:

Language

This part of the course will treat phonology and spelling, the growth of the vocabulary, semantic development and semantic change, syntactical development, and the social aspects of language. Students will be helped to write good idiomatic prose with clarity and effective economy and to distinguish these qualities in what they read.

Literature — Poetry, Drama, the Novel

This part of the course is designed as an introduction to the major forms of English literature. The set texts will be studied both histori­cally and critically and will be used also as a basis for examining certain general problems in literary and critical theory.

ENGLISH II (Pass and Distinction — 3 hours per week)

English II this year consists of a main course Romanticism and Early 19th Century Literature and three other courses:

The Language of Chaucer and the Language of the Renaissance period;

Chaucer: selected “Canterbury Tales”;

Milton.

Additional for Distinction.

Old English
Middle English
English Literature of the 16th Century (excluding drama).

ENGLISH III (Pass and Distinction — 3 hours per week)

English III this year consists of a main course — modern Literature and an additional course — Milton.

Additional for Distinction.

Old English
Middle English
English Literature of the 19th Century (excluding drama).

ENGLISH IV (Honours)

1. Old English
2. Middle English
3. The History of the English Language from 1500 to the present.
4. Shakespeare and other Elizabethan Dramatists
5. The 17th Century
6. The 18th Century
7. Practical Criticism
8. Thesis

Students offering the language option will take 1, 2, 3, 8 and any one of 4, 5, 6. Students offering the literature option will take 4, 5, 6, 7, 8.

DEPARTMENT OF FRENCH

FRENCH I (Pass — 6 hours per week)

The history and literature of nineteenth century France: an intro­ductory study based on the reading of prescribed texts (one lecture and one tutorial group weekly).

Translation and explanation of prescribed texts, with an introduction to French versification (one lecture weekly).

Exercises in translation from English into French, with some unseen translation from French into English (one lecture weekly); the writing of four short essays in French.

Phonetics, reading aloud, conversation, and dictation (2 hours weekly).

FRENCH II (Pass and Distinction — 6 hours per week)

The literature of the period represented by the prescribed texts (one lecture weekly and tutorial groups to be arranged).

Translation and explanation of prescribed texts (one lecture weekly).

Explanation in French of prescribed texts (one lecture weekly).

Exercises in translation from English into French, with some unseen translation from French into English (one lecture weekly); the writing of four short essays in French.

Special literary study of XXth Century French Drama (tutorial groups to be arranged).

Additional for Distinction (2 hours per week).

Individual study of the history of the French language during the preceding long vacation.

Lectures, exercises and prescribed texts as for Course II Pass.

Examination and translation of mediaeval or sixteenth century texts (one lecture weekly).

History of the prescribed period of literature (one lecture weekly).

FRENCH III (Pass and Distinction — 6 hours per week)

Lectures, exercises and prescribed books as for Course II Pass (N.B. including XXth Century French Drama).

Lectures, exercises and prescribed books as for Course II Distinction and Course III Pass.

Individual study of additional Old French or sixteenth century texts.

FRENCH IV (Honours — 5 hours per week)

Modern French Literature.

The social and intellectual history of France from 1870.

A special study of the Chansons de geste; translation and explanation of Old French Texts.

A thesis in French on some aspect of French literature or language.

Students are required to discuss vacation reading and the subject of their thesis with the Head of the Department before the end of the third year.
DEPARTMENT OF GEOGRAPHY

GEOGRAPHY I (Pass—4 hours per week)

This course is planned as an introduction to the scope and content of Geography by surveying the differential character, world distribution and regional significance of the major landscape elements. It is prefaced by a brief account of the history and methods of the subject, and by a short course in map reading designed to equip the student with techniques basic to geographical study. The course reviews the various types of landform, climate, soil and natural vegetation, discusses the factors contributing to their differential character and considers their contribution to the regional variety of the world. An introduction to the field of human geography gives particular attention to the distribution and growth of population, the various forms and patterns of settlement and the nature of human occupations. The relationship of these factors with each other and with the physical landscape will be discussed and a study made of broad regional groupings throughout the world.

Four days of field excursions and practical exercises relating to all aspects of the course are an integral part of the course.

GEOGRAPHY II (Pass and Distinction — 3 hours per week)

There are three parts of this course. Two of these each study an aspect of economic geography and in the third the principles and practices of previous studies are applied to a regional study of the home country.

Agricultural Geography

A study is made of the geography of agricultural production and the distribution of agricultural commodities.

The course includes especially the study of agricultural types on a world basis: the examination of selected farm practices within each type: commodity studies associated with each type: an analysis of the degree of specialisation in agricultural production: and an appraisal of agricultural problems as influenced by physical, cultural and economic factors.

Industrial Geography

In the course the location, origins and present character of selected industries and areas of industrialisation will be examined with particular reference to the relations of area or industry to such features as power resources, raw materials, labour, markets, transport, etc. Methods of classifying and measuring industry and the appropriate methods of the cartographic representation of this will be discussed.

The Regional Geography of Australia and New Zealand

This course includes a discussion both of the broad characteristics and of the more detailed regional features of each country. The study consists of a systematic as well as a regional treatment.

Systematic: The character and variety of such physical aspects as landform, climate, soil and vegetation and of human features such as the history of land development, population, primary, secondary and tertiary industries and the regional significance of political divisions.

Regional: A subdivision of each country will be made and the character and problems of each region examined in detail.

The course includes ten days' field investigation of the regional character or developmental problems in a selected area.

Additional for Distinction (3 hours per week).

Lectures, seminars and fieldwork are conducted in the following:

Cartography and Surveying: This course covers the study of modern map making principles and techniques. The problems, uses and limitations of the main classes of map projection — azimuthal, conical, cylindrical and conventional — are reviewed. The construction of reconnaissance and topographic maps by traversing and plane tabling and the interpretation of aerial photographs are discussed. Practical work in the laboratory and in the field are conducted to illustrate this work.

A Study of the Methodology of Geographical Thought: This is an advanced course on the historical development of the subject, modern trends and attitudes, and the scope and methods of geography as suggested in the methodological discussions and field work of geographers.

GEOGRAPHY III (Pass and Distinction — 4 hours per week)

This course consists of three regional studies designed to instruct students in the problems, method and purpose of regional geography. They will, in the areas selected, study the regional variety of landscape in terms of the interaction between the physical environment and the use man, at his different levels of culture, has made and is making of it, to satisfy his social and economic needs.

The Regional Geography of North America

Here the area chosen will be studied with respect to the changing face of the continent since European occupation.

The Regional Geography of Europe

A study of the varying landscapes of the continent as they have evolved in an area with complex political divisions and affiliations.

The Regional Geography of Monsoon Asia

In this course, designed to study the regional geography of the area from Pakistan through south-east Asia to China and Japan, emphasis is given to the contemporary problems of the inhabitants of these countries as they attempt to harness resources to meet the needs of a modern society.

This course includes ten days field investigation of the developmental problems of an Australian area.

Additional for Distinction (3 hours per week).

Geomorphology

An advanced study of landforms, their variation and regional significance. An analysis is made to the genesis of landforms with particular reference to the views of Penck and Davis. Erosion surfaces and their significance for earth sciences are discussed. Regional studies of denudation chronology based on local fieldwork and the literature and map analyses of other regions are made.

Climatology

This includes a study of the nature of climate, and the compilation, limitation and use of the climatic record. The heat and water balances are analysed and the dynamic nature of climate, including modern air-mass theory is reviewed. The course discusses the problems and methods of climate classification and the values of plants and soils as climatic indicators. The evidence and theories of past climatic changes are reviewed and specific climatological problems related to other sciences are studied.
Soils, Soil Erosion and Conservation
The first part of this course includes the nature and formation of soils, their physical and chemical properties, the types and methods of soil surveys and the problems of soil classification. The second part is concerned with a study of soil erosion, the occurrence of various types of erosion and the methods used to conserve soil resources. A field study of features of both parts of the course will be made.

GEOGRAPHY IV (Honours — 3 hours per week).
This course is planned as an introduction to research work in Geography. During this course each student is required to submit a thesis embodying the result of an original investigation on a subject approved by the Head of the Department of Geography.
In addition, lectures, seminars and field work will be offered in the systematic topics as listed for Geography III above. Students must choose two of the three offered.

DEPARTMENT OF GERMAN
ELEMENTARY GERMAN (4 hours per week)
This course is intended for students with no previous knowledge of German. It may be counted as a qualifying course if followed by German I and German II.

GERMAN I (Pass — 6 hours per week)
A survey of German Literature will be given as part of this course. The main emphasis in the reading will fall on the period 1830-1880.

GERMAN II (Pass and Distinction — 6 hours per week)
Sturm und Drang in Term I and II; Romantik in Term III.

GERMAN III (Pass and Distinction — 6 hours per week)
The Modern Period.

GERMAN IV (Honours)
This course has three aims: to consolidate historical knowledge of the language, to deepen the study of the Classical period, and to exercise the critical faculty by a detailed study of major critical works.

GREEK—DEPARTMENT OF CLASSICS
ELEMENTARY GREEK (4 hours per week)
Greek through reading.

GREEK I (Pass — 3 hours per week)
Unseen Translation and Prose Composition.
Study of Prescribed Texts.

GREEK II (Pass and Distinction — 5 hours per week)
Unseen Translation and Prose Composition.
Study of Prescribed Texts.
Greek History.
Greek Lyric Poetry.

Additional for Distinction.
As for Greek II Pass together with an additional subject to be arranged.

DEPARTMENT OF HISTORY
HISTORY I (Pass — 3 hours per week)
An introductory survey of British and European history from the fifteenth century to the eighteenth century (British history, 1485-1688; European history, c. 1450-1714). In British history, the main emphasis will be upon constitutional developments, although due attention will be paid to economic and social changes. Students will be expected to acquire a thorough knowledge of the significant statutes and documents of the period. On the European side, special attention will be given to the problem of the interpretation of the Renaissance and to the Reformation and Counter-Reformation, and to such topics as the growth of capitalism, the rise of the Modern State, and the scientific and geographical discoveries.

HISTORY II (Pass and Distinction — 3 hours per week)
An outline survey of modern British and European history from the 18th century to the outbreak of the Second World War. In British history, the main emphasis will be upon political and constitutional developments, such as the development of the political party and the party system, the growth of the Cabinet, the various reform movements, and the growth of the Modern State, but due attention will be paid to such economic and social changes as the Industrial Revolution and the emergence of the Welfare State. The European course will deal with political developments such as the French Revolutions and the creation of modern Germany and Italy, and also economic and intellectual movements during the period.

Additional for Distinction.
The course will be concerned with the following topics:— the Barbarian invasions and the creation of Mediaeval Europe; Feudalism and the Mediaeval Church; the Investiture Contest and the conflict between Empire and Papacy; the twelfth century Renaissance, the Conciliar Movement and the decline of the Mediaeval world. Relevant documents will be studied from J. F. Henderson: Select Historical Documents of the Middle Ages.

HISTORY III (Pass and Distinction — 4 hours per week)
This course comprises some 70 lectures on the history of China, Japan and South East Asia, 30 lectures on the history of the United States of America, and 30 on Australian history. In the Pacific course the emphasis is upon the impact of the West upon the East, with particular reference to the post-1830 period. The American course will survey the United States comprehensively from the first settlements until recent times, concentrating on the 19th century. The Australian section will consist of a survey of Australian history from the foundation of New South Wales onwards.

Additional for Distinction.
After a brief introduction outlining the exploration and opening of the Pacific until 1815, the course will examine in detail the activities of the Western Powers in that region against a general background of their respective colonial and foreign policies. Attention will also be given to the effects of these activities and policies upon the native countries and societies.
HISTORY IV (Honours)
The History of Political Thought
This course comprises two hours per week of lectures and seminars on the history of political thought from the Greeks to Rousseau. Students are expected to acquaint themselves with the texts of the political theorists discussed.

Problems in Australian History
A seminar course concerned with themes in Australian history which have attracted particular attention both in the past and present. Students presenting papers for discussion are expected to make extensive use of library resources, including periodical files, contemporary secondary material and such primary material as is available, including printed historical records, parliamentary debates and papers etc.

Historiography
This course in Historical Method includes extensive reading from the works of the great historians: Herodotus; Thucydides; Bede; Boethius; Gibbon; Macauley; Buckle; Carlyle; Froude; Lecky; Ranke; Acton; Trevelyan; and Toynbee.

The following course is offered when necessary:

International Law and Organisation
This course consists of an examination of the various attempts to solve the most acute problem facing the modern world. After a brief sketch of the historical development of International Law, the main emphasis will be upon the Hague Conferences, the League of Nations, the International Court of Justice, and the United Nations Organisation. Although primarily historical, the course will discuss the development of the International Law, its nature and scope, its defects and possibilities.
LATIN—DEPARTMENT OF CLASSICS

LATIN I (Pass — 5 hours per week)
Unseen translation, prose composition and grammar
Study of prescribed texts
Background course on classical life and literature

LATIN II (Pass and Distinction — 6 hours per week)
Unseen translation and prose composition
Study of prescribed texts
Roman history and Latin literature of the Republic

Additional for Distinction.
Roman history and Latin literature of the Republic
Vergili Opera, ed. Hirtzel, Oxford Classical Texts

LATIN III (Pass and Distinction — 4 hours per week)
As for Latin II.

Additional for Distinction.
As for Latin II (Distinction) with an additional subject to be arranged.

DEPARTMENT OF MATHEMATICS
(See Division of Science)

DEPARTMENT OF PHILOSOPHY

PHILOSOPHY I (Pass — 4 hours per week)
An introductory course, with two distinct sections. The first is formal, concerned with logic and the methods of reasoning which are employed in science. The second is concerned with general philosophical problems, as they arise among the Greeks, and in Descartes' writings. What sort of problems they are, and how they are to be attacked, will be the subject of weekly seminars, based on the set text.

Logic and Scientific Method (2 hours per week)
Introductory: Some work on Greek philosophy and Socratic Dialogues.
Descartes and Philosophical Problems
Seminar on Problems of Philosophy

PHILOSOPHY II (Pass and Distinction — 4 hours per week)
A first course in either Ethics and Politics, or Early Greek Philosophy, which may be taken with third year students, forms one strand; the other is a study of problems in metaphysics and theory of knowledge as they arise and are exemplified in two contrasting schools of thought, the Rationalists on the Continent and the Empiricists in England. The problems themselves form the material for seminars.

Introduction to Ethics and Politics
Rationalism and Early Empiricism
Descartes — Leibniz; Locke — Berkeley
Seminar

Additional for Distinction.
Students taking distinction will be expected to do some more intensive work on the pass course material, to attend special lectures and seminars on Epistemology in the 19th Century, Problems in Modern Philosophy, or Political Philosophy. In association with the course they will be expected to study a wide range of source material in order to come to grips with general philosophical positions and their history, and with details of treatment of some central questions.

PHILOSOPHY III (Pass and Distinction — 4 hours per week)
A course in the philosophy of David Hume and Immanuel Kant which studies the development of material arising in their predecessors (especially considered in the second year course). Modern attitudes to the main issues will be introduced in lectures and in recommended reading. A course in either Ethics and Politics, or Early Greek Philosophy, which may be taken with second year students.

Additional for Distinction.
As for Philosophy II distinction.
DEPARTMENT OF PSYCHOLOGY

PSYCHOLOGY I (Pass — 4 hours per week)
- Physiological Basis of Behaviour
- Child Development
- Individual Differences inc. Psychometrics, Psychological Tests and Measurement
- Motivation and Personality
- Learning
- Cognition
- Methodology in Psychology
- Statistical Method and Practical Psychology

PSYCHOLOGY II (Pass and Distinction — 6 hours per week)
- Social Psychology
- Psychology of Personality
- Psychological Methods

Additional for Distinction, (Arts) and Science students
- Developmental Psychology

PSYCHOLOGY III (Pass and Distinction — 5 hours per week)
- Clinical Psychology
- Psychology of Perception
- Problems and Theories of Learning
- Psychological Research and Statistics

Additional for Distinction
- History and Systems of Psychology
- Abnormal Psychology

PSYCHOLOGY IV (Honours Year)

Psychology IV consists of four Sections:
- A prescribed course of reading in systematic psychology.
- A series of seminars concerned with the basic issues in psychology.
- Preparation of a theoretical thesis, being a critical study of a specific theoretical issue.
- An empirical research project, the independent empirical investigation of a specific problem.

DIPLOMA IN EDUCATION COURSES

(In association with Newcastle Teachers' College)

I: FOUNDATIONS OF EDUCATION (7 hours per week)
- The course is designed to provide students with a background of educational theory as part of their preparation for teaching and attempts to relate the problems of educational aims and practice to the needs of modern society.
- General Principles of Teaching Practice
  - Class Control and Discipline
  - Principles of Routine and Classroom Management
  - Analysis and Organisation of Teaching Material
  - Facilitation of Learning
  - Grading of Work to suit Individual Differences
  - Bringing Reality into the Classroom
  - Assessment of Progress
  - Professional Attitudes and Professional Growth
- Theoretical Bases of Educational Practice
  - This strand is intended to give a broad view of some major problems of modern educational practice and of the theoretical and historical factors underlying these problems. Emphasis is to be placed on the relevance of these problems to New South Wales but comparisons are made with the education systems of England, France, U.S.A. and U.S.S.R.
- Research in Education
  - An examination of the principal methods of research in education and their use in making decisions on policy and procedure. Illustrations will be given from current journals and students will be expected to be familiar with the design of experiments and the evaluation of the results of educational research. The course will include a study and criticism of methods of testing and examination.
- Educational Psychology and Child Development
  - A study of child behaviour in its relationship to the problems of school and society. Learning theories, intelligence and its measurement, social determinants of behaviour, group dynamics, and personality study are the principal topics for discussion but the problems of delinquency, adolescence, guidance and counselling arise naturally in this context.
  - For students electing primary or infants teaching it will be necessary to conduct additional seminars discussing developmental problems appropriate to the particular age group.

II: HEALTH EDUCATION AND PHYSICAL EDUCATION

Part A: Physical Education
- A study of the general principles and practice of Physical Education, team games and sports, together with regular practical experience related to the teaching of Physical Education and supervision of sport in schools.

Part B: Health Education
- A study of school health and school hygiene to prepare the student for his work as a teacher. Demonstrations and practice in First Aid. The recognition of the common diseases of childhood and adolescence, the action the teacher should take to help prevent the spread of these diseases, and the responsibility of the teacher with regard to the health of his pupils.
III: SPEECH TRAINING

(a) For Students Studying English Method

The aims of this course are to study the objectives and methods of teaching speech in schools to bring about improvement in the student's own speech and to provide each student with the basic knowledge for teaching good speech.

(b) For Students not Studying English Method

Each student will be required to pass a test in speech aimed at testing the effectiveness and acceptability of his speech. The course will be mainly a practical one and questions of theory will be considered as the need arises. However, every student will be required to study some of the principles of good speech and voice production as far as these affect both his own effectiveness as a teacher and his ability to encourage good speech habits in his pupils.

(c) Drama

Each student will devote an hour each week to the study of the art of play-production. Each student will be required as practical work to take part, either on the production or the acting side, in the staging of at least one play. No written examination is required, as all students will be judged on practical work.

IV: METHODS

Special Secondary Methods

i) English Method

A study of the aims and methods of teaching English in the secondary school including the problems associated with the teaching of written English, spelling and reading, oral expression, literature, and the drama. The course in English Method includes Drama and the use of Drama as a teaching procedure. Practical ability in this field will be assessed in conjunction with the Drama Course outlined as Part III (c) above.

ii) History Method

A study of the aims and methods of teaching History in the secondary school.

iii) Geography Method

The course aims to prepare students for the teaching of Geography and Social Studies in secondary schools. It will consist of lectures, seminars, discussions, demonstration and practical work.

iv) Modern Languages Method

A study of the aims and methods of teaching French and German in the secondary schools.

v) Latin Method

The place of Latin in the curriculum. Traditional claims and current criticisms. Impact of the new Primary Syllabus upon the teaching of Latin. Different methods of presentation. Examination of the present syllabus and discussion of methods of approach to it. The place of grammar and textual study. Discussion of some of the major problems facing the teacher of Latin in to-day's secondary schools.

vi) Commercial Method

The aims and methods of teaching commercial subjects in the secondary school. The subjects concerned are Book-keeping, Business Principles, Accountancy, Economics. All students who have not taken Accountancy and Commercial Law during their degree courses will be required to spend an additional hour each week studying the fundamentals of Book-keeping and Business Principles.

vii) Mathematics Method

The course consists of two parts, one, lectures and demonstrations on the methods of teaching secondary school mathematics and, two, lectures designed to broaden the student's background knowledge of mathematics, its history and its social importance.

viii) Junior Science Method

The teaching of physics and chemistry to pupils in the first three years of the secondary school. A study will be made of the problems of teaching theoretical material and special emphasis will be placed upon the importance of a sound approach to practical and demonstration work.

ix) Senior Science Method (Physical Sciences)

The course is available normally only to students who are studying Junior Science Method also, as the two lecture series are integrated as much as possible. It aims to provide background material, historical and social, as well as scientific, to the teaching of senior physics and chemistry. There are also discussions, illustrations and demonstration of methods of presentation of material appropriate to this level together with a critical analysis of the present syllabi.

Guidance Method

This course is designed to acquaint the student with the Guidance services of the Department of Education in their administrative and operational aspects. A knowledge of common psychological disorders found in the school child is necessary. Students attempting this course should have a background of at least two years' formal study of Psychology at University level.

Primary Method

A comprehensive study of the methods of teaching suited for children in the Primary School including the psychological principles underlying teaching methods and familiarity with the content material of the N.S.W. Curriculum for Primary Schools.

Infant Method

A comprehensive study of the methods of teaching suited for children in the Infant School including the psychological principles underlying teaching methods and familiarity with the content material of the N.S.W. Curriculum for Infant Schools.

V: BIOLOGICAL SCIENCE

Part A:

The course covers the Biology Syllabus of the secondary schools of N.S.W. and appropriate teaching methods are discussed in association with the treatment of each topic. It is intended to provide a background of biological knowledge for science teachers who have not included these studies in their degree courses as all science teachers may be called upon either to teach biology or supervise its teaching. OR
Part B:

Special Thesis

This special thesis should be a considerable piece of work engaging the attention of the student throughout the whole year. It should be an independent study along the lines of the student’s speciality. This means that it will normally be done in the field of one or other of the student’s teaching methods. If a student’s special interest lies in the field of one of the foundation subjects, however, it is quite satisfactory for the thesis to be done in this field.

The student is required to give thought to the topic of the thesis early in his course and discuss it with his lecturer. Written approval must be sought for the choice of topic, and progress must be reported on request. The thesis must be submitted for marking on or before the date of commencement of Annual Examinations.

VI: Practical Teaching and Demonstrations

Suitable practical teaching and demonstrations will be arranged to provide an opportunity for each student to develop teaching skill.

Demonstrations

Demonstrations are arranged as part of each method course and, in addition some further demonstrations are arranged in connection with courses on General Principles of Teaching and Educational Psychology.

Teaching Experience

All students are required to undertake the equivalent of eight weeks of teaching practice in schools. Of these eight weeks two will be Home Practice in the Summer Vacation before University term begins and the remainder will be divided into two periods of practice supervised by Teachers’ College Staff.

A satisfactory standard of practical teaching skill must be reached before a Diploma can be awarded.

Division of Commerce

Department of Accountancy

Accounting I

This course, which must be taken by all students reading for the degree of Bachelor of Commerce, will be in four main sections, viz.: (a) basic theory; (b) historical recording; (c) comprehension and interpretation of accounting data and reports, and (d) introduction to managerial accounting — the provision of information useful to management in the formulation of its policies and in the evaluation of current performance.

The syllabus will cover the recording of transactions and the preparation of income statements and balance sheets of sole traders, partnership firms, corporations and non-trading concerns. Students will also be given an introduction to management accounting, including topics such as budgeting and budgetary control, analysis and interpretation of accounting reports.

Accounting II

First year work on the measurement of periodic profit will be extended to cover manufacturing and large-scale merchandising situations. The department, branch and product will become units of account and this will make possible the consideration of cost, volume and profit relationships, not only for the firm as a whole, but for product lines, projects and segments of the firm.

Merchandise accounting will include departmental and branch accounting, consignments and joint ventures and will involve the control and valuation of current assets with particular reference to inventory. The voucher register and accounting for discounts will also be covered.

The industrial accounting will be limited to: manufacturing statements, accounting for materials, labour and expense, job and process cost records, reconciliation and integration of cost and financial records, allocation of indirect costs to products, departments and projects.

In addition, the course will include the accounting problems of pastoral and rural enterprises.

Accounting III

This subject will provide a comprehensive treatment of the accounting requirements of various legal forms of organisation—partnership, company, trustee and executorship, and will include an examination of the accounting problems associated with bankruptcy and company liquidation.

Corporation accounting will provide the major area of study and will encompass the following topics: company formation, reconstruction, amalgamation, take-overs, holding companies, company annual reports, goodwill and share valuation, price level changes, receiviorships and liquidations, mining, insurance, banks and finance companies.

Accounting IV

This subject will place particular emphasis on accounting control through the use of standards, budgets and performance reports prepared on a responsibility basis. It will include the planning and design of the budgetary system, budget preparation, co-ordination, and integration of budgets, flexible budgets, analysis of variances by responsibility and cause and the preparation of performance reports for all levels of management.
The subject will provide a more advanced treatment of business forecasting, profit planning, cost-volume-profit relationships and comparative cost studies.

There will be a more advanced treatment of cost accounting to include standard costing, problems of expense absorption, joint and by-products, direct costing and accounting for non-manufacturing costs.

The course will provide for formal work on mechanical and electronic data processing and on the design and installation of accounting systems.

AUDITING AND INTERNAL CONTROL

This course will be integrated with accounting where practicable and will cover basic auditing concepts, auditing principles and procedures and methods of investigation.

The course will deal with the nature, scope and auditing significance of internal control, internal control procedures, internal check and internal audit; vouching, checking, verification of balance sheet items, the development of audit programmes, investigations, auditors' and investigators' reports.

Attention will be given to trends and developments in the profession, modern techniques as applied to machine and electronically processed accounting material, testing and sampling, the evolutions of auditing standards and professional ethics.

Company audits will be dealt with at length and statute and case law decisions affecting auditors will be examined.

TAXATION

The major part of the syllabus is concerned with a detailed study of the Income Tax Assessment Act, the determination of income, the assessment of specific forms of income, allowable deductions both in a general and specific sense, the assessment of different classes of taxpayer and the machinery provisions of income tax collection.

There are also lectures dealing with land tax assessment and collection, pay-roll and sales taxes.

BUSINESS FINANCE

This course will be concerned with the question of funds, their deployment and control and the disposition of earnings. It will deal with short and long term finance from external sources, and financing by retention of earnings. Attention will be given to the problems associated with the techniques to be followed in raising capital, the control of funds once obtained and the factors to be considered in determining reserve and dividend policies. The relevance of conventional accounting techniques for the control of business finance will also be examined.

ACCOUNTING SEMINAR I

A more rigorous treatment of the topics prescribed for Accounting II with emphasis on: accounting principles, convention and doctrines, measurement of periodic profit, inventory valuation and variable costing and problems of cost and expense allocation in the measurement of departmental and product costs.

ACCOUNTING SEMINAR II

This seminar will be devoted to the discussion of selected topics from Accounting III and Accounting IV, viz.: concepts of profit and income, accounting for price-level changes, cost, volume profit analysis and profit planning, budgetary control and performance reporting, profitability and rate of return.

ACCOUNTING SEMINAR III

This course is to be conducted at an advanced level and will consist of the reading and discussion of topics in financial and managerial accounting.

Financial accounting topics which will receive attention are: profit and income concepts, balance sheet valuation, inventory values, depreciation, fund accounting, accounting for price changes and rate of return on investment.

Managerial accounting topics to be discussed will be as follows: the historical development of costing, relationship between accounting and economic concepts of cost and income, cost-concepts, costing as an instrument of planning and pricing, and costing as an instrument of control.

COST ACCOUNTING

This course is designed to cover the more advanced concepts of cost accounting and their relation to allied disciplines — economics, statistics, production, marketing and engineering. Extensive use will be made of case study material to illustrate applications to industry.

COMMERCIAL LAW I

General introduction to the Australian legal system including an examination of the principal sources of English law in New South Wales, viz.: custom, common law, equity, judicial decisions and legislation.

Law of contract, including guarantee and suretyship; sale of goods; hire purchase legislation; agency; partnership; personal property including classification of property, disposition of property, bailment, liens, bills of sale, bailments; negotiable instruments; insurance; commercial arbitration; succession and trusts.

COMMERCIAL LAW II

This subject will combine a study of bankruptcy law and company law. The section dealing with bankruptcy will include an analysis of the acts of bankruptcy, debts provable in bankruptcy, property available to creditors, avoidance of settlements and discharge of bankrupt persons.

The part devoted to company law will include a study of the Companies Act, 1961, and general principles of company law, with particular emphasis on the formation and registration of companies, memorandum and articles of association, share capital, membership, reconstruction, amalgamations and winding up.

CONSTITUTIONAL LAW

An examination of the principal sources of English law.

A survey of the constitutional history of the United Kingdom.

The general principles of the constitutional law of the United Kingdom.

The constitutional history and law of New South Wales.

The general principles of administrative law. In particular, this matter will cover delegated legislation, and the use and nature of the prerogative writs.

The constitutional law of the Australian Commonwealth, including the nature of federal constitutions, the interpretation of the Commonwealth Constitution and a survey of the federal legislative, executive and judicial powers. The survey of legislative power will concentrate on those powers important in the field of industrial law.
ECONOMICS I
(a) Microeconomics
This subject is concerned with microeconomics. It begins with a brief introductory account of the major problems of economics and with the methods of economic analysis. It then covers the theory of demand and the theory of the firm, examining price and output policies in different market situations. Attention will be devoted in this section to a consideration of the results of empirical studies into business behaviour, and of the impact of government policy. The final section will deal with the analysis of distribution.

(b) Elementary Economic Statistics
An introduction to the use and interpretation of economic statistics. Main emphasis is on descriptive methods — sources and collection of data; graphs, diagrams and tables; and an elementary treatment of index numbers, time series and Social Accounting.

ECONOMICS II
This subject deals with macroeconomics. It is concerned with the theory of income and employment and an elementary appraisal of the trade cycle. The application of theory to policy will be treated in the spheres of inflation, monetary and financial control and internal and external balance.

ECONOMIC FLUCTUATIONS AND GROWTH
An analysis of the theories of fluctuations and growth and their applications to studies of problems of developing economies. An examination of development problems in Asia, Africa and the Middle East will complete the subject.

COMMERCE STATISTICS
This is a terminal course in Statistical Methods for those Commerce students who do not intend to specialise in Statistical Analysis.

The basic ideas of probability and statistical inference are developed and the application of sampling techniques is studied in such fields as market research, quality control and auditing. The course also includes a discussion of regression and correlation techniques and statistical decision-making.

STATISTICAL ANALYSIS I
The content of this course is as follows: Probability (elementary set algebra). Variates (univariate, multi-variate, expectations, moment generating and characteristic functions). Standard distributions. Sampling distributions. Point estimation (means, maximum likelihood, minimum X²). Confidence interval estimation, exact and approximate X². Introduction to the theory of significance tests.

STATISTICAL ANALYSIS II
The object of this course is to consider regression analysis intensively; the techniques and assumptions influencing its use, the application to economic data, the testing of numerical results and the interpretations for economic analysis. The work provides some introduction to econometrics.

MATHEMATICAL ECONOMICS I
This course is concerned with the application of mathematical techniques to theories of fluctuations, growth and allocation.

MATHEMATICAL ECONOMICS II
This course deals with programming applications in economics and related fields.

MATHEMATICS FOR COMMERCE

ECONOMETRICS
Selected topics from statistical decision theory, statistical programming, time series analysis, estimation and testing of econometric models.

HISTORY OF ECONOMIC THOUGHT
This subject treats the development of economic ideas and analysis. Economic thinking prior to the 18th century is considered as preliminary to Physiocratic ideas and the work of Adam Smith. The progress of society is examined in the light of contributions by Ricardo, Malthus, Senior, Marx and J. S. Mill. Subsequent developments by Alfred Marshall and the critiques of classical economics are then reviewed.

INDUSTRY ECONOMICS
Developments in the theory of the firm. This course deals with theoretical problems and specific issues related to the Australian economy.

ECONOMICS III
(a) Public Economics
This subject covers the theory of fiscal policy and government intervention in economic activity. Under this heading Australian Federal State financial relationships are examined as well as comparisons of fiscal techniques between various countries. The problems of policy in underdeveloped countries are also examined.

(b) International Economics
Major topics in this series of lectures are:
- The pure theory of international trade — the doctrine of comparative cost, the theory of international values, and gains from trade.
- Balance of payments analysis and policy — adjustments via price and income changes, devaluation, tariffs, quantitative restrictions and international agreements.
- Postwar foreign trade policies — the I.M.F. and I.B.R.D. and other international institutions, the sterling and dollar areas, the common market, international investment.

ADVANCED ECONOMIC ANALYSIS
A survey of advanced economic theory and applications in the quantitative and policy fields.

ELEMENTARY MATHEMATICAL ECONOMICS
This course deals with the application of some elementary mathematical techniques to economic theory.
SEMINAR IN ECONOMIC THEORY AND PROBLEMS

This Seminar will be concerned with the analysis of contemporary problems, particularly those directly related to economic policy making and with more advanced aspects of economic theory. Students will be expected to present papers and participate in discussion. A number of papers will be presented by members of institutions concerned with the conduct of economic policy.

STATISTICAL METHODS II

This course is a direct continuation of the course in Statistical Methods I. It develops further the exposition of the sampling techniques, and their application in the fields of market research, quality control and auditing. Other topics included in the course cover some more specific methods and applications of correlation and regression techniques, and an introduction to demography.

MONEY, CREDIT AND FINANCIAL INSTITUTIONS

This subject covers a theoretical and empirical assessment of the financial organisation of the economy. The first part of the work covers a detailed treatment of credit and money in the modern economy including the role of non-banking financial intermediaries. In the later part of the course there is an assessment of the policy problems in the financial sector of the economy.

DIVISION OF ENGINEERING
DEPARTMENT OF CIVIL ENGINEERING

8.112 MATERIALS AND STRUCTURES


Stresses due to Axial Force, Bending Moment (brief treatment non-uniplanar bending), and Shear Force.

Torsion in Circular Shafts.

Relationship between Bending Moment, Slope and Deflection. Differential equations of simple beam theory. Area Moment Theorems.

Fixed ended beams.

Strain energy due to Axial Force, Shear Force, Bending Moment and Torque. Deflections at a single load. Shock loads, Helical and flat leaf springs.


Laboratory work including tension, compression, hardness and impact tests with metals, experiments in flexure and torsion.

8.121 STRUCTURES

Relation between design, analysis and proportioning. Brief review of design principles — dead and live loads; equivalent uniform loads, factors of safety; load factors. Structural hazards — excessive deflection, instability, fire-resistance, corrosion, decay.

Factors affecting design — erection and transport, availability of materials and plant.

Design procedure — specification, drawings.

Design of riveted joints. Design of welded joints.

Theory of centrally loaded and eccentrically loaded columns, Euler's formula, Perry-Robertson formula, Rankine's and straight line formulae. Design of plated I-section columns.

Design of beams, plated beams and plate web girders.

Design of Roof Trusses.

Reinforced Concrete design applied to statically determinate structures.

Simple beams and slabs, tee-beams, doubly-reinforced beams, concentrically and eccentrically loaded columns. Column footings.

8.122 STRUCTURES

Relation between design analysis and proportioning. Brief review of design principles — dead and live loads, equivalent uniform loads, factors of safety; load factors.

Structural hazards — factors affecting design.

Design procedure — specifications, drawings.

Design of riveted and welded joints.
Column Theory — Euler, Perry-Robertson, Rankine and Straight-line formulae. Column design in steel.

Design of steel beams — plated beams, plate web girders. Column design in steel.

Design of roof trusses.

Reinforced concrete design applied to statically determinate structures.

Simple beams and slabs, tee beams, double-reinforced beams, concentrically and eccentrically loaded columns. Column footings.

Influence lines for statically determinate structures.


Moment-distribution. Stiffness and carry-over, solution of continuous beams.

Introduction to 3-dimensional statics. Composition and resolution of forces, moment of an oblique force about any axis, equations of equilibrium.

Strain energy methods for the solution of one-fold statically indeterminate rigid frame and pin-jointed truss problems. Determination of deflections using unit load method; Castigliano’s theorems. Williot-Mohr diagrams.

8.131 STRUCTURES.

Relation between design, analysis and proportioning.

Dead loads, live loads, equivalent uniform loads, factors of safety, load factors.

Structural hazards — factors affecting design.

Codes of practice.

Design procedure, specifications and drawings.

Design of riveted and welded joints.

Column theory, Euler's formula. Brief mention of Rankine and Perry-Robertson formulae.

Design of simple steel columns. Plated columns.

Roof trusses. Design of various members and connections.

Approximate analysis of knee-braced bent.

Influence lines for statically determinate structures.

Theorem of Three Moments — brief treatment.

Beams and Girders — design of plated girders, plate web girders, crane runway girders.

8.132 STRUCTURES.


Retaining walls and small dams.


Analysis of rigid frames by Slope Deflection and Moment Distribution. Treatment of sidesway.

Analysis of arches.


Retaining walls and small dams.

Design of continuous structures in Reinforced Concrete.

Continuous beams and slabs, simple continuous frame.

Introduction to ultimate load method in reinforced concrete design.

Plastic analysis of simple steel structures.


8.141 ENGINEERING COMPUTATIONS.

Construction of intercept charts for 3 or more variables.

Construction of nomograms.

Introduction to finite differences. Solution of one-fold statically determinate rigid frame and pin-jointed truss problems. Determination of deflections using unit load method; Castigliano’s theorems. Williot-Mohr diagrams.

8.142 ENGINEERING COMPUTATIONS.

Construction of intercept charts for 3 or more variables.

Construction of nomographic charts by use of determinants.

Introduction to finite differences. Solution of algebraic and transcendental equations by simple iteration methods — horizontal iteration, Newton Raphson Method.


8.211 MATERIALS LABORATORY.

Testing of common metals, timber, bricks. Introduction to concrete technology, including mix design, together with tests on cement, aggregates and concrete.

8.221 ENGINEERING MATERIALS.

(a) Concrete Technology. Materials used in modern concretes, physical and chemical properties of cements; production, testing and selection of aggregates; pozzolans, admixtures. Workability, strength and other properties of concrete and factors affecting these. Target strengths and the design and proportioning of mixes.

Laboratory work — Cement and aggregate tests; examination of factors influencing workability and strength properties of concrete; mix design procedure.

(b) Soil Mechanics. Physical and Mechanical properties affecting capability and compressibility and their application in practical problems relative to seepage, uplift and the settlement of buildings located above buried compressible soil strata, shear-strength, bearing capacity and earth pressure, and their

---

166
application to engineering problems, including retaining walls. Laboratory work — soil identification and testing of physical properties.


8.222 CIVIL ENGINEERING MATERIALS.

(a) Concrete Technology etc. Significance and measurement of permeability, durability, elastic modulus, creep and other concrete properties; factors affecting these and concrete volume change. Design and proportioning of special concretes. Manufacture and field control.


Laboratory work—Examination of special concretes.

(b) Soil Mechanics. Studies of theoretical and applied sections of soil mechanics relating to foundations and earth dams.

8.223 CIVIL ENGINEERING MATERIALS.

(a) Concrete Technology, etc. Significance and measurement of permeability, durability, elastic modulus, creep and other concrete properties; factors affecting these and concrete volume change. Design and proportioning of special concretes, for high strength, mass and lightweight. Manufacture and field control.

Wood Technology and Miscellaneous Materials: Mechanical properties and structure of timber. Attack and preservation; manufactured units. Properties and use of structural aluminium alloys. Structural clay products, special laminates and plastics. Lightweight concrete — Examination of special concretes; design, manufacture and testing of reinforced concrete beams to meet particular requirements.

(b) Soil Mechanics. Advanced studies of theoretical and applied sections of soil mechanics, including foundations, mass soil behaviour, tunnels and arching, stability of slopes, earth dams, soil technology and stabilisation work.

Laboratory and design office work — shear testing and other advanced soil investigations; stability of earth dams and other soil retaining structures.


Laboratory work includes tests on timbers and wires, creep experiments and work with wire resistance strain gauges.

8.411 SURVEYING.


8.421 SURVEYING.

History and development of surveying; types of survey; introduction to errors. Linear measurement, chaining and chainage corrections; accuracy. Chain surveys. Surveying instruments. The level, differential levelling; errors. Grading; volumes of earthworks; prismoidal and mean end area formulae. Contouring; use of mass diagram. Traversing, the compass; the theodolite. Miscalce, adjustment of traverses. Calculation of areas. Setting out; horizontal circular curves. Tacheometry; stadia theory and formulae. The plane table. Nature, causes and classes of errors of measurement, linear and angular.

A survey camp of one week in Third Term is part of this course.

8.422 AND 8.423 SURVEYING.

Geodetic surveying; implications and instruments used. Adjustments. Control surveys; horizontal control by triangulation, by baseline measurement or by traversing. Vertical control by differential levelling, trigonometric or barometric levelling. Spherical trigonometry. Elementary astronomy: solar and stellar observations; latitude, time and azimuth. Setting out of engineering works; curves, transition curves. Introduction of the theory of map projection.

Elements of photogrammetry; photo-interpretation. Engineering computations; centre point quadrilateral, strength of figures, adjustment of networks, baselines.

Outline of survey laws and regulations.

A survey camp of one week in third term is part of this course.

8.521 HYDRAULICS

Dimensional analysis, hydraulic model theory, surface resistance in flow in pipes and channels.


8.522 HYDRAULICS

Dimensional analysis, hydraulic model theory scale effect, distorted models. Fluid turbulence, velocity distribution, surface resistance, in flow past plane boundaries and in pipes and channels.


Potential flow, flow nets, percolation.

8.611 CIVIL ENGINEERING

(a) Public Health Engineering. Processes of decomposition and decay; chemical and bio-chemical measurement of degree of pollution; B.O.D.; rates of bio-chemical oxidation; basic principles of the treatment of polluted waters. Water supply schemes; collection and distribution of water; principles and practice of water treatment; sewerage systems; construction of sewers; pumping stations; sewage treatment and disposal; flushing pools; refuse disposal.

(b) Engineering Hydrology. A basic course in Engineering Hydrology dealing with principles and modern techniques. Topics covered are:— Meteorology, climatology, evaporation, analysis of hydrologic data, stream gauging, the run-off process, infiltration, design storm synthesis, unitgraphs, synthetic unitgraphs, flood frequency studies, rational method, urban drainage design, streamflow routing, water balance, water losses, rainfall run-off relationships, streamflow correlations, storage determination, groundwater.

168
8.612 CIVIL ENGINEERING
(a) Road Engineering. Road location and surveys under urban and rural conditions, road design standards, geometrical design, road alignment, design of curves and intersections; types and functions of pavements. Concrete, bituminous and stabilised construction, culverts, road plant. Pavement thickness. Road maintenance. Urban stormwater drainage. Economic analysis of routes and schemes.

(b) Engineering Construction and Administration. Construction plant and equipment; compressed air, drilling and tunnel equipment, earth moving plant, hoisting and conveying equipment, pumping and piledriving plant, workshop plant. Construction methods; earthworks foundations, coffer-dams, caissons, piles, steel, timber, and concrete construction. Prestressed concrete, bridges, wharves, dams, pipelines and multi-storied buildings.

(c) Irrigation Engineering. Natural and artificial irrigation; sources of water, water requirements, methods of application to land. Soil deterioration. Investigation and design of irrigation systems, water metering. Maintenance and operation of irrigation systems.

8.613 CIVIL ENGINEERING
(a) Roads and Railway Engineering. Road location and surveys under urban and rural conditions. Road design standards, geometrical design, road alignment, design of curves and intersections; types and functions of pavements. Concrete, bituminous and stabilised construction: culverts, road plant. Pavement thickness. Road maintenance. Urban stormwater drainage. Economic analysis of routes and schemes.

(b) Irrigation, Hydro-electric, and Harbours and Rivers Engineering. Natural and artificial irrigation; sources of water, water requirements, methods of application to land. Soil deterioration. Investigation and design of irrigation systems, water metering. Maintenance and operation of irrigation systems. Hydro-electric power schemes, combined thermal and hydro systems. Hydro-electric potential, determination of storage requirements and plant capacity.

(c) Engineering Construction and Administration. Construction plant and equipment; compressed air, drilling and tunnel equipment, earth moving plant, hoisting and conveying equipment, pumping and piledriving plant. Construction methods; earthworks foundations, coffer-dams, caissons, piling, steel, timber and concrete construction. Bridges, wharves, dams, pipelines and multi-storied buildings.

DEPARTMENT OF ELECTRICAL ENGINEERING

6.101 ELECTRIC CIRCUIT THEORY

Units and Standards. The definitions of electric and magnetic quantities. Systems of units; rationalized and unrationalized. Dimensional analysis. Primary and secondary standards.

Conduction. Linear and non-linear resistances.


Transient Response of Circuits. With lumped parameters (linear) with steady and applied sinusoidal e.m.f.s. D.E. classical solutions RL, RC and RLC Circuits. Basic principles of Laplace transform methods.


6.152 ELECTRIC CIRCUIT THEORY

Non-linear A.C. Circuits — modulation.

Three phase circuits, balanced, unbalanced harmonics, symmetrical components.

Four terminal networks, matrix methods.

Transmission line theory: Steady state equations, Travelling waves, Reflection, Transients.

Wave filters.

6.051 ELECTRICAL ENGINEERING

A course comprising electrical engineering material which can be given profitably in a common form to students in each of the final year options. The material includes:


C. Electron Physics. A brief but unified treatment of the bases for technological devices utilizing conduction of electricity controlled by fields in vacuo, in gases and in the solid state.

6.251 ELECTRIC POWER ENGINEERING


Rotating Machines. Electromechanical energy conversion. Basis of machine operation (a) the BLV, Bli viewpoint and (b) the magnetic field viewpoint. Generators and motors. Energy balance. Singly and multiply excited magnetic systems. Reluctance torque.

The electrostatic machine.
Rotating Machines Performance and Analysis. Torque generated voltages and magnetic fields in a.c. machines with sinusoidal m.m.f. and flux density distribution, and in d.c. machines.
Polyphase induction and synchronous machines and d.c. machines. Equivalent circuits, current, locus diagrams, torque speed characteristics. Tests. Losses, rating and heating.

6.252 ELECTRICAL POWER SYSTEMS

6.262 ELECTRICAL MACHINES
General Principles. E.M.F. and torque. M.M.F. and flux distributions of d.c. and polyphase windings; saturation curve. Windings: lap and wave, simplex and multiplex; effect of chording and distribution on e.m.f. harmonics. Generalised treatment of rotating machine theory.
Synchronous Machines. Armature reactance and reaction; Potier vector diagrams; two-axis theory. Excitation and reluctance torques: torque-angle characteristics of smooth vector and salient pole motors and generators. Saturation effects. Parallel operation; load sharing, power factor control.
Electrical Transients. In machines and systems of machines.
Dynamics of electro-mechanical systems.
Special Machines. Inductor alternators, selsyns.

6.351 ELECTRONICS
Electron emission and flow in a vacuum, in gases and in semi-conductors.
Diodes—thermonic, gas and semi-conductor types.
Control of electron flow in a vacuum, in a gas and in a semi-conductor. Triodes, pentodes and transistors. Thyatrons.
Small signal equivalent circuits of transistors and vacuum tubes.
Small signal amplifiers employing transistors and vacuum tubes.
Oscillators — vacuum tube, transistor and thyatron.
Power Amplifiers — Class A, Class B, Class C.
Modulation — particularly amplitude modulation of Class C amplifiers.
Demodulation — particularly diode detection of an amplitude modulated signal.
Feedback — effect of negative feedback on gain, distortion and output impedance of amplifiers; stability.
Rectifier power supplies — thermionic, gas diode and semi-conductor diode supplies with choke and condenser input filters.

6.801 ELECTRICAL ENGINEERING
Phasor Representation and use of Complex Algebra. Rectangular, polar and exponential forms. Concept of impedance.
M.M.F. Diagrams and rotating fields. M.M.F. diagrams for concentrated and distributed phase windings. Rotating field by graphical method.
High Vacuum Tubes as Circuit Elements. Voltage and current symbols. Graphical analysis. The equivalent circuit. The equivalent
6.802 ELECTRICAL ENGINEERING

Review of Circuit Theory.


Transients. RL and RC transients with constant applied voltages. Time constant. LC circuit oscillations. AC transients.


Induction Machines. Analysis bases on simplified equivalent circuit. No load and blocked rotor tests.


Construction of curves from plane geometry. Various surfaces and solids, their sections, developments and intersections in solid geometry.

Application of descriptive geometry to certain problems arising in engineering practice. Special emphasis on ability to visualise problems and processes involved in their solution.

5.101 MECHANICAL ENGINEERING DESIGN

Design procedures, loadings and factors of safety standards.

Stresses in bolts.

Design examples involving simple stresses. Design of shafts and bearings, belt drives and pulleys (leather, V-pivot drives), friction clutches, springs and screws (for power applications).

Design of spur gear drives in accordance with BSS 436, introduction to worm gear drives in accordance with BSS 721.

Design of band brakes (forces in bands, pressure distribution) and shoe brakes.

Crane design, including working equipment and traversing gear.

5.103/5.103S MECHANICAL ENGINEERING DESIGN

(a) Lectures: Design of reciprocating machine elements, high-speed rotors, pressure vessels, and pipe lines.

(b) Drawing Office: Detailed design of reciprocating components and cylinders. Creative design of a power or processing plant, special purpose machine or mechanism.

5.202 MECHANICAL TECHNOLOGY

Plastic yielding of metals; Blanking and Shearing; Bending; Hollow ware; Forging; Casting; Rolling; Weldments.

5.204 MECHANICAL TECHNOLOGY


5.302 THEORY OF MACHINES


5.303 MECHANICAL VIBRATIONS

Periodic motions, Fourier analysis (motion only). Simple harmonic motion. Equations of motion of "one degree of freedom" system.


Physical concept of Boundary Layer.
Laminar and Turbulent Motion: Flow in Pipes and Conduits.
Linear and Angular Momentum Theorems and Elementary Applications to Turbomachines.

5.502 FLUID MECHANICS

Rotary Expanders. Momentum Principle applied to Flow through a Rotor; Axial Flow Turbines; Radial Flow Turbines.

5.503 FLUID MECHANICS

Elements of Fluid Dynamics: Euler Equations; Momentum Theorems; Rotational Motion, Potential Flows; Simple Stream and Potential Functions; Elementary Wing Theory.
Lubrication Theory: Design of Bearings.
Turbulent flow in boundary layers and in closed conduits.
Hydraulic Turbines: Characteristic Proportions: Selection of Type and Speed for New Plant.
Surges and Water Hammer.
Centrifugal and Axial Flow Compressors.

5.601 MECHANICAL ENGINEERING

Elements of Fluid Dynamics: Euler Equations; Momentum Theorems; Rotational Motion; Potential Flows; Simple Stream and Potential Functions; Elementary Wing Theory; Lubrication Theory: Design of Bearings.
Turbulent Flow in boundary layers and in closed conduits.
Hydraulic Turbines: Characteristic Proportions: Selection of type and speed for a new plant.
Surges and Water Hammer.
Centrifugal and Axial Flow Compressors.

Propulsion systems. Propulsive efficiency. Thermodynamics of ramjets and rocket motors.

5.701 THERMODYNAMICS

The First Law of Thermodynamics. The cycle; The First Law; Mechanical equivalent of Heat; Corollaries of First Law.
Non-flow Processes. The Energy Equation and Reversibility; constant volume, constant pressure, polytropic, adiabatic and isothermal processes.
The Second Law of Thermodynamics and Reversibility. Cycle efficiency; The Second Law; Reversibility and Irreversibility; Reversible and Irreversible cycle.
General Thermodynamic Relations. Properties to be related; General Thermodynamic Relations; Change of Phase; Specific heats of an Ideal Gas (definition only).
Properties of Fluids. Temperature (omit thermodynamic scale); Properties of liquids and vapours; Tables of Properties; diagrams of Properties (T-S, H-S, P-H); Properties of a Perfect Gas.
Non-flow Processes. Constant volume, constant pressure, polytropic, adiabatic and isothermal processes applied to a vapour and to a perfect gas; Irreversibility and Free expansion.
Vapour Power Cycles. Criteria for the comparison of cycles; Carnot cycle; Rankine, Reheat and Regenerative cycles; Economiser and Air-preheater; The Ideal Working Fluid.
Gas Power Cycles. Internal combustion engines and Air-standard cycles; Otto, Diesel and mixed cycles; M.E.P. as criterion of performance; Cycles having Carnot efficiency.

5.702 THERMODYNAMICS

Heat Pump and Refrigeration Cycles. Reversed Carnot cycle and Performance Criteria; Practical Refrigeration cycles; Water Refrigerator; Absorption Refrigerators; Gas cycles.
Properties of Mixtures. Gibbs-Dalton Law; Mixtures of Perfect Gases; The Mixing Process; Gas and Saturated vapour Mixtures; Psychrometry; Hygrometric chart.
Reciprocating Expanders and Compressors. Work transfer: Indicator Diagram; Reciprocating Air Compressors; The Steam Engine; Rotary Positive Displacement Compressors.
The Working of I.C. Engines. Criteria of Performance; Factors limiting Performance; Comparison with Air-standard cycles; Thermodynamic Charts.

Heat Transfer—Conduction. Fourier's Law; One-dimensional steady conduction through a composite wall; radial steady conduction through the wall of tube; One-dimensional unsteady conduction.

Heat Transfer—Convection. Grashof, Nusselt, Reynolds and Prandtl Nos.; Principles of Dynamic Similarity and Dimensional Analysis applied to Forced and Free Convection (omitting derivation of equations); convection with change of phase (descriptive treatment only).

Heat Transfer—Radiation. Laws of Black-body Radiation; Kirchhoff's Law; Radiation exchange between two "black" and two "grey" surfaces; Radiation from Gases and Flames (descriptive treatment only).

Combined Modes of Heat Transfer. Heat Exchangers; mean temperature difference; Heat flow through a wall; Heat flow through a Cooling Fin (descriptive treatment only); Thermocouple in a gas stream.

5.703 THERMODYNAMICS

General Thermodynamic Relations. Thermodynamic Temperature Scale; Exact differentials; Maxwell relations; Equation of State; Co-efficient of Expansion and compressibility; Specific Heats; Joule-Thomson Co-efficient; Graphical Determination of Entropy and Enthalpy; Change of Phase; van der Waal's and Clapeyron's relationships.

Non Steady Flow Processes.

Combustion Processes. Fuels; Conservation of Mass; Experimental Product Analysis; Calorific Value of Fuels; Efficiency of power plants and combustion processes; Dissociation; Equilibrium constants.

Steam Plants. Binary Vapour Cycle; Back Pressure and Extraction Turbines; Metastable Flow of vapours; Super critical systems; Nuclear power systems.

Jet Propulsion Engines. The momentum Equation; Rocket Motors; Ramjets.

Air Conditioning. Enthalpy potential in heat and mass transfer; Cooling towers and evaporating condensers; Cooling and dehumidifying with coils and sprays; Air filtration; Air Conditioning Calculations; Air flow in ducts; Air distribution.

PROFESSIONAL ELECTIVE COURSE

24 weeks course of 3 hours weekly

Energy Applied to Propulsion

The general energy spectrum
Sources suitable for propulsive applications
Petroleum, coal, synthetic, nuclear
Fuel source location, and refining
Fuel chemistry
Fuel types, properties, and test techniques
Fuel storage and pumping
Fuel metering systems
Combustion problems in propulsion units
Operating problems
Future trends.

DIVISION OF SCIENCE
DEPARTMENT OF CHEMISTRY

CHEMISTRY I
A course of 3 lectures per week and laboratory session of three hours per week for 3 terms, covering the following topics:

Introduction to physical and chemical phenomena; atomic and molecular structure; valency; periodicity of properties; systematic chemistry of elements of main groups of the periodic table; chemical reactions and equilibria; solutions of non-electrolytes and electrolytes; analysis; organic chemistry of simple aliphatic compounds.

CHEMISTRY II
A course of 4 lectures per week and two laboratory sessions each of 2½ hours per week for 3 terms arranged on the following pattern:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Inorganic</td>
<td>Physical</td>
<td>Analytical Chemistry and Physical Methods</td>
<td>Organic</td>
</tr>
<tr>
<td>Term 2</td>
<td>Inorganic</td>
<td>Physical</td>
<td>Analytical Chemistry and Physical Methods</td>
<td>Organic</td>
</tr>
<tr>
<td>Term 3</td>
<td>Inorganic</td>
<td>Physical</td>
<td>Analytical Chemistry and Physical Methods</td>
<td>Organic</td>
</tr>
</tbody>
</table>

Brief outlines are as follows:

Inorganic Chemistry.
Valence and molecular structure, including wave mechanical principles; the solid state; co-ordination chemistry; systematic chemistry of sub-groups 1, 2, 3, 4, 5, 6 and 7.

Physical Chemistry.
Thermodynamics; phase equilibria; kinetics; surface chemistry.

Analytical Chemistry and Physical Methods.
Principles of gravimetric, volumetric, electrolytic and colorimetric methods of analysis.

Organic Chemistry.
A study of functional groups in aliphatic and aromatic systems with modern theoretical concepts.

CHEMISTRY III (For students in Metallurgy)
A course comprising the Inorganic, Physical and Analytical Chemistry and Physical Methods sections of Chemistry II.

CHEMISTRY III
A course of 4 lectures per week and two laboratory sessions each of 2½ hours per week for 3 terms arranged on the following pattern:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Inorganic</td>
<td>Physical</td>
<td>Analytical Chemistry and Physical Methods</td>
<td>Organic</td>
</tr>
<tr>
<td>Term 2</td>
<td>Inorganic</td>
<td>Physical</td>
<td>Analytical Chemistry and Physical Methods</td>
<td>Organic</td>
</tr>
<tr>
<td>Term 3</td>
<td>Inorganic</td>
<td>Physical</td>
<td>Analytical Chemistry and Physical Methods</td>
<td>Organic</td>
</tr>
</tbody>
</table>
Brief outlines are as follows:

**Inorganic Chemistry.**
Modern valency theory; non-stoichiometric compounds; unusual bond types; radiochemistry; nuclear fuel processing; actinides and lanthanides; co-ordination chemistry; chemistry of group 8.

**Physical Chemistry.**
Thermodynamics of non-ideal systems and systems of variable composition; electrochemistry; electrode processes, electrolytic solutions; kinetics; surface chemistry.

**Analytical Chemistry and Physical Methods.**
Chemical equilibria; ion exchange, extraction; spectroscopy; X-ray crystallography.

**Organic Chemistry.**
Stereochemistry; reaction mechanisms; heterocyclic compounds; carbohydrates; amino acids and proteins.

**CHEMISTRY III (For students in Industrial Chemistry).**
A course comprising the Physical and Organic Sections of Chemistry III.

**CHEMISTRY III**
A course of 90 to 120 lectures with associated laboratory work on a guided selection of topics.

The following are examples in the several fields arranged in units of 10 lectures or small integral multiples thereof.

**Inorganic Chemistry.**
Theoretical Chemistry.
Unusual oxidation states and special types of compounds.
Radiation Chemistry.

**Physical Chemistry.**
Application of thermodynamics to industrial problems.
Polymer chemistry.
Phase equilibria in multicomponent systems.
Surface chemistry of solids, catalysis, topochemistry.

**Analytical Chemistry and Physical Methods.**
Theory and applications of solvent extraction and chromatography.
Reactions in non-aqueous media.
Organic reagents in chemical analysis.
Modern physical methods of analysis.

**Organic Chemistry.**
Conformation analysis; terpenes; steroids.
Chemical pharmacology; chemotherapy.
Oxygen heterocycles; nitrogen heterocycles, alkaloids.

**Applied Chemistry.**
Industrial Chemistry.
Application of thermodynamics to industrial problems.
Phase equilibria in multicomponent systems.
Micromeritics.

**CHEMISTRY IV (Honours)**
A course extending over one full-time academic year, comprising:
Part A—Lecture-tutorial courses with directed reading.
Part B—A research project, the results of which are to be embodied in a thesis.
Advanced Stratigraphy and Structural Economic Petrology Sedimentation Geology Geology

Brief outlines are as follows:

**Advanced Petrology.**
Petrogenesis; petrographic techniques.

**Stratigraphy and Sedimentation.**
Principles of stratigraphy; world stratigraphy; sedimentation; theoretical palaeontology.

**Structural Geology.**
Advanced structural geology and geotectonics; photogeology; solution of structural problems.

**Economic Geology.**
Ore mineralogy; principles of formation and classification of mineral deposits; problems of ore genesis; ore microscopy.

**GEOLOGY IIIA**
A course of 6 lectures and 6 laboratory hours per week for 3 terms, together with 10 days' field work, arranged on the following pattern. In addition, a thesis is to be submitted.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology of Fuels</td>
<td>Geophysics</td>
<td>Exploration and Mining Geology</td>
<td>Engineering Geology</td>
</tr>
</tbody>
</table>

Brief outlines are as follows:

**Geology of Fuels.**
Properties and classification of coal and petroleum; origin and genesis of coal and petroleum; world and geological distribution of coal and petroleum.

**Geophysics.**
Geophysical characteristics of the earth and its components; principles and application of geophysical techniques.

**Exploration and Mining Geology.**
Geology applied to exploration and development of mineral resources.

**Engineering Geology.**
Soil mechanics; engineering properties of rocks; subsurface water; geological problems in engineering design and construction; sedimentation engineering.
MATHEMATICS III.
The course comprises Mathematics II together with the following:
2nd Term, Module F.
3rd Term, Modules K, X.

MATHEMATICS II.
The course comprises the following Modules:
1st Term, Modules C, Q, R.
2nd Term, Modules G, V.
3rd Term, Module Z.

PURE MATHEMATICS III.
A course of 4 lectures and one tutorial hour per week for 3 terms, comprising the following:
Algebra: real variable theory; foundations in geometry; differential equations; matrices, functions of a complex variable.

APPLIED MATHEMATICS III.
A course of 4 lectures and one tutorial hour per week for 3 terms, comprising the following:
Extension of the work in Applied Mathematics II; statistics; Cartesian tensors; mechanics of continuous medium; general tensors, calculus of variation.

THEORY OF STATISTICS I.
A course of 4 lectures and 3 hours per week of tutorial and laboratory work for 3 terms comprising the following:
Probability; variates; standard and sampling distributions; point and interval estimation; tests of significance; regression.

10.051 MATHEMATICS.
A course of 2 lectures per week for 3 terms comprising the following:
Practical applications of trigonometry. Analytical geometry, including some work on conic sections. Further work on calculus and a study of the equation \( y'' = f(x) \) with a variety of boundary conditions.

DEPARTMENT OF PHYSICS

PHYSICS 1.011.
A general course of 2 hours per week for three terms, covering all fields of physics at an elementary level.

PHYSICS I.
A course of 3 lectures per week and a laboratory/tutorial session of 3 hours per week for 3 terms, covering the following topics:
Mechanics; properties of matter; heat and light; wave motion and sound; electricity and magnetism.

PHYSICS II.
A course of 4 lectures and two laboratory sessions each of 2 hours per week for 3 terms, arranged on the following pattern:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Electricity &amp; Magnetism A</td>
<td>Physical Optics &amp; Radiation</td>
<td>Mechanics — Vibrations</td>
<td>Thermo-dynamics &amp; Kinetic Theory</td>
</tr>
<tr>
<td>Term 2</td>
<td>Electricity &amp; Magnetism B</td>
<td>Atomic Physics</td>
<td>Mechanics — Wave Motion</td>
<td>Thermo-dynamics &amp; Kinetic Theory</td>
</tr>
<tr>
<td>Term 3</td>
<td>Electronics</td>
<td>Solid State Physics</td>
<td>Nuclear Physics</td>
<td>Electromagnetism &amp; Physical Optics</td>
</tr>
</tbody>
</table>

Brief outlines are as follows:

Electricity and Magnetism. (A)
Electrical measurements; d.c. circuits; a.c. circuits.
Electricity and Magnetism. (B)
Dielectrics; magnetic materials; Maxwell's equations.
Electronics.
Electron emission; valves; amplifiers; gas filled valves; cathode ray oscilloscope; modulation and detection.

Physical Optics and Radiation.
Electromagnetic wave and quantum concepts; interference; diffraction; polarization; radiation laws.

Atomic Physics.
Quantum theory of radiation; X-rays; nucleus; isotopes; radioactivity; optical spectra; Bohr theory.

Solid State Physics.
Electronic and thermal properties of solids; the perfect solid; defects in solids; strength of solids.

Mechanics — Vibrations.
Damped harmonic motion; forced vibrations; resonance; Q number; anharmonic motion; combination of harmonic motion.

Mechanics — Wave Motion.
Longitudinal and transverse progressive waves; wave velocities; interference of waves; sound; Doppler effect.

Nuclear Physics.
Artificial nuclear disintegration; artificial radioactivity; alpha decay; beta decay; gamma rays and gamma decay.
Thermodynamics and Kinetic Theory.
First and second laws; kinetic theory; non-ideal gas; thermodynamic functions; Joule-Thomson effect; phase changes.

Electromagnetism and Physical Optics.
Introductory field concepts; law of force; constitutive equations; Maxwell's equations; electromagnetic wave propagation in free space.

PHYSICS II.
A terminating course of two lectures per week and a laboratory session of 2½ hours per week for 3 terms comprising lectures 1 and 2 of Physics II.

PHYSICS III.
A course of 4 lectures per week and laboratory sessions normally 8 hours per week for 3 terms arranged on the following pattern:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>Electricity and Magnetism</td>
<td>Classical Thermodynamics</td>
<td>Quantum Mechanics</td>
<td>Relativity &amp; Electromagnetic Theory</td>
</tr>
<tr>
<td>Term 2</td>
<td>Electronics &amp; Electricity in Gases</td>
<td>Statistical Thermodynamics</td>
<td>Spectroscopy</td>
<td>Electromagnetic Theory</td>
</tr>
<tr>
<td>Term 3</td>
<td>Electronics</td>
<td>Nuclear Physics</td>
<td>Plasma Physics</td>
<td>Solid State</td>
</tr>
</tbody>
</table>

Brief outlines are as follows:

Electricity and Magnetism.
Circuit theory including resonance; coupled circuits and transmission lines; non-sinusoidal waveforms; transients; transform methods.

Electronics and Electricity in Gases.
Gas discharges; electron dynamics; electron optics; pulse circuits; radio receivers; U.H.F. valves; special valves; semi-conductor electronics including amplifiers, oscillators, pulse and switching gear.

Electronics.
Electron emission; valves; amplifiers; gas filled valves; cathode ray oscilloscope; modulation and detection.

Classical Thermodynamics.
The first law, work in electromagnetic systems; second law, applications to simple systems; low temperature physics; thermodynamic inequalities; phase equilibrium.

Statistical Thermodynamics.
Ensembles, energy distributions, canonical partition function; thermodynamic functions, internal degrees of freedom; monatomic crystal, diatomic gas, quantum statistics.

Nuclear Physics.
Constitution of the nucleus, radioactivity, systematics of nuclear stability, nuclear reactions, nuclear forces, cosmic rays.

Quantum Mechanics.
Elements of classical mechanics, Schrödinger wave mechanics, application to harmonic oscillator, potential barriers and the hydrogen atom; identical particles.

Spectroscopy.
Series relations in line spectra; the vector model of the atom; Landé interval rule, auto-ionisation; Stern-Gerlach experiment; Zeeman and Stark effects; hyperfine structure; molecular spectra; spectrochemical analysis, microwave spectroscopy.

Plasma Physics.
Elementary plasma dynamics; arc, spark and glow discharges; gas and electron temperatures; pinched discharges; thermonuclear reactions.

Solid State.
Classification of solid types, crystal structure; electronic structure and bands; Kronig-Penney model; defects in solids.

Relativity and Electromagnetic Theory.
Mechanics; electrodynamics; radiation phenomena; wave propagation, radiation, sources and fields; boundary conditions; reflection and refraction; dispersion; interference and diffraction; polarisation; magneto-optics; electro-optics.

Relativity.
Mechanics; electrodynamics; radiation phenomena.

PHYSICS IV (Honours).
A course of one year's full-time study comprising:
(a) Lectures and guided reading in the following fields: Electron physics; quantum mechanics and statistical mechanics. Classical mechanics and classical theory of fields. X-ray diffraction and crystallography; structure of real crystals. Aspects of the physics of solids and solid surfaces. Selected topics in spectroscopy.
(b) A research project, the results of which are to be embodied in a thesis.

Subjects Provided by Other Divisions

Engineering I — See Division of Engineering.
Psychology I, II, III } See Division of Arts.
Geography I, II, III } See Division of Arts.

188
PREScribed TEXTS FOR 1963

Information regarding prescribed texts is set out in the following pages. The subjects are listed in the Division and under the Department in which the instruction is provided which is not necessarily that which controls the course. Supplementary reading lists will be issued from time to time.

The order of contents is as follows:

Applied Science:
- Chemical Engineering and Industrial Chemistry
- Metallurgy
- Industrial Arts

Architecture.

Arts:
- Economics
- Education
- English
- French
- Geography
- German
- Greek
- History
- Latin
- Philosophy
- Psychology
- The Diploma in Education

Commerce:
- Accountancy
- Economics

Engineering:
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

Science:
- Chemistry
- Geology
- Mathematics
- Physics
DIVISION OF APPLIED SCIENCE

DEPARTMENT OF CHEMICAL ENGINEERING AND INDUSTRIAL CHEMISTRY

Chemical Engineering I
Chemical Engineers' Handbook
Chemical Engineering (Vol. 1)
Principles of Unit Operations
Chemical Process Principles (Vol. 1)
Metallurgy for Engineers (4th Ed.)

Chemical Engineering II/IIA
Introduction to Chemical Engineering Thermodynamics
Chemical Engineering Kinetics
The Employer, Employee and the Law
Australian Mercantile Law

Chemical Engineering IIB/IIIB
Chemical Engineering (Vol. 2)
Chemical Process Principles (Vol. 2)
Costs in the Australian Process Industries
Process Heat Transfer
Pressure Vessel Code
Concrete and Buildings
Structural Steel in Buildings
Minimum Design Load on Buildings
Manual Metallic Arc Welding
Plant Design and Economics for Chemical Engineering

Chemical Engineering IIIA
Chemical Engineering (Vols. 1 and 2)
Principles of Unit Operations

Chemical Engineering IIIIB/IIIBT
Costs in the Australian Process Industries
Work Study
Process Equipment Design
Automatic Process Control

Industrial Chemistry I
Chemical Process Industries
For additional textbooks, consult lecturers concerned.

Industrial Chemistry II
Consult lecturers concerned.

DEPARTMENT OF METALLURGY

Metallurgy I
A Text-book of Metallurgy
Phase Diagrams in Metallurgy
The Structure of Metals and Alloys
The Structure of Metals (2nd Ed.)
Dislocations and Plastic Flow in Crystals
Mechanical Metallurgy

Metallurgy II
The Structure of Metals (2nd Ed.)
Dislocations and Plastic Flow in Crystals
Functions of the Alloying Elements in Steel (2nd Ed.)

Metallurgy III
As for Metallurgy II. Selected reference lists will be issued by the lecturers concerned.

4.922 Materials Science
Engineering Metallurgy, Vol. 1
A Textbook of Metallurgy

DEPARTMENT OF INDUSTRIAL ARTS

Stages I and II only will be offered in 1963. Students should consult the Sections dealing with the Divisions which offer the subjects required for these stages.
# DEPARTMENT OF ARCHITECTURE

## 11.211 Construction I.
- Building Constructions (Vols. I-IV) .. .. .. McKay, W. B.
- Gregory's Modern Building Practice in Australia
  Mackey, G. F.
- C.E.B.S. Notes on the Science of Building, No. 1 — latest issue.
  Local Government Ordinance No. 71 — Sydney Corporation Act
  By-laws 51-58 inclusive.

## 11.221 Structures I.
- Introduction to Structural Mechanics
  Reynolds, T. J., and Kent, L. E.

## 11.231 Building Science I.
- Principles of Modern Building, Vol. 1 .. .. .. H.M.S.O.

## 11.311 Drawing I.
- Descriptive Geometry for Architects and Builders

## 11.312 Drawing II.
- Roman Lettering for Students .. .. .. Bostock, J.
  Draughtsmanship .. .. .. .. .. .. Reekie, R. F.

## 11.313 Specifications.
- Specifications .. .. .. .. .. .. Edwards, H. Griffith

## 11.411 Town Planning I and II.
- Town and Country Planning
  Brown, A. J., and Sherrard, H. M.

## 11.412 Building Services A.
- Australian Sanitary Engineering Practice .. Randerson, H. Y.

## 11.232 Building Science II.
- Structure in Building .. .. .. .. .. Cassie and Napper
  Strength of Materials .. .. .. .. .. Singer, F. L.

## 11.233 Building Science III.
- Structural Steelwork .. .. .. .. .. Reynolds, T. J., and Kent, L. E.
- Elementary Reinforced Concrete Design .. .. .. Morgan, W.

## 11.312) (Architectural).
- A History of Architecture .. .. .. .. .. .. .. .. .. OR
  A General History of Architecture .. .. .. .. .. .. .. .. .. OR

## 11.121) Interior Lighting Design .. .. .. .. .. .. British Lighting Council
  Simplified Daylight Tables — National Building Studies
  H.M.S.O.

## 11.122) History of Architecture I-IV.

## 11.123) History of Architecture on the Comparative Method
- Fletcher, Sir Banister

## 11.124) A History of Architecture .. .. .. .. .. .. Statham, H. H.
- A General History of Architecture .. .. .. .. .. .. Allsopp, B.

## 11.311) Drawing I and II.
- Dictionary of Modern Painting .. .. .. Lake and Maillard
DIVISION OF ARTS

DEPARTMENT OF ECONOMICS
Consult Lecturers Concerned.

DEPARTMENT OF EDUCATION

Education I.

A Hundred Years of Education .......... Peterson, A. D. C.
A Short History of Educational Ideas ... Curtis and Boulwood
Psychology of the Child ............... Watson, R. I.
Psychology of Adolescence ............ Cole, Loella
An Introduction to Research Procedures in Education
Statistical Analysis .................... Edwards, A. L.

Education II.

History of the Problems of Education ... Brubacher, J. S.
New Era in Education .................. Kandel
Contemporary Education ............... Cram and Browne
Comparative Education .................. Hans
Fundamentals of Curriculum Construction Smith, Stanley
Personality ........................... McLelland, C. G.
Personality ....................... Stagner, R.

Additional for Distinction.

An Introduction to Educational Research Travers, R. M.
Social Statistics ........................ Blalock, H. M.

Education III (Honours Year).

Methods of Research ................... Good, C. V., and Scates, B. E.
Social Statistics ........................ Blalock, H. M.

DEPARTMENT OF ENGLISH

English I.

A History of the English Language ...... Brook, G. L.
A Short History of English Literature ... Ifor Evans, B.
Poems .................................. Main, C. F., and Seng, Peter J. (Eds.)
Moll Flanders ......................... Defoe
Joseph Andrews ....................... Fielding
Vanity Fair ............................ Thackeray
Emma .................................... Jane Austen
Barchester Towers ..................... Trollope
The Mayor of Casterbridge ............. Hardy
To the Lighthouse ..................... Virginia Woolf
The Power and the Glory .............. Graham Greene
Lord of the Flies ...................... William Golding
King Oedipus ........................... Sophocles
Macbeth, Much Ado About Nothing .... Shakespeare
Volpone ............................... Jonson
The Way of the World ................. Congreve
The School for Scandal ................ Sheridan
The Pillars of the Community .......... Ibsen
Juno and the Paycock ................. O'Casey
Under Milk Wood ...................... Thomas
Summer of the Seventeenth Doll ........ Lawler

English II.

Poetical Works (O.U.P.) ............... Coleridge
Or Selected Poems (Penguin) 
Poetical Works (O.U.P.) ............... Wordsworth
Or Selected Poems (Penguin) 
Poetical Works (O.U.P.) ............... Keats
Or Selected Poems (Penguin) 
Poetical Works (O.U.P.) ............... Shelley
Or Selected Poems (Penguin) 
Poetical Works (O.U.P.) ............... Byron
Biographia Literaria, ed. G. Watson ... Coleridge
Coleridge's Writings on Shakespeare ... ed. T. Hawkes
Northanger Abbey ..................... Jane Austen
Sense and Sensibility ................. Jane Austen
Persuasion ............................ Jane Austen
The Antiquary ........................ Scott
Old Mortality ........................ Scott
The Heart of Midlothian ............... Scott
Headlong Hall ........................ T. L. Peacock
Nightmare Abbey ...................... T. L. Peacock
Jane Eyre .............................. C. Bronte
Wuthering Heights .................... E. Bronte
The Scarlet Letter .................... H. Melville
Moby Dick ............................. H. Melville

Additional for Distinction.

Sweet's Anglo-Saxon Primer ............ Davis (Ed.)
14th Century Verse and Prose .......... Sisam (Ed.)

English III.

Milton


Dramatists: Yeats, Synge, Shaw, Eliot, O'Casey, O'Neill.

Novelists: Joyce, Lawrence, Hemingway, Faulkner, Cary.

The Odyssey .......................... Homer
The Aeneid ............................ Virgil
Metamorphoses (Selections) ............ Ovid
The Faerie Queene, Book I ............ Spenser

Additional for Distinction.

Piers the Plowman ..................... Skelton (Ed.)
Sir Gawain and the Green Knight .. Tolkien and Gordon (Eds.)

English IV (Honours Year) — To be prescribed.

DEPARTMENT OF FRENCH

Reference Books.

Students must possess, in addition to the prescribed texts, (1) a complete French grammar such as Heath's New Practical French Grammar (Harrap) and (2) a comprehensive dictionary such as Mansion's Shorter English-French Dictionary and Shorter French-English Dictionary (Harrap) or Petit's Dictionnaire anglais-francais and Dictionnaire francais-anglais (Hachette) or Gasc's unabridged Dictionary of the French and English Languages (Bell). The study of French is greatly facilitated by the possession of Harrap's Standard French and English Dictionary (Harrap), 2 vols., Maurice Denis's Le Bon Usage (Duculot), and Ph. Martinon's two books, Comment on parle en francais and Comment on prononce le francais (Larousse).
French I.
Manuel des études littéraires françaises, XIXe siècle
Castr et Surer

The Poetry of France
Boase

Germinal
Zola

Les Deux ors de France
France

Le Rouge et le Noir
Stendhal

Trois Contes
Flaubert

L'Ile des Pingouins
France

Introduction to French Phonetics
Nicholson

French I.
Armstrong

La Sauvage
Anouilh

Bal des Voleurs
Anouilh

French II.
XVIe siècle: Les grands auteurs français
Lagarde et Michard

le Cid
Corneille

Polyeucte
Corneille

Théâtre 4 vols.
Molière

Phèdre
Racine

Athalie
Racine

La Princesse de Clèves
Mme de la Fayette

Intermezzo
Giraudeau

La Valse des Toréadors
Anouilh

Port-Royal
Montlherial

Additional for Distinction
Évolution et structure de la langue française
W. von Wartburg

The French Language
Ewert, A.

From Latin to Modern French
K. Whipple

Grammaire historique de la langue française
Nyroop, K.

Chrestomathie du moyen âge
Clédet

Oeuvres
Villon

Manuel des études littéraires françaises—Moyen âge
Castr et Surer

French III.
As for French II, plus
Les Provinciales
Pascal

Additional for Distinction
As for French II Distinction.

French IV.
The Development of Modern France
Brogan

Democracy in France
Thomson

French Politics
Pickles, Dorothy

La Chanson de Roland
Jenkins, (Ed.) Heath

Le Roman de Tristan
Béroul, (Ed.) Muret

DEPARTMENT OF GEOGRAPHY

Geography I.
Elements of Geography
Finch, Trewartha, Robinson and Hammond

Mapwork & Practical Geography
Bygott, J.

The Face of the Earth
Dury, G. H.

A Geography of Towns
Smillies, A. E.

Applied Geography
Stampe, L. D.

The University Atlas
Fullard & Darby

Australian Forecasting & Climate
Ashton & Maher

Geography II.
The Geography of Economic Activity
Thoman, R. S.

Industrial Activity and Economic Geography
Estall & Buchanan

The World's Wealth
Moore, W. G.

Case Studies in World Geography
Highsmith, R. M. (Ed.)

Land Utilization in Australia
Wadham, Wilson & Wood

Australia, New Zealand & the Southwest Pacific
Robinson, K. W.

The Australian Environment
C.S.I.R.O.

New Zealand, A Regional View
Cumberland & Fox

Additional for Distinction
The Spirit and Purpose of Geography
Wooldridge & East

Perspective on the Nature of Geography
Hartshorne, R.

Maps and their Makers
Crone, G. R.

Map Making
Debenham, F.

General Cartography
Raisz, E.

Map Projections
Steers, J. A., Or Kellaway

Geography from the Air
Walker, F.

Maps & Diagrams
Monkhouse & Wilkinson

Geography III.
North America
Jones and Bryan

Orr & Patterson, J. H.

Regional Geography of Anglo-America
White & Fosque

Canadian Regions
Putnam & Kerr (Eds.)

The Changing Map of Asia
East & Spate

Malaya, Indonesia, Borneo & the Philippines
Robequain, C.

The Pattern of Asia
Ginsburg & Robertson

Europe & its Borders
Oglivie, A. G.

A Historical & Political Geography of Europe
Pounds, N. J. G.

Western Europe
Monkhouse, E. J.

The British Isles
Dury, G. H.

Additional for Distinction
Geographical Essays
Davis, W. M.

Principles of Geomorphology
Thorburn, W. D.

Landscape
Cotton, C. A.

Climatology
Haurwitz & Austin

The Restless Atmosphere
Hare, F. K.

General Climatology
Crichtfield, H.

Climate & Man
U.S. Dept. of Agriculture

The Soils that Support Us
Kellogg, C. E.

Soils, Their Origin, Constitution & Classification
Robinson, G. W.

The Study of Soil in the Field
Clarke, G. R.

DEPARTMENT OF GERMAN

U.S. Dept. of Agriculture

Reference Books:
Cassells' German Dictionary

Der Sprachbrockhaus

Abridged Dictionary of German
Schmitt-Fricke-Seuert

German Synonyms
Farrell

German
Bittell

Elementary German
Die Kalendargeschichten (rororo)
Brecht, B.

The Heath-Chicago Series of Rapid Readers Nos. 1, 2, 3, 12, 13
Hagold
German I.
Iphigenie auf Tauris
Goethe
Kabale und Liebe
Schiller
Aus dem Leben eines Taugenichts
Eichendorff
Die schwarze Spinne
Goethe
Poems
Mörike
Selections from Adalbert Stifter (ed. Spalding)
Stifter
Romeo and Julia auf dem Dorfe (Die Leute von Seldwyla)
Keller
Unordnung und frühes Lied
Mann, T.
Das Urteil
Kafka
Penguin Book of German Verse
Forster (Ed.)
Deutsche Gegenwart
Kirchhoff, G.

Additional for Distinction

German II.
Emilia Galotti
Lessing
Faust I
Goethe
Die Leiden des jungen Werthers
Goethe
Poems
Goethe
Die Räuber
Schiller
Wallenstein
Schiller
Gedichte
Schiller
Gedichte/Hyperion
Hölderlin
Heinrich von Ofterdingen/Hymen an die Nacht
Novalis
Novellen
Kleist
Peter Schlemihls wunderbare Geschichte
Chamisso
Deutsche Gedichte der Romantik
Brink (Ed.)
Zeichen der Zeit, Vols. 1 and 2
Killy (Ed.)
Introduction to the Historical Study of New High German
Kirk

Additional for Distinction

Middle High German Primer
Wright
Nibelungenlied

Selected Poems of Walther von der Vogelweide
Aus Minnesangs Frühling

Faust II
Goethe
Dr. Faustus
Mann, T.

German III.
Der Schwierige
Hofmannsthal
Familie Selizke
Holz, A. u. Schlaf, J.
Tonio Kröger
Mann, T.
Der Tod in Venedig
Mann, T.
Die Stürmflut
Barlach
Amerika
Kafka
Gesang des Abgeschiedenen (Traki)
Menschenleiden (corro)
Pithus
Drei Groschen Oper
Brecht
Die Schule der Diktatoren
Kästner
Haus ohne Hüter
Boil
Zeichen der Zeit, Vols 3 and 4
Killy

Additional for Distinction

As for German II Distinction.

German IV.
Old High German.
Althochdeutsches Elementarbuch
Naumann and Betz
If not available
An Old High German Reader
Barber
Or
An Elementary Old High German Grammar
Ellis
Drama of the 19th Century — Theory and Practice (Texts to be prescribed).

GREEK — DEPARTMENT OF CLASSICS

Elementary Greek.
Xenophon: Anabasis II
Edwards, G.M. (Ed.)
Euripides: Iphigenia in Aulis and in Tauris
Kennedy, E. C. (Ed.)

Greek I.
Euripides, Ion
Owen, G. (Ed.)
Plato, Phaedo
Burnet, J. (Ed.)
Xenophon, Cyropaedia II
Shuckburgh, E. S. (Ed.)

Greek II.
Iliad I-XII
Leaf, W. (Ed.)
Herodotus II
Wardell (Ed.)
Sophocles, Oedipus Tyrannus
Jebb, R. C. (Ed.)

Greek III.
Sophocles, Oedipus Tyrannus
Jebb, R. C. (Ed.)
Pindar, Oxford Classical Text with Farnell's Commentary

Demosthenes, Philippics I and II and Chersonesus
Sandsys (Ed.)

Greek IV.
Thucydides IV
Graves, C. E. (Ed.)

DEPARTMENT OF HISTORY

History I.
Tudor England
Bindoff, S. T.
England under the Tudors
Ellon, G. R.
Constitutional History of Modern Britain
Kelir, D. L.
Tudor Constitutional Documents
Tanner, J. R.
England in the 17th Century
Ashley, M.
English Constitutional History of the 17th Century
Tanner, J. R.
The Renaissance
Ferguson, W. K.
The Reformation of the 16th Century
Bainton, R. H.
The Prince
Machiavelli
Richelieu and the French Monarchy
Wedgewood, C. V.
The Thirty Years War
Wedgewood, C. V.
Louis XIV and the Ascendancy of France
Ashley, M.

History II.
Constitutional History of Modern Britain
Kelir, D. L.
England in the 18th Century
Plumb, J. H.
England in the 19th Century
Thomson, D.
Europe in the 19th and 20th Centuries
Grant & Templey
Or
Europe since Napoleon
Thomson, D.
The French Revolution .................. Thompson, J. M.
Modern Germany ........................ Pinson, K.
Liberalism and the Challenge of Fascism .... Schapiro, J. S.
Heritage of Western Civilisation ....... Beauty and Johnson

Additional for Distinction
Select Historical Documents of the Middle Ages
Henderson, J. F.

History III.

Short History of Modern China ........ Latourette, K. S.
Japan's Modern Century .................... Borton
Japan Since Perry ........................ Yanaga
Japan, Past and Present ..................... Reischauer
History of South East Asia ................ Hall, D. G.
Buddhism ................................. Humphreys
A Short History of Confucian Philosophy .. Liu Wu-Chi
The Story of Australia ........................ Shaw, A. G. L.

Australia: A Social and Political History
Greenwood, G. (Ed.)

Select Documents in Australian History, Vols. I and II
Clarke, C. M. H. (Ed.)

The United States .......................... Nicholas

Additional for Distinction
Studies in mid-Victorian Imperialism ...... Bodelfen, C. A.
Problems of Greater Britain ............. Dilkes, Sir W.
Imperialism .............................. Hobson, J.
Imperialism and World Politics ............ Moon, P. T.
The Imperialist Idea and Its Enemies ...... Thornton, A. P.
History of the United States' Foreign Policy .. Pratt, J. W.
The Ideology of French Imperialism 1871-81 .. Murphy, A.
L'Expansion Francaise dans le Pacifique de 1800 a 1842 .. Falir, J. P.

Britain in the Pacific Islands ............... Morrell, W. P.
British Policy in the South Pacific ...... Ward, J. M.
The Pacific, its past and the policy of the Great Powers from the 18th Century .......... Schofield, G.
A Century in the Pacific ................... Colwell, J.
European vision and the South Pacific 1788-1850 ... Smith, B. W.
International Rivalry in the Pacific Islands 1800-1875 .. Brookes, J. I.
The Western Pacific 1788-1885 (Cambridge History British Empire, Vol. 7, Part I, Chapter 12) ... Benians, E. A.

History IV.

Republic .................................. Plato
Politics ................................... Aristotle
The City of God (selected passages) ...... St. Augustine
Summa Theologica ........................... St. Thomas Aquinas
De Libero Arbitrio .................................. Dante
The Prince, The Discourses ................. Machiavelli
Leviathan .................................. Hobbes
Second Treatise of Civil Government ....... Locke
The Social Contract ......................... Rousseau

LATIN — DEPARTMENT OF CLASSICS
All students should possess Bradley's Arnold's Latin Prose Composition, revised by Mountford, a standard Latin Grammar, such as Gildersleeve and Lodge, Latin Grammar, and also Laidlaw, Latin Literature.

Those who intend to proceed beyond Latin I will need in addition a Latin Dictionary such as Lewis, a Latin Dictionary for Schools or Lewis and Short, Latin Dictionary, and also M. Cary, A History of Rome.

Latin I.

Virgil, Aeneid II .......................... Page, T. E. (Ed.)
Cicero, Catilinarian Orations ............. Wilkins, A. S. (Ed.)
Ovid, Fasti III ............................ Bailey, C. (Ed.)

Latin II.

Catullus ................................ Fordyce, C. J. (Ed.)
Livy, XXVI .............................. Henry, R. G. (Ed.)
Plauto, Mostellaria ......................... Sonnenschein, E. A. (Ed.)

Latin III.

As for Latin II, plus
Lucretius .................................. Duff, J. D. (Ed.)

DEPARTMENT OF MATHEMATICS
(See Division of Science)

DEPARTMENT OF PHILOSOPHY

Philosophy I.

The Elements of Logic .......................... Latta and Macbeath
Trial and Death of Socrates .................. Descartes
Discourse on Method or Philosophical Writings, trans. Haldane and Ross, Vol. 1 .......................... Descartes
Introduction to Philosophical Analysis ............ Hoppers
Age of Reason .............................. "Mentor"

Philosophy II.

Early Greek Philosophy ........................ Burnet
Philoosophical Writings, trans. Haldane and Ross, Vol. 1 .......................... Descartes
Modanology (Ed. Latta) ......................... Leibniz
Ethics .................................... Spinoza
Essay on the Human Understanding ............... Locke
Principles of Human Knowledge (Ed. Jessop) ...... Berkeley
Or
New Theory of Vision ........................ Berkeley
Introduction to Philosophical Analysis ............ Hoppers
Age of Enlightenment ........................ "Mentor"

Philosophy III.

Early Greek Philosophy ........................ Burnet
Or
History of Ethics .......................... Sidgwick
Introduction to Philosophical Analysis ............ Hume
Treatise (Ed. Selby-Bigge) ..................... Kant

DEPARTMENT OF PSYCHOLOGY

Psychology I.

Introduction to Psychology .................. Hilgard, E. R., or
Munn, N. L., or
Morgan, C. T.
Experimental Psychology ..................... McGuigan, F. J.
The French Revolution .............. Thompson, J. M.
Modern Germany .................. Pinson, K.
Liberalism and the Challenge of Fascism ... Schapiro, J. S.
Heritage of Western Civilisation ....... Beatty and Johnson

**Additional for Distinction**

Select Historical Documents of the Middle Ages
Henderson, J. F.

**History III.**

Short History of Modern China .......... Latourette, K. S.
Japan's Modern Century ............... Borton
Japan Since Perry ................... Yanaga
Japan, Past and Present ............. Reischauer
History of South East Asia .......... Hall, D. G.
Buddhism ................................ Humphreys
A Short History of Confucian Philosophy .... Liu Wu-Chi
The Story of Australia ................ Shaw, A. G. L.
Australia: A Social and Political History Greenwood, G. (Ed.)
Select Documents in Australian History, Vols. I and II Clarke, C. M. H. (Ed.)
The United States ........................ Nicholas

**Additional for Distinction**

Studies in mid-Victorian Imperialism ...... Bodelfen, C. A.
Problems of Greater Britain .......... Dilkes, Sir W.
Imperialism .......................... Hobson, J.
Imperialism and World Politics ......... Moon, P. T.
The Imperialist Idea and Its Enemies ... Thornton, A. P.
History of the United States' Foreign Policy Pratt, J. W.
The Ideology of French Imperialism 1871-81 Murphy, A.
L'Expansion Francaise dans le Pacifique de 1800 à 1842 Faivre, J. P.

Britain in the Pacific Islands ........... Morrell, W. P.
British Policy in the South Pacific .......... Ward, J. M.
The Pacific, its past and the policy of the Great Powers from the 18th Century Schofield, G.
A Century in the Pacific ............... Colwell, J.
European vision and the South Pacific 1768-1850 Smith, B. W.
International Rivalry in the Pacific Islands 1800-1875 Brookes, J. I.
The Western Pacific 1788-1885 (Cambridge History British Empire, Vol. 7, Part I, Chapter 12) Benians, E. A.

**History IV.**

Republic ............................ Plato
Politics ................................ Aristotle
The City of God (selected passages) ... St. Augustine
Summa Theologica ..................... St. Thomas Aquinas
De Monarchia ........................ Dante
The Prince, The Discourses ............. Machiavelli
Leviathan ............................ Hobbes
Second Treatise of Civil Government .... Locke
The Social Contract .................. Rousseau

**LATIN — DEPARTMENT OF CLASSICS**

All students should possess Bradley's Arnold's Latin Prose Composition, revised by Mountford, a standard Latin Grammar, such as Gildersleeve and Lodge, Latin Grammar, and also Laidlaw, Latin Literature.

Those who intend to proceed beyond Latin I will need in addition a Latin Dictionary such as Lewis, a Latin Dictionary for Schools or Lewis and Short, Latin Dictionary, and also M. Cary, A History of Rome.

**Latin I.**

Virgil, Aeneid II .................... Page, T. E. (Ed.)
Cicero, Catilinarian Orations ......... Wilkins, A. S. (Ed.)
Ovid, Fasti III ........................ Bailey, C. (Ed.)

**Latin II.**

Catullus ................................ Fordyce, C. J. (Ed.)
Livy XXVI ................................ Henry, R. G. (Ed.)
Plautus, Mostellaria ................... Sonnenschein, E. A. (Ed.)

**Latin III.**

As for Latin II, plus
Lucretius ............................ Duff, J. D. (Ed.)

**DEPARTMENT OF MATHEMATICS**

(See Division of Science)

**DEPARTMENT OF PHILOSOPHY**

**Philosophy I.**

The Elements of Logic ............... Latta and Macbeath
Trial and Death of Socrates .......... Descartes
Discourse on Method or Philosophical Writings, trans. Haldane Smith, and Ross, Vol. 1
Introduction to Philosophical Analysis ...... Hospers
Age of Reason .......................... "Mentor"

**Philosophy II.**

Early Greek Philosophy ................ Burnet
Philosophical Writings, trans. Haldane and Ross, Vol. 1 Descartes
Monadology (Ed. Latta) ............... Leibniz
Ethics ................................ Spinoza
Essay on the Human Understanding ... Locke
Principles of Human Knowledge (Ed. Jessop) Berkeley
Or New Theory of Vision ............... Berkeley
Introduction to Philosophical Analysis ...... Hospers
Age of Enlightenment .................. "Mentor"

**Philosophy III.**

Early Greek Philosophy ................ Burnet
Or History of Ethics ................... Sidgwick
Introduction to Philosophical Analysis ...... Hospers
Treatise (Ed. Selby-Bigge) ............... Hume
Critique of Pure Reason trans. Kemp Smith Kant

**DEPARTMENT OF PSYCHOLOGY**

**Psychology I.**

Introduction to Psychology ............ Hillard, E. R., or Munn, N. L., or Morgan, C. T.
Experimental Psychology ................ McGuigan, F. J.
Psychological Testing (2nd Ed.) ... Anastač, A.
Essentials of Psychological Testing (2nd Ed.) . Cronbach, L. J.
Theory and Practice of Psychological Testing (3rd Ed.) Freeman, F. S.

Psychology II.
Social Psychology ... Sprott, W. J. H.
The Scientific Study of Behaviour ... Argyle, M.
Personality ... McClelland, D.
Theories of Personality ... Hall, C. S. and Lindsey, G.
Statistical Methods for the Behavioural Sciences ... Edwards, A. L.

Child Development and Personality ... Mussen, P. H. and Conger, J. J.
Psychological Testing ... Anastač, A.

Psychology III.
Clinical Psychology ... Waller, R. W.
Psychology of Perception ... Dember, W. N.
Theories of Perception and the Concept of Structure ... Allport, F. H.
Theories of Learning ... Hilgard, E. R.
The Psychology of Learning ... Bugelski, B. R.

Additional for Distinction
Conceptual Framework of Psychology ... Brunswik, E.
Systems and Theories of Psychology ... Chaplin, J. P. and Krawiec, T. S.

Psychological Theory ... Marx, M. H.

Psychology IV (Honours).
Theories of Perception and the Concept of Structure ... Allport, F. H.

Psychology, A Study of a Science ... Koch, S. (Ed.)
Handbook of Social Psychology, Vol. I ... Lindsey, G. (Ed.)
Learning Theory and Behaviour ... Mowrer, O. H.

Additional Distinction Texts to be Prescribed.

THE DIPLOMA IN EDUCATION

Foundations of Education.
Student Teaching in Secondary Schools ... Schorling, R. and Batchelder, H. T.
Uses and Abuses of Psychology ... Eysenck, H. J.
An Hundred Years of Education ... Peterson, A. D. C.
A Short History of Educational Ideas ... Curtis and Boulwood
Comparative Education ... Hans
An Introduction to Research Procedures in Education ... Rummel, J. F.
Statistical Analysis ... Edwards, A. L.
Measurement of Abilities ... Vernon, P. E.
Educational Psychology ... Cronbach, L. J.

Psychology of Thinking ... Thomson, R.
Readings in Social Psychology ... Swanson, Newcombe and Hartley.

Personality and the Behaviour Disorders ... Hunt, J. McV.
Nature and Conditions of Learning ... Kingsley, H. L. and Garry, R.

Health Education and Physical Education.
Successful Teaching in Physical Education ... Davis, E. C. and Lawther, J. D.

Hygiene and Health Education for Training Colleges ... Davies, M. B.

Speech Training.
An English Pronouncing Dictionary ... Jones, D.

Proficiency in English ... Mitchell, A. G.

Methods—Special Secondary Methods.
English Method—To be prescribed.
History Method—To be prescribed.
Geography Method.
Geography in the Secondary School ... Briault and Shave
A Handbook of Suggestions on the Teaching of Geography ... U.N.E.S.C.O.

Modern Languages Method.
Board of Secondary School Studies Syllabi.
Latin Method—To be prescribed.

Commercial Method.
Teaching the Social Studies in Secondary Schools ... Binning and Binning
Principles of Teaching Applied to Book-keeping and Accounts ... Williams, J. H.

Outline of Accounting ... Goldberg, L.
Australian Merchants Law ... Yorston and Fortescue
Commercial Dictionary ... Yorston

Elementary Accounting ... Yorston

Mathematics Method—To be prescribed.

Junior Science Method
A Source Book for Science Teachers ... U.N.E.S.C.O.
The Teaching at Science Secondary Schools—Science Masters' Association

School Laboratory Management ... Sutcliffe

Modern Science Teaching ... Heiss

Senior Science Method (Physical Sciences)—To be prescribed

Or Primary Method—To be prescribed

Or Infant Method—To be prescribed

Biological Science.—To be prescribed.
Accounting I.
Accounting Fundamentals .... Yorston, Smyth & Brown
Accountancy Exercises — First Year
Accounting I Tutorial Exercises (The University of New South Wales Students' Union)

Accounting II.
Accounting Fundamentals .... Yorston, Smyth & Brown
Cost Accounting: A Managerial Approach .... Hornsby, C.
Accountancy Exercises — Advanced
Accounting II Tutorial Exercises (The University of New South Wales Students' Union)
Accounting IV Tutorial Exercises (The University of New South Wales Students' Union)
Accounting Exercises (Advanced) (Department of Accounting, University of Melbourne)

Accounting III.
Accounting Fundamentals .... Yorston, Smyth & Brown
Advanced Accounting Vols. 1 and 2 .... Yorston, Smyth & Brown
The Companies Act, 1961 (The Government Printer, Sydney)
Accounting III Tutorial Exercises (The University of New South Wales Students' Union)
Accounting Exercises (Advanced) (Department of Accounting, University of Melbourne)

Auditing and Internal Control.
Auditing .... Irish, R. A.
Montgomery's Auditing .... Lenhart, N. J. and Defilise, P. L.
Or
Auditing Principles—Objectives, Procedures and Working Papers .... Stettler, H. F.
Internal Auditing for Management, Rev. Ed. .... Lamperti, F. A. and Thurston, J. B.

Taxation Law and Practice.
Post-graduate Lectures in Taxation
The University of New South Wales
Guide to Commonwealth Income Tax .... Gunn & Maas
Sales Tax Highlights .... Irving, H. R.
Statutes:
Income Tax & Social Services Contribution Assessment Act 1936-1962 (Commonwealth)
Income Tax (International Agreements) Act 1953-1960 (Commonwealth)

Business Finance.
Fundamentals of Corporation Finance, Rev. Ed. .... Bradley, G. F.

Basic Business Finance Text and Cases, Rev. Ed. .... Hunt, Williams and Donaldson
Investment Analysis and Management, Rev. Ed. .... Plum, Humphrey & Bowyer

Accounting Seminar I.
Accounting Concepts of Profit .... Gilman, S.

Accounting Seminar II.
Readings in Cost Accounting, Budgeting and Control .... Thomas, W. E. (Ed.)

Accounting Seminar III.
Studies in Accounting Theory
Baxter, W. T. and Davidson, S.
Studies in Costing .... Solomons, D.
The Fund Theory of Accounting and Its Implications for Financial Reports .... Vatter, W. J.
Quantitative Analysis for Business Decisions .... Bierman, Fouraker and Jardick
The Capital Budgeting Decision .... Bierman, H., Smith, S.

Cost Accounting.
Cost Accounting and Analysis .... Devine, C. T.
Accounting Systems, Procedures and Methods .... Gillespie, C.
Readings in Cost Accounting, Budgeting and Control .... Thomas, W. E.
Budgeting, Profit-planning and Control .... Welsch, G. A.

Commercial Law I.
The Employer, The Employee and The Law .... Sykes, Edward I.
Australian Mercantile Law .... Yorston & Fortescue
Anson's Law of Contract .... Guest Statutes:
Sale of Goods Act (N.S.W.) 1923 (as amended)
Bills of Exchange Act (Commonwealth) (as amended)
Partnership Act (N.S.W.) 1892

Commercial Law II.
Australian Bankruptcy Law .... Lewis
Company Law in Australia .... Yorston & Brown
Statutes:
The Bankruptcy Act (Commonwealth) 1924 (as amended)
The Companies Act (N.S.W.) 1961

Production.
Production Planning and Inventory Control .... Magee, J. F.
Analysis for Production Management .... Bowman, E. H. and Fetler, R. B.

Accounting Control.
Controllership—The Work of the Accounting Executive .... Heckert, J. B. and Willson, J. D.
Management Accounting for Profit Control .... Keller, I. W.
DEPARTMENT OF CIVIL ENGINEERING

8.122 Materials and Structures.
Strength of Materials Den Hartog
Elements of Strength of Materials Timoshenko and MacCulloch
Strength of Materials Shanley

8.121) Structures.
8.122) Structures

8.221 Engineering Materials.
Fundamentals of Soil Mechanics Taylor
Composition and Properties of Concrete Troxell, G. E. and Davis, H. E.

Soil Mechanics in Engineering Practice Terzaghi
Testing and Inspection of Engineering Materials Davis, Troxell and Wiskocil

8.421 Surveying.
Plane and Geodetic Surveying (Vol. I) Clarke

8.422 Surveying.

8.423 Surveying.
Plane and Geodetic Surveying Clarke
Photogrammetry Bertil Hallert

8.521 Hydraulics.

8.522 Hydraulics.
Elementary Mechanics of Fluids Rouse, H.
Elementary Fluid Mechanics Vennard

8.611 Civil Engineering.
Water Supply and Waste Water Disposal Fair and Geyer

8.612 Civil Engineering.
Civil Engineering Construction Antill and Ryan
Engineering Administration Ryan, P. W. S.

8.613 Civil Engineering.
Civil Engineering Construction Antill and Ryan
Engineering Administration Ryan, P. W. S.

DEPARTMENT OF ELECTRICAL ENGINEERING

Principles of Electrical Engineering Timble and Bush
C.R.C. Standard Mathematical Tables
Or Mathematical Tables and Formulas ed. Burington

Electrical Transmission of Power and Signals Kimbark
Electrical Engineering Circuits Skilling
C.R.C. Standard Mathematical Tables
Or Mathematical Tables and Formulas ed. Burington

6.251 Electric Power Engineering.
Electric Machinery Fitzgerald and Kingsley
Theory of Electrical Machines Wood

6.351 Electronics.
The Junction Transistor and its Application Wolfendale
Applied Electronics Gray
Or Engineering Electronics Ryder
Or Electronic Fundamentals and Applications Ryder

6.651 Electrical Engineering.
Network Synthesis Balabanian
Industrial Electronics Handbook Fretzman
Introduction to the Design of Servomechanisms Bower and Schulteis
Solid State Physical Electronics Van der Ziel
Electrical Measurements Harris

DEPARTMENT OF MECHANICAL ENGINEERING

Engineering I.
Australian Standard Drawing Practice (C21—1951) Inst. of Engineers, Australia
Practical Geometry and Engineering Graphics Abbott, W.
Construction of Graphs and Charts Hall, A. S.
Engineering Mechanics I—Lecture Notes Hall, A. S.
Modern Workshop Technology, Pt. 1 Wright Baker, H.
Mechanics Vol. II Meriam, J. L.

Descriptive Geometry.
Descriptive Geometry Robertson, R. G.

5.101 Mechanical Engineering Design.
Practical Geometry and Engineering Graphics Abbott, W.

5.501 Mechanical Engineering Design.
Mechanical Design Phelan, R. M.
Regulations under Scaffolding and Lifts Act, 1912-1948
Machine Cut Helical and Spur Gears BSS No. 436-1940
Limits and Fits for Engineering BS 1916, Part I, 1953
Guide to the Selection of Fits. BS 1916, Part II, 1953

5.12D Mechanical Engineering Design.
Design of Machine Elements Faires, V. M.
Or Fundamentals of Mechanical Design Phelan, R. M.

5.13 )
5.13D) Mechanical Engineering Design.
As for 5.101

5.14 )
5.14D) Mechanical Engineering Design (Diesel Engine Section).
Diesel Engine Design Walshaw, T. D.
5.23D) Mechanical Technology.  
Modern Workshop Technology Part II ... Wright Baker, H.  

Mechanics for Engineers ... Beer and Johnston  

5.302 Theory of Machines.  
Dynamics of Machinery ... Holowenko  

5.303 Mechanical Vibrations.  
Mechanical Vibrations ... Church  

5.304 Theory of Machines.  
Dynamics of Machinery ... Holowenko  

5.305 Theory of Machines.  
Dynamics of Machinery ... Holowenko  

5.34 Theory of Machines.  
Dynamics of Machinery ... Holowenko  

5.34D) Dynamics of Machinery ... Holowenko  

5.501 Fluid Mechanics.  
Fluid Mechanics for Engineers ... Barna, P. S.  
Or  
Fluid Mechanics ... Streeter, V. L.  
Or  
Elementary Fluid Mechanics ... Vennard, J. K.  

5.502 Fluid Mechanics.  
Fluid Mechanics for Engineers ... Barna, P. S.  

5.701 Thermodynamics.  
Engineering Thermodynamics, Work and Heat Transfer ... Rogers and Mayhew  

5.702 Thermodynamics.  
Engineering Thermodynamics, Work and Heat Transfer ... Rogers and Mayhew  

5.73D Thermodynamics.  
Theory and Practice of Heat Engines ... Wrangham  

5.74) Thermodynamics.  
Theory and Practice of Heat Engines ... Wrangham  

5.703) Mechanical Engineering.  
Thermodynamics ... Lee and Sears  
Refrigeration and Air Conditioning ... Stoecker  

Professional Electives.  
Refrigeration and Air Conditioning ... Stoecker, W.  
Energy Applied to Propulsion.  
Petroleum and Performance in Internal-Combustion Engineering ... Goodger, E. M.  

DIVISION OF SCIENCE  
DEPARTMENT OF CHEMISTRY  

Chemistry I.  

Principles of Chemistry, 6th ed. ... Hildebrand & Powell bound with Reference Book of Inorganic Chemistry Latimer & Hildebrand  
A Simple Guide to Modern Valency Theory ... Brown  
Introduction to Organic Chemistry ... Read  
Laboratory Manual of Quantitative Inorganic Analysis Belcher and Nutten  
Introduction to Semimicro Qualitative Analysis ... Sorum  
Optional.  
Theory and Problems of College Chemistry ... Schaum  
Or  
How to Solve General Chemistry Problems ... Sorum  

Chemistry II and IIT.  

Inorganic.  
Valency and Molecular Structure ... Cartmell and Fowles  
Inorganic Chemistry ... Heslop and Robinson  
Synthetic Inorganic Chemistry ... Jolly  
Experimental Inorganic Chemistry ... Palmer  
Physical.  
Chemical Thermodynamics ... Klotz  
Physical Chemistry ... Moore  
Or  
Physical Chemistry ... Barrow  
Experimental Physical Chemistry, 5th ed. ... Daniels et al.  
Analytical Chemistry and Physical Methods.  
Laboratory Manual of Quantitative Inorganic Analysis Belcher and Nutten  
Principles and Methods of Chemical Analysis ... Walton  

Organic (Not for Chemistry IIT)  
Or  
Organic Chemistry ... Morrison and Boyd  
Practical Organic Chemistry ... Mann and Saunders  

Students terminating organic chemistry at this stage may prefer:  
Essential Principles of Organic Chemistry ... Cason  
in lieu of Finar or Morrison and Boyd.  

Chemistry III and IIT.  

Inorganic.  
Modern Aspects of Inorganic Chemistry Emeleus and Anderson  
Inorganic Chemistry ... Heslop and Robinson  
Experimental Inorganic Chemistry ... Palmer  
Or  
Synthetic Inorganic Chemistry ... Jolly  
Optional.  
Valence ... Coulson  
Introduction to Coordination Chemistry ... Graddon  

210
### DEPARTMENT OF GEOLOGY

#### Geology I and II

- Principles of Stratigraphy, 2nd ed. 
  Dunbar and Rodgers
- Physical Geology, 5th ed. 
  Emmons, Allison, Stauffer and Thiel
- Essentials of Earth History 
  Stokes
- Palaeontology 
  Woods
- Mineralogy 
  Berry and Mason
- Optical Crystallography 
  Wahlstrom
- Petrography (Freeman) 
  Williams, Turner and Gilbert
- Optical Mineralogy, 3rd ed. 
  Kerr
- Outlines of Structural Geology 
  Hills
- Principles of Invertebrate Palaeontology 
  Shrock & Twenhofel

#### Geology III

- Optical Mineralogy, 3rd ed. 
  Kerr
- Igneous and Metamorphic Petrology 
  Turner and Verhoogen
- Principles of Stratigraphy 
  Dunbar and Rodgers
- Textures of Ore Minerals (2nd ed. 1984) 
  Edwards
- The Formation of Mineral Deposits 
  Bateman
- Microscopic Determination of Ore Minerals
  (U.S. Geol. Surv. Bull. 914, 1940)
- Short Principles of Invertebrate Palaeontology 
  Shrock & Twenhofel
- Introduction to Geophysics 
  Howell

#### Geology IIIA

- Structural Methods for the Exploration Geologist 
  Badgley, P.
- Coal Science 
  Krevelen and Schuyer
- Manual of Field Geology 
  Compton
- Geology and Engineering (2nd ed. 1962) 
  Legget
- Applied Sedimentation 
  Trask
- Ground Water-Hydrology 
  Todd
- Principles of Engineering Geology and Geotechnics
  Krynine and Judd
- Soil Mechanics in Engineering Practice 
  Terzaghi and Peck

### DEPARTMENT OF MATHEMATICS

#### Mathematics I

- Complementary Mathematics 
  Keane, A & Senior, S.A. (Eds.)
- Calculus (2nd ed.) 
  Thomas, G. B.
- Higher Algebra for the Undergraduate (2nd ed.) 
  Weiss, M. J. and Dubisch, R.
- Analytic Geometry—A Vector Approach 
  Wexler, C.

#### Pure Mathematics II

- Complex Variables and Applications 
  Churchill, R. V.
- Advanced Calculus 
  Kaplan, W.
- Mathematical Methods 
  Keane, A & Senior, S.A. (Eds.)
- Higher Algebra for the Undergraduate (2nd ed.) 
  Weiss, M. J. and Dubisch, R.
- Differential Equations 
  Piaggio, H. T. H.
- Additional for Distinction.
  Consult lecturers concerned.

#### Applied Mathematics II

- Introduction to the Theory of Mechanics 
  Bullen, K. E.
- Electricity 
  Coulson, C. A.
- Introduction to Probability and Statistics 
  Lindgren, B. W. and McElrath, G. W.
- Classical Mechanics 
  Rutherford, D. E.
- Advanced Vector Analysis 
  Weatherburn, C. E.
- Additional for Distinction.
  Consult lecturers concerned.

#### Mathematics II and III

- Mathematical Methods 
  Keane, A & Senior, S.A. (Eds.)
- Introduction to Probability and Statistics 
  Lindgren, B. W. and McElrath, G.W.
- Vector Methods 
  Rutherford, D. E.

#### Mathematics II, Part I

- Mathematical Methods 
  Keane, A & Senior, S. A. (Eds.)
- Vector Methods 
  Rutherford, D. E.

#### Mathematics II, Part II

- Mathematical Methods 
  Keane, A & Senior, S. A. (Eds.)
- Introduction to Probability and Statistics 
  Lindgren, B. W. and McElrath, G.W.

#### Mathematics III

- Mathematical Methods 
  Keane, A & Senior, S. A. (Eds.)
- Introduction to Probability and Statistics 
  Lindgren, B. W. and McElrath, G.W.

#### Pure Mathematics III

- Mathematical Analysis 
  Apostol, T. M.
- Differential Equations (2nd ed.) 
  Agnew, R. F.
- Theory of Ordinary Differential Equations 
  Burkhill, J. C.
- Complex Variables and Applications 
  Churchill, R. V.
- Introduction to the Theory of Finite Groups 
  Ledermann, W.
- Linear Algebra for the Undergraduate 
  Murdoch, D. C.
- Introduction to Projective Geometry 
  O'Hara, C. W. and Ward, D. R.
- Special Functions of Mathematical Physics and Chemistry 
  Sneddon, I. N.
- Additional for distinction.
  Consult lecturers concerned.

DEPARTMENT OF GEOLOGY
- Physical
  Chemical Thermodynamics 
  Klotz
- Physical Chemistry 
  Moore
- Experimental Physical Chemistry 
  Daniels et al.

DEPARTMENT OF CHEMISTRY
- Analytical Chemistry and Physical Methods
  Instrumental Methods of Chemical Analysis 
  Ewing

DEPARTMENT OF PHYSICS
- Soils
  Principles of Engineering Geology and Geotechnics
  Manual of Field Geology
  Applied Sedimentation
  Coal Science
  Ground Water Hydrology
  Geology and Engineering (2nd ed. 1962)
  Structural Methods for the Exploration Geologist
  The Formation of Mineral Deposits
  Igneous and Metamorphic Petrology
  Principles of Invertebrate Palaeontology
  Optical Petrography
  Principles of Invertebrate Palaeontology
  Optical Principles of Invertebrate Palaeontology
  Principles of Stratigraphy
  Textures of Ore Minerals
  The Formation of Mineral Deposits
  Microscopic Determination of Ore Minerals
  Principles of Invertebrate Palaeontology
  Introduction to Geophysics

DEPARTMENT OF MATHEMATICS
- Complementary Mathematics
  Keane, A & Senior, S.A. (Eds.)
- Calculus (2nd ed.)
  Thomas, G. B.
- Higher Algebra for the Undergraduate (2nd ed.)
  Weiss, M. J. and Dubisch, R.
- Analytic Geometry—A Vector Approach
  Wexler, C.
- Complex Variables and Applications
  Churchill, R. V.
- Advanced Calculus
  Kaplan, W.
- Mathematical Methods
  Keane, A & Senior, S.A. (Eds.)
- Higher Algebra for the Undergraduate (2nd ed.)
  Weiss, M. J. and Dubisch, R.
- Differential Equations
  Piaggio, H. T. H.
- Additional for Distinction.
  Consult lecturers concerned.
- Introduction to the Theory of Mechanics
  Bullen, K. E.
- Electricity
  Coulson, C. A.
- Introduction to Probability and Statistics
  Lindgren, B. W. and McElrath, G. W.
- Classical Mechanics
  Rutherford, D. E.
- Advanced Vector Analysis
  Weatherburn, C. E.
- Additional for Distinction.
  Consult lecturers concerned.
- Mathematical Methods
  Keane, A & Senior, S.A. (Eds.)
- Introduction to Probability and Statistics
  Lindgren, B. W. and McElrath, G.W.
- Vector Methods
  Rutherford, D. E.
- Mathematical Methods
  Keane, A & Senior, S. A. (Eds.)
- Vector Methods
  Rutherford, D. E.
- Mathematical Methods
  Keane, A & Senior, S. A. (Eds.)
- Introduction to Probability and Statistics
  Lindgren, B. W. and McElrath, G.W.
- Mathematical Methods
  Keane, A & Senior, S. A. (Eds.)
- Introduction to Probability and Statistics
  Lindgren, B. W. and McElrath, G.W.
- Mathematical Analysis
  Apostol, T. M.
- Differential Equations (2nd ed.)
  Agnew, R. F.
- Theory of Ordinary Differential Equations
  Burkhill, J. C.
- Complex Variables and Applications
  Churchill, R. V.
- Introduction to the Theory of Finite Groups
  Ledermann, W.
- Linear Algebra for the Undergraduate
  Murdoch, D. C.
- Introduction to Projective Geometry
  O'Hara, C. W. and Ward, D. R.
- Special Functions of Mathematical Physics and Chemistry
  Sneddon, I. N.
- Additional for distinction.
  Consult lecturers concerned.
Applied Mathematics III.

Statistics: An Introduction — Fraser, D. A. S.
Hydro- and Aero-dynamics — Green, S. L.
Introduction to Numerical Analysis — Hildebrand, F. B.
Cartesian Tensors — Jeffrey, H.
Classical Mechanics — Rutherford, D. E.
Principles of Mechanics (3rd ed.) — Synge, J. L. & Griffith, B. A.
Tensor Calculus — Spain, B.

Additional for distinction.
Consult lecturers concerned.

Theory of Statistics I.

Statistical Theory in Research — Anderson, R. L. & Bancroft, T. A.
Statistics: An Introduction — Fraser, D. A. S.

Mathematics (Mechanical Engineering III and IV and
Civil Engineering IV)

Consult lecturers concerned.

DEPARTMENT OF PHYSICS

Physics 101.

Physics — Physical Science Study Committee

Physics I.

Physics for Students of Science and Engineering

Resnick and Halliday

Physics II and III and III.

Textbook of Physics — Kronig
Additional for Science Students—as recommended by lecturers.

Physics III.

Introduction to Modern Physics — Richtmeyer, Kennard and Lauritson
Electricity and Magnetism — Bleaney and Bleaney
Solid State Physics — Decker
Vacuum Tube and Semi-conductor Electronics — Millman
Classical Thermodynamics — Pippard
Optics — Jenkins and White
Atomic Spectra and Atomic Structure — Herzberg
Gaseous Conductors — Cobine
Statistical Thermodynamics — Hill
POST GRADUATE STUDY

The University provides facilities at Newcastle University College for students to proceed to the Degrees of:

Doctor of Philosophy
Master of Architecture
Master of Arts
Master of Commerce
Master of Engineering
Master of Science

1. The Degree of Doctor of Science is also awarded by the University for a contribution of distinguished merit in the fields of Science, Engineering or Applied Science.

2. The Degrees of Doctor of Philosophy, Master of Architecture, Master of Arts, Master of Commerce, Master of Engineering and Master of Science are all awarded for research and require the preparation and submission of a thesis embodying the results of an original investigation or design. Candidates for the Doctorate of Philosophy are normally involved in three years' work. The work for the Master's degree may be completed in a minimum of one year, but normally requires two years of study. The conditions governing the award of the various higher degrees are set out in the following pages.

Enquiries by scholars contemplating enrolment in Post-Graduate Courses which they wish to undertake at Newcastle University College should be made in the first instance through the Registrar, Newcastle University College, Tighe's Hill, N.S.W., Australia.

HIGHER DEGREES

CONDITIONS FOR AWARD OF DEGREE OF DOCTOR OF SCIENCE

1. The degree of Doctor of Science may be granted by the Council on the recommendation of the Professorial Board for an original contribution (or contributions) of distinguished merit to some branch of Science, Engineering or Applied Science.

2. A candidate for the degree of Doctor of Science shall hold a degree of the University of New South Wales or shall have been admitted to the status of such degree. No candidate shall present himself for the degree of Doctor of Science until five years after the award of his original degree.

3. The degree shall be awarded on the published work* of the candidate although in special circumstances additional unpublished work may be considered provided that these circumstances are recognised as sufficient by the Professorial Board.

4. A candidate for the degree shall forward to the Registrar an application accompanied by a fee of £31/10/- . With such application the candidate shall forward—

(i) Four copies (wherever possible) of the work referred to in paragraph 3.

(ii) Any additional work, published or unpublished, which he may desire to submit in support of his application.

(iii) A statutory declaration indicating those sections of the work, if any, which have been submitted previously for a degree or diploma in any University.

5. Every candidate in submitting his published work and such unpublished work as he deems appropriate shall submit a short discourse describing the research activities embodied in his submission. The discourse shall make clear the extent of originality and the candidate's part in any collaborative work.

6. The work shall be submitted to a committee of three examiners appointed by the Professorial Board who may require the candidate to answer orally or in writing any questions concerning his work.

* In these regulations, the term “published work” shall mean printed in a periodical or as a pamphlet or as a book readily available to the public. The purpose of requiring publication is to ensure that the work submitted has been available for criticism by relevant experts, and examiners are given discretion to disregard any of the work submitted if, in their opinion, the work has not been so available for criticism.
CONDITIONS FOR THE AWARD OF DEGREE OF DOCTOR OF PHILOSOPHY

1. The degree of Doctor of Philosophy may be granted by the Council on the recommendation of the Professorial Board to a candidate who has made an important contribution to knowledge and who has satisfied the following By-laws and Regulations made in accordance with these By-laws.

Qualifications

2. A candidate for registration for the degree of Ph.D. shall—
   (i) hold an honours degree from the University of New South Wales; or
   (ii) hold an honours degree of equivalent standing from any other approved University; or
   (iii) if he holds a degree without honours from the University of New South Wales or an approved University, have achieved by subsequent work and study a standard recognised by the Board as equivalent to honours; or
   (iv) in exceptional cases, submit such other evidence of general and professional qualifications as may be approved by the Professorial Board.

Registration

3. When the Professorial Board is not satisfied with the qualifications submitted by a candidate, the Board may require him, before he is permitted to register, to undergo such examination or carry out such work as the Board may prescribe.

Course of Study

5. Subsequent to registration the candidate shall pursue a course of advanced study and research for at least nine academic terms, save that—
   (i) a candidate who is not fully engaged in research work for his degree will be required to satisfy the Professorial Board on the amount of time he can devote to research work for the degree: and he may not proceed to the degree before the expiration of ten academic terms from the date of registration as a candidate;
   (ii) any candidate who before registration was engaged upon research to the satisfaction of the Professorial Board, may be exempted from three academic terms.

6. A candidate shall present himself for examination not later than fifteen academic terms from the date of his registration, unless special permission for an extension of time be granted by the Professorial Board.

7. The course, other than field work, must be carried out in a School of the University, under the direction of a supervisor appointed by the Board, or under such conditions as the Board may determine, save that a candidate may be granted special permission by the Board to spend a period of not more than three academic terms in research at another institution approved by the Board.

8. Not later than three academic terms after registration the candidate shall submit the subject of his thesis for approval by the Professorial Board. After the subject has been approved it may not be changed except with the permission of the Board.

9. A candidate may be required to attend a formal course of study appropriate to his work.

Thesis

10. On completing his course of study every candidate must submit a thesis which complies with the following requirements:
   (i) The greater proportion of the work described must have been completed subsequent to registration for the Ph.D. degree.
   (ii) It must be a distinct contribution to the knowledge of the subject.
   (iii) It must be written in English and reach a satisfactory standard of literary presentation.

11. The thesis must consist of the candidate's own account of his research. In special cases work done conjointly with other persons may be accepted, provided the Professorial Board is satisfied on the candidate's part in the joint research.

12. Every candidate shall be required to submit with his thesis a short abstract of the thesis comprising not more than 300 words.

13. A candidate may not submit as the main content of his thesis any work or material which he has previously submitted for a University degree or other similar award.

14. It shall be understood that the University retains the four copies of the thesis and is free to allow the thesis to be consulted or borrowed, subject to the provisions of the Copyright Act (1912-1950) the University may issue the thesis in whole or in part in photostat or microfilm or other copying medium.

Entry for Examination

15. The candidate shall give in writing two months' notice of his intention to submit his thesis and such notice shall be accompanied by the appropriate fee.

16. Four copies of the thesis shall be submitted together with a certificate from the supervisor that the candidate has completed the course of study prescribed in his case.

17. The thesis shall be in double-spaced typescript. The original copy for deposit in the Library shall be prepared and bound in a form approved by the University. The other three copies shall be bound in such manner as allows their transmission to the examiners without possibility of disarrangement.

18. The candidate may also submit as separate supporting documents any work he has published, whether or not it bears on the subject of the thesis.
19. The Professorial Board shall appoint the examiners, one of whom shall normally be an external examiner.

20. After the examiners have read the thesis they may—
   (i) without further test recommend the candidate for rejection;
   (ii) request additional work on the thesis before proceeding further with the examination.

21. If the thesis reaches the required standard, the examiners shall arrange for the candidate to be examined orally, and, at their discretion, by written papers and/or practical examinations on the subject of the thesis and/or subjects relevant thereto.

22. If the thesis is adequate but the candidate fails to satisfy the examiners at the oral or other examinations, the examiners may recommend the University to permit the candidate to re-present the same thesis and submit to a further oral, practical or written examination within a period specified by them but not exceeding eighteen months.

23. At the conclusion of the examination, the examiners will submit to the Professorial Board a concise report on the merits of the thesis and on the examination results.

Fees

24. The fee payable for an examination qualifying for registration shall be £5.

25. An approved candidate shall pay—
   (i) a registration fee of £2.
   (ii) a supervision fee of £30 per annum.
   (iii) a fee of £21 on application for the examination.

26. Fees shall be paid in advance.

CONDITIONS FOR THE AWARD OF DEGREE OF MASTER OF ARCHITECTURE

1. An application to register as a candidate for the degree of Master of Architecture shall be made on the prescribed form which shall be lodged with the Registrar at least one full calendar month before the commencement of the term in which the candidate desires to register.

2. An applicant for registration for the degree of Master shall have been admitted to a Bachelor's degree in Architecture in the University of New South Wales, or other approved University, in an appropriate School.

3. (i) In exceptional cases persons may be permitted to register as candidates for the degree of Master if they submit evidence of such general and professional attainments as may be approved by the Professorial Board.
   (ii) The registration of diplomates of the New South Wales Department of Technical Education as candidates for the degree of Master of Architecture shall be determined in each case by the Professorial Board. Normally such applicants shall be required to produce evidence of academic and professional progress over a period of five years from the time of gaining the diploma.

4. In addition to any other provisions of these regulations the Professorial Board may require an applicant to demonstrate his fitness for registration by carrying out such prescribed work and study and sitting for such examinations as the Board may determine.

5. In every case, before permitting an applicant to register as a candidate, the Professorial Board shall be satisfied that adequate supervision and facilities are available.

6. An applicant approved by the Professorial Board shall register in one of the following categories:—
   (i) Student in full-time attendance at the University.
   (ii) Student in part-time attendance at the University.
   (iii) Student working externally to the University.

7. An approved applicant shall be required to pay the undermentioned fees:—
   (i) a registration fee of £2;
   (ii) the appropriate laboratory and supervision fee according to the category in which the student is registered;
   (iii) a fee of £15 when submitting the thesis for examination.

The combined laboratory and supervision fee shall be—
   (a) £30 p.a. for students in full-time attendance at the University;
   (b) £15 p.a. for students in part-time attendance at the University;
   (c) £10 p.a. for students working externally to the University.

Fees shall be paid in advance.

8. (i) Every candidate for the degree shall be required to carry out a programme of advanced study, to take such examinations, and to perform such other work as may be prescribed by the Professorial Board. The programme shall include the preparation and submission of a thesis embodying the results
of an original investigation or design relative to Architecture. The candidate may submit also for examination any work he has published, whether or not such work is related to the thesis.

(ii) The investigation or design, and other work as provided in paragraph 8 (i) shall be conducted under the direction of a supervisor appointed by the Board or under such conditions as the Board may determine.

(iii) Every candidate shall submit three copies of the thesis as provided under paragraph 8 (i).* All copies of the thesis shall be in double-spaced typescript, shall include a summary of approximately 200 words, and a certificate signed by the candidate to the effect that the work has not been submitted for a higher degree to any other University or Institution. The original copy of the thesis for deposit in the Library shall be prepared and bound in a form approved by the University†. The other two copies of the thesis shall be bound in such manner as allows their transmission to the examiners without possibility of disarrangement.

(iv) It shall be understood that the University retains the three copies of the thesis and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act (1912-1950) the University may issue the thesis in whole or in part in photostat or microfilm or other copying medium.

9. No candidate shall be considered for the award of the degree until the lapse of six complete terms from the date from which the registration becomes effective, save that in the case of a full-time candidate who has obtained the degree of Bachelor with Honours or who has had previous research experience, this period may, with the approval of the Professorial Board, be reduced by not more than three terms.

10. For each candidate there shall be two examiners appointed by the Professorial Board, one of whom shall, if possible, be an external examiner.

* The thesis and other relevant work may be submitted to the Registrar at any time during the year, within the provisions of paragraph 9 of the Master of Architecture Regulations.

In order that a successful candidate may have a reasonable chance of having his degree conferred at one of the formal degree conferring ceremonies, the candidate should arrange for his thesis and other relevant work to be in the hands of the Registrar at least fourteen weeks prior to the date of such ceremony.

† For the specifications currently approved for the preparation and binding theses see Calendar—preparation and binding of higher degree thesis.

CONDITIONS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS

1. An application to register as a candidate for the degree of Master of Arts shall be made on the prescribed form which shall be lodged with the Registrar at least one full calendar month before the commencement of the term in which the candidate desires to register.

2. Candidates for the degree of Master of Arts shall submit themselves for examination in one or more of the following schools or Departments:

3. French ‡ 7. Psychology 11. Geography ‡
4. German ‡ 8. Sociology +

‡ Available in Newcastle Division of Arts only.
* Including Scientific Thought.
+ Available at Kensington only.

3. Except as provided in paragraph 4 an applicant for registration for the degree of Master of Arts shall have been admitted to the degree of Bachelor of Arts at a standard not below Second Class Honours in the University of New South Wales, or in an appropriate School from another approved University.

4. Graduates in Arts of this or another University with a degree of less than Second Class Honours standard shall be required before registration to take a qualifying examination and may be required to take such courses as the Head of the School or Department concerned may decide.

5. The Professorial Board may in exceptional circumstances admit to a candidature for the degree of Master of Arts a graduate in a Faculty other than Arts of this or another University.

6. Every candidate for the degree of Master of Arts shall in the first instance submit his proposed course of study and the subject of his thesis for the approval of the Head of the School or Department concerned.

7. Notwithstanding any other provisions of these regulations the Professorial Board may on the recommendation of the Head of the School or Department require an applicant to demonstrate his fitness for registration by carrying out such work and sitting for such examinations as the Board may approve, or may accept evidence of equivalent work as demonstrating fitness.

* The Professorial Board may on the recommendation of the Head of the School concerned require a candidate to undergo a suitable language test in a relevant foreign language, the form of such test to be prescribed by the Head of the School concerned.

8. Every candidate for the degree shall be required to submit a thesis embodying the results of an original investigation, and may further be required to take such examinations as may be required by the Head of the School or Department concerned and approved by the Professorial Board.

9. The investigation and other work as provided in paragraph 8 shall be conducted under a supervisor appointed by the Board or under such conditions as the Board may determine.
10. No candidate shall be considered for the award of the degree until the lapse of four complete terms from the date from which registration becomes effective, save that in the case of a candidate who has demonstrated exceptional merit this period may, with the approval of the Professorial Board, be reduced by one term.

11. For each candidate there shall be two examiners appointed by the Professorial Board, one of whom shall, if possible, be an external examiner.

12. The examination for the degree of Master of Arts shall be held at such time as the examiners, with the approval of the Board, may appoint.

13. Every candidate shall submit three copies of the thesis provided under paragraph 8. All copies of the thesis shall be in double-spaced typescript, shall include a summary of approximately 200 words, and a certificate signed by the candidate to the effect that the work has not been submitted for a higher degree to any other University or institution. The original copy of the thesis for deposit in the Library shall be prepared and bound in a form approved by the University. The other two copies of the thesis shall be bound in such a manner as allows their transmission to the examiners without possibility of disarrangement.

14. It shall be understood that the University retains the three copies of the thesis and (unless the candidate specifies to the contrary) is free to allow the thesis to be consulted or borrowed, or to be issued in whole or in part in photostat or microfilm or other copying medium.

CONDITIONS FOR THE AWARD OF DEGREE OF MASTER OF COMMERCE

1. An application to register as a candidate for the degree of Master of Commerce shall be made on the prescribed form which shall be lodged with the Registrar at least one full calendar month before the commencement of the term in which the candidate desires to register.

2. An applicant for registration for the degree of Master shall have been admitted to a Bachelor's degree in Commerce in the University of New South Wales, or an appropriate degree of any other approved University.

3. (i) In exceptional cases persons may be permitted to register as candidates for the degree of Master if they submit evidence of such academic and professional attainments as may be approved by the Professorial Board.

(ii) The registration of diplomates of the New South Wales Department of Technical Education as candidates for the degree of Master of Commerce shall be determined in each case by the Professorial Board. Normally, such applicants shall be required to produce evidence of academic and professional progress over a period of five years from the time of gaining the diploma.

4. Notwithstanding any other provisions of these regulations the Professorial Board may require an applicant to demonstrate his fitness for registration by carrying out such work and sitting for such examinations as the Board may determine.

5. In every case, before permitting an applicant to register as a candidate, the Professorial Board shall be satisfied that adequate supervision and facilities are available.

6. An applicant approved by the Professorial Board shall register in one of the following categories:

(i) Student in full-time attendance at the University.

(ii) Student in part-time attendance at the University.

(iii) Student working externally to the University.

7. An approved applicant shall be required to pay the undermentioned fees—

(i) a registration fee of £2;

(ii) the appropriate laboratory and supervision fee according to the category in which the student is registered;

(iii) a fee of £15 when submitting the thesis for examination.

The combined laboratory and supervision fee shall be—

(a) £30 p.a. for students in full-time attendance at the University;

(b) £15 p.a. for students in part-time attendance at the University;

(c) £10 p.a. for students working externally to the University.

Fees shall be paid in advance.

8. (i) Every candidate for the degree shall be required to carry out a programme of advanced study, to take such examinations and to perform such other work as may be prescribed by the Professorial Board. The programme shall include the preparation and submission of a thesis embodying the results of an original investigation or design. The candidate may submit also for examination any work he has published, whether or not such work is related to the thesis.
The investigation or design and other work as provided in paragraph 8 (i) shall be conducted under the direction of a supervisor appointed by the Board or under such conditions as the Board may determine.

Every candidate shall submit three copies of the thesis as provided under paragraph 8 (i). All copies of the thesis shall be in double-spaced typescript, shall include a summary of approximately 200 words, and a certificate signed by the candidate to the effect that the work has not been submitted for a higher degree to any other University or institution. The original copy of the thesis for deposit in the Library shall be prepared and bound in a form approved by the University. The other two copies of the thesis shall be bound in such manner as allows their transmission to the examiners without possibility of disarrangement.

It shall be understood that the University retains the three copies of the thesis and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act (1912-1950) the University may issue the thesis in whole or in part in photostat or microfilm or other copying medium.

No candidate shall be considered for the award of the degree until the lapse of six complete terms from the date from which the registration becomes effective, save that in the case of a full-time candidate who has obtained the degree of Bachelor with Honours or who has had previous research experience, this period may, with the approval of the Professorial Board, be reduced by not more than three terms.

For each candidate there shall be two examiners appointed by the Professorial Board, one of whom shall, if possible, be an external examiner.
8. (i) Every candidate for the degree shall be required to carry out a programme of advanced study, to take such examinations and to perform such other work as may be prescribed by the Professorial Board. The programme shall include the preparation and submission of a thesis embodying the results of an original investigation or design. The candidate may submit also for examination any work he has published, whether or not such work is related to the thesis.

(ii) The investigation or design and other work as provided in paragraph 8 (i) shall be conducted under the direction of a supervisor appointed by the Board or under such conditions as the Board may determine.

(iii) Every candidate shall submit three copies of the thesis as provided under paragraph 8 (i). All copies of the thesis shall be in double-spaced typescript, shall include a summary of approximately 200 words, and a certificate signed by the candidate to the effect that the work has not been submitted for a higher degree to any other University or institution. The original copy of the thesis for deposit in the Library shall be prepared and bound in a form approved by the University. The other two copies of the thesis shall be bound in such manner as allows their transmission to the examiners without possibility of disarrangement.

(iv) It shall be understood that the University retains the three copies of the thesis and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act (1912-1956) the University may issue the thesis in whole or in part in photostat or microfilm or other copying medium.

9. No candidate shall be considered for the award of the degree until the lapse of six complete terms from the date from which the registration becomes effective, save that in the case of a full-time candidate who has obtained the degree of Bachelor with Honours or who has had previous research experience, this period may, with the approval of the Professorial Board, be reduced by not more than three terms.

10. For each candidate there shall be two examiners appointed by the Professorial Board, one of whom shall, if possible, be an external examiner.
(ii) The investigation or design and other work as provided in paragraph 8 (i) shall be conducted under the direction of a supervisor appointed by the Board or under such conditions as the Board may determine.

(iii) Every candidate shall submit three copies of the thesis as provided under paragraph 8 (i). All copies of the thesis shall be in double-spaced typescript, shall include a summary of approximately 200 words, and a certificate signed by the candidate to the effect that the work has not been submitted for a higher degree to any other University or institution. The original copy of the thesis for deposit in the Library shall be prepared and bound in a form approved by the University. The other two copies of the thesis shall be bound in such manner as allows their transmission to the examiners without possibility of their disarrangement.

(iv) It shall be understood that the University retains the three copies of the thesis and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act (1912-1950) the University may issue the thesis in whole or in part in photostat or microfilm or other copying medium.

9. No candidate shall be considered for the award of the degree until the lapse of six complete terms from the date from which the registration becomes effective, save that in the case of a candidate who has obtained the degree of Bachelor with Honours or who has had previous research experience, this period may, with the approval of the Professorial Board, be reduced by up to three terms.

10. For each candidate there shall be two examiners appointed by the Professorial Board, one of whom shall, if possible, be an external examiner.

CONDITIONS FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE OR ENGINEERING WITHOUT SUPERVISION.

Where it is not possible for candidates to register under the existing regulations for the degree of Master of Science or Master of Engineering without supervision, by reason of their location at centres which are distant from University Schools or where effective supervision is not practicable, registration may be granted in these categories under the following conditions:—

1. An application to register as an external candidate for the degree of Master of Science or Master of Engineering without supervision shall be lodged with the Registrar not less than six months before the intended date of submission of the thesis*. With such application the candidate shall submit the topic of his thesis and a synopsis in sufficient detail to enable the appointment of examiners.

2. The subject of the thesis must be approved as being suitable by the Professorial Board.

3. An applicant for registration shall have been admitted to a Bachelor's Degree of the University of New South Wales.

4. An approved applicant shall be required to pay the following fees:—

   (i) a registration fee of £2;

   (ii) a fee of £30 when submitting thesis for examination.

5. (i) Every candidate for the degree shall be required to submit a thesis of a satisfactory literary standard embodying the results of an original investigation or design. The candidate may also submit for examination any work he has published, whether or not such work is related to the thesis.

   (ii) Every candidate shall submit three copies of the thesis as provided under paragraph 5 (i). All copies of the thesis shall be in double-spaced typescript, shall include a summary of approximately 200 words, and a certificate signed by the candidate to the effect that the work has not been submitted for a higher degree to any other University or institution. The original copy of the thesis for deposit in the Library shall be prepared and bound in a form approved by the University†. The other two copies of the thesis shall be bound in such manner as allows their transmission to the examiners without possibility of disarrangement.

   (iii) Every candidate shall submit with the thesis a statutory declaration that the material contained therein is his own work, except where otherwise stated in the thesis.

   (iv) Unless there is a specific arrangement to the contrary it shall be understood that the University retains the three copies of the thesis and is free to allow the thesis to be consulted or borrowed, or to be issued in whole or in part in photostat or microfilm or other copying medium.

6. No candidate shall be considered for the award of the degree until the lapse of nine terms in the case of Honours graduates and twelve terms in the case of Pass graduates from the date of graduation.

7. For each candidate the Professorial Board shall appoint at least two examiners one of whom shall be an internal examiner.

8. If the thesis reaches the required standard the candidate shall be required to attend for an oral examination at a time and place nominated by the University. The examiners may also arrange at their discretion for the examination of the candidate by written papers and/or practical examinations on the subject of the thesis and/or subjects related thereto.

* Candidates are advised to seek registration as early as possible.
† Separate sheet for preparation and binding of higher degree theses.
SCHOLARSHIPS AND FELLOWSHIPS
POST-GRADUATE AWARDS
(Tenable at the University of New South Wales)

THE IMPERIAL CHEMICAL INDUSTRIES OF AUSTRALIA AND NEW ZEALAND RESEARCH FELLOWSHIP

Imperial Chemical Industries of Australia and New Zealand has undertaken to provide a sum of £1,100 annually to establish a Fellowship to be known as the “Imperial Chemical Industries of Australia and New Zealand Research Fellowship.” The following conditions apply to the award:—

1. The Research Fellowship is to be used to promote knowledge in those fields which have some direct relation to the scientific interests and national responsibilities of ICIANZ, such as pure and applied chemistry, biochemistry, agricultural science, chemotherapy, pharmacology, physics, engineering, mining and metallurgy.

2. The appointment to a Fellowship is to be made by the University subject to agreement by ICIANZ and is to be open to any subject of a nation in the British Commonwealth who is a graduate of a recognised University.

3. The normal period of tenure will be two years.

4. A Fellow may be permitted to undertake teaching duties within the University, in addition to the research activities for which the Fellowship is granted.

5. A Fellow will not be under any obligation to take out a higher degree.

6. It is intended that the grant should increase the output of research and not be used to relieve the burden on any other source of revenue.

7. The annual grant to the University is fixed at £1,100.

8. Where no suitable candidate applies in any year, the University may carry the grant forward.

9. Application should be made to the Registrar by 30th November, in 1962, and each alternate year thereafter.

CONSOLIDATED ZINC RESEARCH SCHOLARSHIP

The post-graduate scholarship scheme operated by Consolidated Zinc Proprietary Limited has been broadened to include the fields of mining engineering, chemical engineering and geology in addition to metallurgy.

The scholarship is tenable initially for one year, but may be renewed for up to three years at the discretion of the company and on the recommendation of the University. The value of the scholarship will be dependent upon the qualifications, age, experience and marital responsibilities of the candidate but will not be less than £750 per annum.

Before lodging an application with the company, the applicant should first obtain the agreement of the appropriate University authority that the suggested research will be acceptable for submission as a thesis for a higher degree. Applicants or holders of Consolidated Zinc research scholarships should not be committed to or be under obligation to any other organisation.

Applications for post-graduate research assistance should be sent to the General Manager, Consolidated Zinc Pty. Ltd., G.P.O. Box 384D, Melbourne, by 1st December each year.

THE AUSTRALIAN ATOMIC ENERGY COMMISSION POST-GRADUATE RESEARCH STUDENTSHIP

The Australian Atomic Energy Commission offers a number of post-graduate research studentships for award to University honours graduates who are British subjects domiciled in Australia and who wish to proceed to a higher degree in an Australian University. The research topic should be in a field related to Australia’s programme of atomic energy research, development and application.

The studentships will normally carry a stipend within the range £900–£1,100 per annum. The actual stipend at the commencement of the studentship will depend on the usual time required to obtain a pass degree in the faculty in which the student graduated. The Commission will meet compulsory University tuition fees and, if the acceptance of a studentship makes it necessary for the student to live away from home, the cost of rail fares to the University at the commencement of the studentship, rail fares home at its conclusion and return rail fares home at the end of each intervening year.

The Commission may, upon request by the University concerned, provide funds for the purchase of equipment, apparatus or materials essential to the student’s programme of research.

A brief report on the student’s progress by his supervisor will be requested half-yearly. At the end of each year a technical report, describing the progress of his (or her) work, must be submitted by the student to the Commission.

The student will be required to accept a financial obligation to work as the Commission may direct for a period of three years immediately after completion of the course.

The student shall be expected to devote the whole of his (or her) time to training in research except for such reasonable vacations as are customary for students of similar status in the institution at which the student is working. However, he may be permitted to undertake limited teaching or demonstrating duties but must inform the Commission of the extent of such activities and the income derived from them. If the Commission considers that such activities are interfering with the student’s progress, it will require that such activities be reduced or terminated.

Appropriate acknowledgment to the Commission shall be made if a student submits for publication any manuscript embodying the results of work undertaken during the tenure of a studentship.

Award of the studentships is made on the nomination of the University, and applicants should in the first place consult the Head of the appropriate School with a view to securing such nomination.

HAROLD G. CONDE MEMORIAL FELLOWSHIP

The Electricity Commission of New South Wales and the Local Government Electricity Association have jointly undertaken to make a grant to the University of £800 per annum to provide a Fellowship in memory of the late Harold G. Conde, a former Chairman of the Electricity Commission. The Fellowship is intended to enable the holder to undertake post-graduate study or research in a field related to the electricity industry.

The conditions of award are as follows:—

1. The holder of the Fellowship is to be known as the “Harold G. Conde Memorial Fellow.”

2. The Fellowship will have a value of £800 per annum from which University fees will be deducted, the balance being payable to the holder as a living allowance.
The Fellowship shall be tenable for a period of one year but may be re-awarded for a second or third year.

Candidates for the Fellowship should possess a degree preferably with honours in a field appropriate to the study or research which they wish to undertake and must be domiciled in Australia.

The Fellowship shall be awarded by the Professorial Board on the recommendation of a committee comprising the Dean of the Faculty of Engineering, the Head of the School of Electrical Engineering, the Head of the School of Nuclear Engineering, a representative or representatives of the Electricity Commission and the Local Government Electricity Association and the Registrar.

The Fellowship is for post-graduate study or research in a field related to the electricity industry to be determined by the Vice-Chancellor and may be applied to enable the holder to complete a Master of Technology course in an appropriate field or, subject to the approval of the University, for research towards a higher degree.

The tenure of the Fellowship shall be subject to the Fellow's work being satisfactory to the Head of the School in which he is studying.

Applications on forms obtainable from the Registrar must be lodged with the Registrar by 30th November in any year in which the Fellowship is available.

ARTHUR NEWBOLD MEMORIAL FELLOWSHIP

Newbold General Refractories Ltd. has agreed to make a grant to the University of £1,000 per annum for a minimum of five years to provide a Fellowship intended to foster fundamental studies of refractories used in the metallurgical and chemical process industries.

The conditions of the award are as follows:

(1) The Fellowship shall be known as the “Arthur Newbold Memorial Research Fellowship”.

(2) The Fellowship will have a value of £1,000 per annum from which University fees will be deducted, the balance being payable to the holder as a living allowance.

(3) Candidates for the Fellowship should possess a degree preferably with honours in Science, Applied Science or Engineering or have at least equivalent qualifications and must be domiciled in Australia.

(4) The Fellowship shall be awarded by the Professorial Board on the recommendation of a committee comprising the Dean of the Faculty of Applied Science, the Head of the School of Chemical Technology, a representative of the company and the Registrar.

(5) The Fellowship shall be tenable for a period of one year but may be re-awarded for a second or third year.

(6) The tenure of the Fellowship shall be subject to the scholar's work being satisfactory to the Head of the School of Chemical Technology.

(7) Subject to University approval the research may be undertaken as work towards a higher degree.

(8) The scholar is required to devote his full time to the research and to submit, during June and December of each year, a full technical report on the research carried out.

Applications, on forms available from the Registrar, should be lodged with the Registrar by 30th November in any year in which the Fellowship is available.

THE GENERAL MOTORS-HOLDEN'S POST-GRADUATE RESEARCH FELLOWSHIPS

General Motors-Holden's Limited have agreed to provide annually twenty-five post-graduate research Fellowships tenable in Australian Universities with the objects of:

(i) increasing the number of highly qualified people in Australia, and

(ii) encouraging the development of research facilities in the Australian universities, so that the community may benefit from the efforts of those capable of contributing to its progress.

Two of the Fellowships are tenable in the University of New South Wales, four are reserved for allocation by the Australian Vice-Chancellors' Committee and the remainder are tenable in the other Australian universities.

The following regulations will apply:

(1) The Fellowships shall be known as the "General Motors-Holden's Post-graduate Research Fellowships."

(2) Each Fellowship is intended to provide for tuition fees, a living allowance and other expenses incidental to post-graduate study and will range in value from a minimum of £300 per annum to a maximum of £1,200 per annum, as recommended by the University.

The company will, in addition, provide the University with unrestricted grants-in-aid of £300 for each Fellowship. This amount will be allotted to the School in which the Fellow will work or may be expended in such other way as the Vice-Chancellor may determine.

(3) The awards shall be made by the Professorial Board on the recommendation of the Research and Graduate Studies Committee. If less than the number of Fellowships available to the University is awarded in any year, the Australian Vice-Chancellors' Committee shall be informed. If after the full number of Fellowships available to the University has been awarded there are still applicants considered worthy of an award, the applications of such candidates shall be forwarded with a recommendation to the Australian Vice-Chancellors' Committee to be considered for the award of a Fellowship from the reserve allocated by the Australian Vice-Chancellors' Committee.

(4) The Fellowships shall normally be tenable for one year. Where the graduate course undertaken is of longer duration than one year the Fellowship holders may make application for a renewal of their Fellowships. Such applications for renewal will be dealt with as new applications for the purpose of competition with other applicants for Fellowships in that year. Under no circumstances will a holder be considered for more than two renewals of his Fellowship.

The tenure of the Fellowship will commence and terminate on dates determined by the University.

(5) Graduates in all faculties may apply but, other things being equal, preference may be given to applicants who have graduated in Engineering, Science, Commerce or Economics and who intend to follow careers in industry or teaching on completion of their Fellowships.
In awarding the Fellowships, qualities of leadership of the candidates, as well as outstanding academic achievements will be taken into consideration.

(6) The company may, from time to time, inform the universities of specific research projects which are of interest to the company; however, the Universities will have full responsibility for selecting such research projects and for the assignment of these to Fellowship recipients.

(7) Applications (in triplicate) on forms obtainable from the Registrar must be lodged with the Registrar by 30th November each year.

(8) Fellows are required to devote their full time to the research and to submit during June and December of each year a full technical report on the research carried out.

(9) Application shall be made to the Registrar by 30th November each year.

COMMONWEALTH POST-GRADUATE AWARDS

The Commonwealth Government is providing each year a number of awards for post-graduate study and research tenable in the Australian Universities. In this University the awards will provide an emolument of £900 per annum, though in special circumstances an emolument in excess of £900 per annum may be provided. In addition, holders of these awards will be exempt from University tuition fees.

The awards will be tenable for one year but may be extended for a longer period provided the maximum duration is not more than four years.

Persons domiciled in Australia who are University graduates or will graduate in the current academic year are eligible for the awards.

Applications for awards tenable at this University must be lodged with the Registrar by 30th November each year.

RAYMOND E. PURVES—CLYDE INDUSTRIES ENGINEERING SCHOLARSHIP

Clyde Industries Limited has agreed to provide one scholarship annually to encourage the study of engineering at the undergraduate or post-graduate level.

Details regarding this scholarship may be obtained from the Registrar.

AUSTRALIAN AUTOMOBILE ASSOCIATION FELLOWSHIPS IN TRAFFIC ENGINEERING

The Australian Automobile Association provided £3,000 in 1961 and has undertaken to provide £3,000 in each of the years 1962 and 1963, for the award of two post-graduate Fellowships in Traffic Engineering tenable at the University of New South Wales.

The objects of the Association in providing the Fellowships are—

(i) to provide an opportunity for young engineers and scientists to undertake advanced study and research in the field of traffic and transport, and

(ii) to encourage the development of adequate research facilities in Australia in this important aspect of national activity.

The conditions of award are as follows:

(1) The Fellowships shall be known as the “Australian Automobile Association Fellowships in Traffic Engineering.”

(2) The Fellowships will have a total value of £1,500 each, of which the holder will normally receive an emolument of £1,200 per annum. In special circumstances the emolument may be increased above this amount or some contribution made to the travel expenses incurred by the holder in taking up the award.

The balance of the funds will be applied by the University to meet tuition fees and to provide facilities or equipment required in the School of Traffic Engineering.

(3) Each Fellowship will be tenable for one year.

(4) Candidates for the Fellowships should possess a degree or diploma (preferably with honours) in Science or Chemical Engineering, or have at least equivalent qualifications.

(5) The Fellowships will be awarded by the Professorial Board on the recommendation of a committee comprising the Dean of the Faculty of Engineering, the Head of the School of Traffic Engineering, a representative of the Australian Automobile Association and the Registrar.

Applications, on forms available from the Registrar, should be lodged with the Registrar by 30th November each year.
## APPENDIX I

### PRIZES

<table>
<thead>
<tr>
<th>Department</th>
<th>Name of Award</th>
<th>Conditions of Award</th>
<th>Recipients, 1961</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountancy</td>
<td>William Forsyth Prize</td>
<td>Awarded to the student showing the greatest proficiency in Auditing.</td>
<td>Not awarded</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td>Finance and Guarantee Co. Ltd. Prize.</td>
<td>Awarded to the student showing the greatest proficiency in Taxation.</td>
<td>Not awarded</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td>Northumberland Permanent Building and Loan Co. Pty. Ltd. Prize.</td>
<td>Awarded to the student showing the greatest proficiency in Law III.</td>
<td>K. H. Osborne</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td>C. J. Chandler Prize.</td>
<td>Awarded to the student showing the greatest proficiency in the first year of the Commerce Course.</td>
<td>K. A. Boyle</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td>The Broken Hill Pty. Co. Ltd. Prizes.</td>
<td>Awarded to students showing the greatest proficiency in:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(i) Accounting I</td>
<td>J. J. H. Davies</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Accounting II</td>
<td>B. L. Watts</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Accounting III</td>
<td>L. R. Watts</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Accounting IV</td>
<td>D. I. Duncan</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v) Advanced Cost Accounting</td>
<td>C. J. McConville</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td>Royal Australian Institute of Architects (Newcastle Division) Prize.</td>
<td>Awarded to students showing the greatest proficiency in Years 1, 2, or 3 of the Architecture Course.</td>
<td>To be awarded</td>
<td>£10/10/-</td>
</tr>
<tr>
<td></td>
<td>Board of Architects of New South Wales Prize.</td>
<td>Awarded to students showing the greatest proficiency in Years 4, 5, or 6 of the Architecture Course.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Special Prize awarded to the student showing the greatest proficiency in completing the course in Architecture.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>Royal Australian Chemical Institute Prize.</td>
<td>Awarded annually to the student showing the greatest proficiency in Chemistry III, providing that he is a student member of the Institute in Newcastle.</td>
<td>Not awarded</td>
<td>£5/5/-</td>
</tr>
<tr>
<td>Department</td>
<td>Name of Award</td>
<td>Conditions of Award</td>
<td>Recipients, 1961</td>
<td>Value</td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td>---------------------</td>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Economics</td>
<td>C. J. Chandler Prize.</td>
<td>Awarded to the student showing the greatest proficiency in the first year of the Commerce Course. Awarded to students showing the greatest proficiency in: Economics I (Arts or Commerce) Economics II (Arts or Commerce) Economics III (Arts or Commerce) Economics IV (Arts or Commerce)</td>
<td>K. A. Boyle</td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td>A. J. Day Memorial Prize.</td>
<td>Awarded to the student in the Division of Commerce at Newcastle University College who has submitted the best undergraduate thesis in the year.</td>
<td>A. J. Fitzgibbons.</td>
<td>Interest annually on gift of £55 invested.</td>
</tr>
<tr>
<td>Engineering</td>
<td>W. E. Clegg Memorial Prize</td>
<td>Awarded to the outstanding student completing the course in Mechanical Engineering.</td>
<td>T. M. Gallagher, J. Lumsden</td>
<td>Interest annually on gift of £100 invested.</td>
</tr>
<tr>
<td></td>
<td>Newcastle Division of the Institution of Engineers, Australia, Prize.</td>
<td>Awarded to a graduate of the Newcastle University College on attaining the degree of Bachelor of Engineering with First Class Honours. If in the same year more than one shall attain first class honours, the prize shall be awarded to him who shall have in the opinion of the Division of Engineering, gained the highest pass. In the event of the equality of merit, the prize shall be equally divided. A graduate shall be one who has spent not less than two full academic years, of which the final year shall be one, as a student of the Newcastle University College.</td>
<td>W. G. Field</td>
<td>25 guineas</td>
</tr>
</tbody>
</table>

## PRIZES

<table>
<thead>
<tr>
<th>Department</th>
<th>Name of Award</th>
<th>Conditions of Award</th>
<th>Recipients, 1961</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>The Newcastle Morning Herald Prizes.</td>
<td>Awarded to the student showing the highest proficiency in: English I English II English III English IV</td>
<td>W. G. Derkenne, Miss A. Rutherford, K. Reynolds, Not awarded</td>
<td>£5, £5, £5, £10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Miss A. Rutherford</td>
<td>Interest annually on gift of £100 invested</td>
</tr>
<tr>
<td>French</td>
<td>Helmore Prize.</td>
<td>Awarded to the student showing the greatest proficiency in French I.</td>
<td>Miss M. Wiblin</td>
<td>do.</td>
</tr>
<tr>
<td></td>
<td>Gertrude Helmore Prize.</td>
<td>Awarded to the student showing the greatest proficiency in French II.</td>
<td>Miss P. Knot</td>
<td>do.</td>
</tr>
<tr>
<td></td>
<td>Ernest Helmore Prize.</td>
<td>Awarded to the student showing the greatest proficiency in French III.</td>
<td>Miss W. Murray</td>
<td>do.</td>
</tr>
<tr>
<td>Geography</td>
<td>Geographical Society of N.S.W. (Newcastle Branch) Prize in Geography.</td>
<td>Awarded to the student showing the greatest proficiency in Geography I.</td>
<td>R. G. Nicholls</td>
<td>£5/5/-</td>
</tr>
<tr>
<td>Geology</td>
<td>The Edward John Phillips Memorial Prize in Geology.</td>
<td>Donated annually to the student showing the greatest proficiency in Geology I. Awarded biennially to the student showing the greatest proficiency in Geology II.</td>
<td>K. Lye, T. A. McMahon</td>
<td>£10</td>
</tr>
</tbody>
</table>
# PRIZES

<table>
<thead>
<tr>
<th>Department</th>
<th>Name of Award</th>
<th>Conditions of Award</th>
<th>Recipients, 1961</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>Sarah Wheeler History Prizes.</td>
<td>Awarded to the student showing the greatest proficiency in History I.</td>
<td>Miss E. Booth</td>
<td>Interest annually on gift of £50 invested</td>
</tr>
<tr>
<td></td>
<td>Newcastle City Council Historical Research Prize.</td>
<td>Awarded to the student showing the greatest proficiency in History II.</td>
<td>A. J. Hassall</td>
<td>£25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Awarded to the student showing the greatest proficiency in History III.</td>
<td>Miss E. N. Maughan</td>
<td>£5/5/-</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>The Australian Institute of Metals Prize.</td>
<td>Awarded to the student, if of sufficient merit, showing the greatest proficiency in Physical Metallurgy.</td>
<td>E. J. Bragett</td>
<td>£50</td>
</tr>
<tr>
<td></td>
<td>John Fallins Prize.</td>
<td>Awarded biennially to the student showing the greatest proficiency in Metallurgical Engineering I or II.</td>
<td>Not awarded</td>
<td>£10</td>
</tr>
<tr>
<td></td>
<td>The Daniel Clark Award.</td>
<td>Awarded to the student showing the greatest proficiency in the Metallurgy Seminar.</td>
<td></td>
<td>£5/5/-</td>
</tr>
<tr>
<td></td>
<td>Edward Guy Smith Memorial.</td>
<td>Awarded to the student, if of sufficient merit who most distinguishes himself on graduation.</td>
<td></td>
<td>Medal</td>
</tr>
<tr>
<td>Physics</td>
<td>Physics Staff Prize.</td>
<td>Awarded to the student showing the greatest proficiency in Physics II or Physics III.</td>
<td>A. I. McIntosh</td>
<td>£25</td>
</tr>
<tr>
<td>Psychology</td>
<td>The British Psychological Society Prize in Psychology.</td>
<td>Awarded to the student, if of sufficient merit, showing the greatest proficiency in Psychology III.</td>
<td>Miss H. A. McIntosh</td>
<td>£5/5/-</td>
</tr>
</tbody>
</table>

## APPENDIX II

**I DIVISION OF APPLIED SCIENCE**

The Chancellor presented the following degrees at a Graduation Ceremony, held at 2.30 p.m. on Friday, April 13 1962, in the College grounds.

**1. PHILIP JOHN MILAND** (German—Honours Class I, Division II)
   - Degree: Bachelor of Applied Science
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**2. LANCELOT R. LEWIS** (History—Honours Class I and University Medal)
   - Degree: Bachelor of Arts
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**3. MITCHELL JAMES LEWIS** (History—Honours Class I and University Medal)
   - Degree: Bachelor of Arts
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**4. NEAL GRANTHAM JONES** (French—Honours Class I and University Medal)
   - Degree: Bachelor of Arts
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**5. CLIVE BENJAMIN FINKELSTEIN**
   - Degree: Bachelor of Engineering and Industrial Chemistry
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**6. THOMAS FREY WILLIAM BROADfoot**
   - Degree: Bachelor of Engineering
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**7. PHILLIP JAMES THOMAS**
   - Degree: Bachelor of Technology
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**8. JOSEPH ALEXANDER THOMAS**
   - Degree: Bachelor of Science
   - Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**M.S.—MASTER OF SCIENCE**

- Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Applied Science

**DEPARTMENT OF CHEMICAL ENGINEERING AND INDUSTRIAL CHEMISTRY**

- Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**DEPARTMENT OF METALLURGY**

- Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**DEPARTMENT OF APPLIED GEOLGY**

- Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts

**DEPARTMENT OF PHYSICS**

- Presented by PROFESSOR M. S. BROWN, Dean of the Faculty of Arts
III. DIVISION OF COMMERCE

Presented by PROFESSOR E. B. SMYTH
Dean of the Faculty of Commerce

B.Com.—BACHELOR OF COMMERCE

Department of Accountancy
Charles Joseph McConville (Honours Class II, Division I)
Kevin Edward Osborne (Honours Class II, Division I)
Gordon Graham Foster (Honours Class III)
William Michael Alexander
Kenneth John Hughes
John Robert Levey
John Arthur Owens
Ronald James Turnbull

Department of Economics
Athol John Fitzgibbons (Honours Class I)
David Ian Duncan (Honours Class II, Division I)
Frederick William Graham
Robert Hamilton Hill
Ellen Mary Kane
Adrian Palmer Nelmes

IV. DIVISION OF ENGINEERING

Presented by PROFESSOR A. H. WILLIS
Dean of the Faculty of Engineering

M.E.—MASTER OF ENGINEERING

Department of Civil Engineering
Harold Edward Bofinger, B.E.
Thesis: “The effect of selected chemicals on a cement stabilized synthetic soil containing bentonite and sand”.

B.E.—BACHELOR OF ENGINEERING

Department of Civil Engineering
Walter George Field, A.S.T.C. (Honours Class I and University Medal)
Brian Stuart Heaton, A.S.T.C. (Honours Class II)
Maxwell John Lowrey, A.S.T.C. (Honours Class II)
Kerry Atkins
Alan Raymond Brown, A.S.T.C.
Peter John Michel, A.S.T.C.
Ronald Francis Schneider, A.S.T.C.

Department of Electrical Engineering
John Douglas Gillard, A.S.T.C.
John Frederick Waters, A.S.T.C.

Department of Mechanical Engineering
Terence Michael Gallagher (Honours Class I)
John Lumsden (Honours Class I)
Dominic Paul Buchhorn
Graham Kenneth Butt, A.S.T.C.
William Lyster Cooper
Edward Francis Gibbs, A.S.T.C.
Norbert Kuras, A.S.T.C.
Hermanus Stephanus van der Lit
Errol John McNiven, A.S.T.C.
Kevin Charles Meyrick, A.S.T.C.
John William Murray Noller, A.S.T.C.
Donald Charles Nugent, A.S.T.C.
John Joseph O'Shea, A.S.T.C.
Charles Girt Resevsky, A.S.T.C.

Terry Walter Riley
Robert Henry Tisdell
Brian William Watts, A.S.T.C.
V. DIVISION OF SCIENCE
Presented by PROFESSOR J. F. CLARK
Dean of the Faculty of Science
Ph.D.—DOCTOR OF PHILOSOPHY
Department of Chemistry
Thomas James Batterham, B.Sc., A.S.T.C.
Thesis: "The chemistry of xanthorrhoea resins".

M.Sc.—MASTER OF SCIENCE
Department of Chemistry
John Barry Henderson, B.Sc., A.S.T.C.
Thesis: "Composition of steel-making slags".

Department of Geology
Arthur Sinclair Ritchie, A.S.T.C.
Thesis: "An application of paper chromatographic analysis to a field method of ore mineral determination".

B.Sc.—BACHELOR OF SCIENCE
Science
Robert Hugh Eather (Physics—Honours Class I)
Ronald James MacDonald (Physics—Honours Class I)
Guido Peter Pez (Chemistry—Honours Class II, Division I)
Denis Paul Tobin (Chemistry—Honours Class II, Division II)
Helen Mary Beath
Sidney Frederick Bourke
Maarten Wicher Bunder
Peter William Dreise
Edward John Langford
Marilyn Nea Moses
Barry John Frederick Myers
Wendy Lynette Newton
Raymond John Nolan

VI. DEPARTMENT OF ARCHITECTURE
Presented by PROFESSOR F. E. A. TOWNDROW
Dean of the Faculty of Architecture
B.Arch.—BACHELOR OF ARCHITECTURE
Brian John Suters, A.S.T.C. (Honours Class I and University Medal)
Graeme Hay, A.S.T.C. (Honours Class II)
Donald David Morris, A.S.T.C. (Honours Class II)
Diploma in Education

Gordon Mowbray, 1959
Julia Fay Nixon, 1959
Anne Douglas Renwick, 1958
John Roach, 1958
Leona Ruth Robinson, 1958
Ross Robinson, 1958
George Maxwell Rogers, 1959
Jennifer Anne Rowe, 1958
George Hobart Simpson, 1959
Geoffrey Malcolm Stephens, 1958
Nola Beverley Thomas, 1959
Barry Edgar Pascoe Williams, 1959
Gregory James Williams, 1959
Robyn Janice Wood, 1958

GRADUATES OF THE UNIVERSITY

Honorary Graduates

Doctors of Philosophy

Stanley Charles Baker, 1958
Thomas James Betterham, 1962
Arthur Kerr Johnston, 1957
William Frederick Joseph Pickering, 1960

Master of Arts

Winston Gregory McMinn, 1961 *

Masters of Engineering

Eric Betz, 1957
Harold Edward Bofinger, 1962

Masters of Science

William George Kirchner, 1955
Miklos Kaiman Ormay, 1961
William Frederick Joseph Pickering, 1956
John Spurgeon Ratcliffe, 1957
Arthur Sinclair Ritchie, 1958
Joseph Alexander Thomson, 1962

Bachelors of Architecture

Graeme Hay, 1962 †
Donald David Morris, 1962 †

Bachelors of Arts

Leigh Alley, 1962
John Raymond Atherton, 1960 †
Marie Rose Baldwin, 1961
Brian Melville Bancefield, 1962
Geoffrey Bartholomew, 1960
Irene Janice Belford, 1961
Geoffrey Robert Bentley, 1961
Kenneth Robert Bignall, 1961
Thorburn, 1961
Annette Marjorie Bowe, 1960
Doreen Bronwyn Brown, 1961 *
John Matthew Brown, 1961 *
Lionel Henry Brown, 1962
Marian Elisabeth Brown, 1960
Anna Zofia Buchhorn, 1962
Judy Claire Bullerwell, 1960 *
John Archibald Wayne Callowell, 1962
Marie Bernadette Callen, 1962
Mary Callen, 1960
John Edward Carter, 1961
Sandra Clare Caseky, 1961
Marian Eleanor Cleck, 1960
Teresa John Collits, 1961
Lance Cameron Corr, 1961
Julian Charles Croft, 1961
Marion Mildred Crothall Pearse, 1961 *
Aphra Nell Currey, 1961
Alexander Walker Cuthbert, 1960
Ronald John Davis, 1961 *
Mary Carmel Dick, 1961
Lancelot Knox Donaldson-Evans, 1962 *
Wendy Gai Doyle, 1962
Jessie Alice Driscoll, 1961
Kenneth Roy Edden, 1962
Judy Patricia Mary Farrell, 1962
Kathleen Patricia Farrell, 1960
Ruth Lorraine Ferrett, 1962
Darrell Graeme Fisher, 1961
Kay Frances Flanagan, 1962
John Joseph Geary, 1960 *
Brenda May Gibbs, 1961
Wendy Renee Gilbert, 1962
John James Grady, 1960 *
Mabel Frances Grady, 1960
Pamela Anne Green, 1962
Joy Emma Greenwood, 1962
Doris Edna Hales, 1962
Colin Anthony Holden, 1962
John Michael Holt, 1962
Janice Lily Humphreys, 1960
John Laurence Hurley, 1962
Anne Margaret Jeffrey, 1962
Glennie Jones, 1960
Grahame Charles Jones, 1962 *
Margaret Elaine Jones, 1962
Barry Thomas Kelly, 1961
Robert Andrew Kelly, 1960 *

Yvonne Kraemer, 1960
Seyrina Krivans, 1962 *
Marie Therese Laffy, 1960
Milton James Lewis, 1962 *
Rachael Lieberman, 1961 *
Kevin Edmund Lindgren, 1962
Kenneth James Longworth, 1962
Heather Jean MacDonald, 1962
Patricia McIlhenny, 1962
Leonard Lethbridge McNab, 1960
Maree Margaret McNamara, 1962
Beverley Anne Manser, 1962
Maureen Markham, 1960
Rosemary Maskey, 1960
Elizabeth Narelle Maughan, 1962
Warren James Monkley, 1962
John William Moore, 1961
Wendy Murray, 1962
Denise Marie Neville, 1961
Jack Nelson, 1961
Philip Edward Niland, 1962 *
Michael John O'Neill, 1962 *
Patrick Grant George O'Shea, 1960
Margaret Pascoe, 1962
Robert William Payne, 1960
Geraldine Patricia Penny, 1960 *
Judy Lorraine Penfold, 1962
Robert Joseph Petherbridge, 1962
Harold James Prince, 1960
Brian John Procior, 1962
Michael John Rabbitt, 1960
Logan John Reay, 1962
Ada Renwick, 1962 *
Kevin James Reynolds, 1962
Helen John Rixon, 1960
Robin Louise Robertson, 1960
Kay Rolfe, 1961
Margaret Mary Ross, 1962
Frances Mary Rowe, 1962
Mary Elizabeth Rummery, 1962
Yvonne Russell, 1961
Noel Rutherford, 1962 *
Brian Patrick Sheedy, 1961
David John Sherlock, 1961 *
Allen James Sme, 1962
George William Southern, 1962
Ramom William Southward, 1961
Graham Spencer, 1961 *
Robert George Stewart, 1962
Roslyn Louise Stock, 1962
Brian John Sweeney, 1962 *
Eileen Jill Syms, 1960
Michael John Taper, 1962
Sarah Elizabeth Taylor, 1962
Kathleen Frances Temple, 1961 *
Elaine Margaret Thompson, 1961
John James Thompson, 1961
Philip Thomson, 1962 *

* Bachelors of Arts
† Bachelors of Architecture
Sister James Mott Dowrie, 1956
Donald Barry Dennis Adrian Downey, 1961
Terry Leicester John
David Armstrong Evans, 1958
Charles Girt Resevsky, 1962
Janice Anne Woolley, 1961
Alexander Walter Young, 1960

William Michael Alexander, 1962
David Ian Duncan, 1962
Ronald Douglas Faraday, 1961
Gordon Graham Foster, 1962
Athol John Fitzgibbon, 1962
Frederick William Grahame, 1962
Robert Hamilton Hill, 1962
Kenneth John Hughes, 1962
Ellen Mary Kane, 1962
Therese Anne Kane, 1961

Bachelors of Arts — continued
Annabel Waterhouse, 1961
Judith Margory Jane Wilson, 1961
Barbara Joan Woolley, 1961

Bachelors of Commerce — continued
John Robert Levey, 1962
Charles Joseph McConville, 1962
Adrian Palmer Nelmes, 1962
Bruce Oliver, 1960
Kevin Edward Osborne, 1962
John Arthur Owens, 1962
Clement Allan Tisdell, 1961
Ronald James Turnbull, 1962
Vu-Nhi Thuy, 1960

Bachelors of Engineering — continued
Robert Leith Hitchcock, 1957
Konrad Leonard Hitz, 1961
Kenneth Robert Michell, 1962
Malcolm Wallace Johnson, 1962
Anthony Joseph Kennedy, 1960
Lance Cooper Kirkwood, 1961
Mervyn Robert Knuckey, 1959
Norbert Kuras, 1962
Hermanus Stephanus van der Lit, 1962
Maxwell John Lowrey, 1962
John Lumsden, 1962
Errol John McIven, 1962
Warren Arthur Matthews, 1959
David James Melville, 1958
Kevin Charles Meyrick, 1962
Peter John Michel, 1962
Brian Edward Milton, 1960
Harold Graham Moore, 1960
Raymond Owen Mullen, 1956
Kenneth Hugh Murdoch, 1961
Gordon Darvey Nelson, 1957
Aubrey Gavin Newman, 1958
John William Murray Noller, 1962
Donald Charles Nugent, 1962
John Joseph O'Shea, 1962
Terry Leicester Piggott, 1957
Donald Barry Proudfoot, 1960
Charles Girt Resevsky, 1962
Terry Walter Riley, 1962
Neil Valentine Robbie, 1958
Ronald Henry Roberts, 1961
Lionel Henry Savins, 1960
Ronald Francis Schneider, 1962
Keith Smedley Sellick, 1958
Graham Smith, 1961
Richard George Smith, 1959

Bachelors of Science — continued
Thomas Akre, 1960
Peter Henry Printz Allen, 1961
Philip Arthur Alston, 1961
Alan Raymond Andrews, 1960
Frank Thomas Bagnall, 1959
Kenneth Victor Barratt, 1957
Thomas James Butterham, 1958
Helen Mary Beath, 1962
Kevin Hilton Bell, 1960
Cedric Ross Berglund, 1961
Sidney Frederick Bourke, 1962
Robert Boyd, 1960
Charles Warren Brock, 1961
Edmund James Buckman, 1955
Maarten Wichcr Bunder, 1962
George Albert Burrell, 1956
Wesley Callender, 1958
David James Carr, 1961
James Eshott Carr, 1953
Irwin Walter Collison, 1959
James Lindsay Cook, 1957
Mervyn Kenneth Cooper, 1955
Mervyn James Counttell, 1957
John Crawford, 1960
Joseph Francis Cudmore, 1960
Jeffrey Allen Dann, 1959
Harry Robertson Davidson, 1960
Judith Ann Davies, 1961
Michael Owen Davies, 1959
Leslie Stanley Davis, 1960
Janet Ruth Donaldson, 1958
James Edward Layt, 1960
John Barry Lean, 1955
Ronald Maurice Leigh, 1959
John Alfred Lewis, 1957
Jaroslav Lorenc, 1959
Robert James MacDonald, 1962
James Stewart McNaughton, 1955
James Alexander Mackie, 1957
Kevin McLeod Marjoribanks, 1959
James Miller, 1957
Cyril Earl Miller, 1960
Lincoln Tim Kui Moo, 1961
Vincent John Moran, 1955
Marlina Nea Moses, 1960
Gordon Mowbray, 1958
William Mowbray, 1957
Peter Lawrence Wilson Muir, 1956
Barry John Frederick Myers, 1962
Alexander Newton, 1956
William Inette Newton, 1962
Raymond John Nolan, 1962
Eric Francis Palmer, 1958
Kenneth Ruben Pemberton, 1960
Guido Peter Pes, 1962
Roger Oliver Prince, 1956
Bruce William Proudfoot, 1962
Harold Walter Read, 1962
Barbara Rees — Sister Mary Julie, 1962
Harold John Rigby, 1959
John Roberts, 1958
John McKay Robinson, 1960
George Maxwell Rogers, 1958
John Roland Rogers, 1960
Frederick Harold Ross, 1956
Brian Lawrence Rowe, 1960
John Sale, 1961
Jeffrey Sams, 1960
Philip John Schofield, 1960
Thomas Charles Scott, 1960
Judith Bentley Sharp, 1962
Albert William Shearer, 1958
John Robert Simpson, 1960
John William Simpson, 1962
Monica Sinclair — Sister Mary Stanislaus, 1962
Lola Beverley Skelton, 1962
David Henry Skinner, 1958
Sylvia Constance Smith, 1961
Bryan Gilbert Smith, 1960
Alan Walter Stein, 1956
Geoffrey Malcolm Stephens, 1957
James Rosevear Stephens, 1962

POST-GRADUATE DIPLOMAS

Diploma in Education

Thomas Akre, 1961
Allen Raymond Andrews, 1961
John Raymond Atherton, 1961
Marie Rose Baldwin, 1962
Irene Janice Belford, 1962
Annette Marjorie Bowe, 1961
Brian Joseph Brown, 1960
Doreen Bronwyn Brown, 1962
Marian EIsbeth Brown, 1961
Mary Callen, 1961
Sandra Clare Caskey, 1962
Hilary Ethel Charker, 1960
Terence John Collins, 1962
Marion Mildred Crothall, 1962
Harry Robertson Davidson, 1961
Judith Ann Davies, 1962
Mary Carmel Dick, 1962
Robyn Ann Ellicott, 1960
Kenneth John Ellis, 1960
Robyn Georhia Garner, 1960
John Francis Hill, 1960
John Gordon Hinde, 1960
Janice Lily Humphreys, 1961
Yvonne Kruemer, 1961
Ronald Maurice Leigh, 1960
Margaret Estelle McDermott, 1960
Allan Bruce McGregor, 1961
Eileen McHugh, 1960
John David McMahon, 1960
Patricia Ann McMaHon, 1962
Kevin McLeod Marjoribanks, 1960
Maureen Markham, 1961
Denise Marie Neville, 1962
Geraldine Elizabeth Pears, 1961
Brian John Proctor, 1962
John Michael Quinn, 1960
Helen Josephine Rice, 1961
Harold John Rigby, 1960
John McKay Robinson, 1961
Kay Rolfe, 1962
Yvonne Russell, 1962
Eileen Jill Symes, 1961
Kathleen Frances Temple, 1962
Annabel Waterhouse, 1962
Judith Margory Jane Wilson, 1962
### Department of Chemical Engineering and Industrial Chemistry

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering I</td>
<td>10-1</td>
<td>M125</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F/T and P/T</td>
<td>6</td>
<td>2-5</td>
<td>M125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering IIA</td>
<td>9-12</td>
<td>M124</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F/T and P/T</td>
<td>6</td>
<td>2-5</td>
<td>M124</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering IIA(T)</td>
<td>10-12</td>
<td>M124</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F/T and P/T</td>
<td>5</td>
<td>2-5</td>
<td>M124</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering IIB</td>
<td>6-9</td>
<td>S17</td>
<td>9-1</td>
<td>S32</td>
<td>1.30-5.30</td>
<td>M124</td>
</tr>
<tr>
<td></td>
<td>F/T and P/T</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F/T and P/T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Industrial Chemistry I</td>
<td>6, 7</td>
<td>M125</td>
<td>9-11.30</td>
<td>M124</td>
<td>9-11.30</td>
<td>M124</td>
</tr>
<tr>
<td></td>
<td>F/T and P/T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Department of Metallurgy

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metallurgy I Lectures F/T</td>
<td>5</td>
<td>MGO8</td>
<td>9</td>
<td>MGO8</td>
<td>12</td>
<td>MGO8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7-9.30a</td>
<td>E18</td>
<td>10</td>
<td>MGO8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>MGO8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P/T</td>
<td>5</td>
<td>MGO8</td>
<td>9p</td>
<td>MGO8</td>
<td>5</td>
<td>MGO8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7-9.30a</td>
<td>E18</td>
<td>4q</td>
<td>MGO8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory F/T</td>
<td>5</td>
<td></td>
<td>1.30-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P/T</td>
<td>5</td>
<td></td>
<td>10-12.30r</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.30-4s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metallurgy IIA</td>
<td>3</td>
<td>M125</td>
<td>5</td>
<td>M125</td>
<td>5</td>
<td>M125</td>
</tr>
<tr>
<td></td>
<td>Lectures F/T and P/T</td>
<td>3</td>
<td></td>
<td>1.30-4.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory F/T and P/T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metallurgy IIB</td>
<td>7</td>
<td>M125</td>
<td>6, 7</td>
<td>MGO8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lectures F/T and P/T</td>
<td>7</td>
<td>5</td>
<td>M125</td>
<td>6, 7</td>
<td>MGO8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7, 8</td>
<td>MGO8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory F/T and P/T</td>
<td>2½</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project F/T and P/T</td>
<td>3½</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Times to be arranged for individual students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.922 Materials Science</td>
<td>2</td>
<td>F/T and P/T</td>
<td></td>
<td>4, 5</td>
<td>E33</td>
<td></td>
</tr>
</tbody>
</table>
### DEPARTMENT OF ARCHITECTURE

**FULL-TIME DEGREE COURSE XIF**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YEAR I</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.111 Design I</td>
<td>1</td>
<td>Tu. 2–3</td>
<td>C31</td>
</tr>
<tr>
<td>11.121 Construction I</td>
<td>4</td>
<td>F. 9–1</td>
<td>C31</td>
</tr>
<tr>
<td>11.222 Structures I</td>
<td>2</td>
<td>M. 3–5</td>
<td>C31</td>
</tr>
<tr>
<td>11.231 Building Science I</td>
<td>2</td>
<td>M. 1–3</td>
<td>C31</td>
</tr>
<tr>
<td>11.121 History of Architecture I</td>
<td>1</td>
<td>Tu. 1–2</td>
<td>C31</td>
</tr>
<tr>
<td>11.131 Drawing I (A) Architectural</td>
<td>3</td>
<td>M. 6–9</td>
<td>C31</td>
</tr>
<tr>
<td>(B) Freehand</td>
<td>3</td>
<td>Tu. 9–12</td>
<td>C31</td>
</tr>
<tr>
<td>(C) Descriptive Geometry</td>
<td>3</td>
<td>W. 9–12</td>
<td>C31</td>
</tr>
<tr>
<td>11.611 Building Trades Workshop</td>
<td>3</td>
<td>Tu. 1–4 ('B' week) Th. 1–4 ('A' week)</td>
<td>S.B.T.</td>
</tr>
<tr>
<td>11.121 History of Architecture I</td>
<td>1</td>
<td>W. 7–8</td>
<td>C31</td>
</tr>
<tr>
<td>11.132 Drawing II (A) Architectural</td>
<td>3</td>
<td>W. 2–5</td>
<td>C30</td>
</tr>
<tr>
<td>(B) Freehand</td>
<td>3</td>
<td>Th. 9–12</td>
<td>C30</td>
</tr>
<tr>
<td>Humanities I</td>
<td>3</td>
<td>M. 9–10, Tu. 9–10</td>
<td>W. 9–10</td>
</tr>
<tr>
<td><strong>YEAR II</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.112 Design II</td>
<td>7</td>
<td>Tu. 10–1, Th. 1–5</td>
<td>C30</td>
</tr>
<tr>
<td>11.222 Structures II</td>
<td>2</td>
<td>Tu. 2–4</td>
<td>C30</td>
</tr>
<tr>
<td>8.211 Building Science III</td>
<td>2</td>
<td>Th. 8–10</td>
<td>E32</td>
</tr>
<tr>
<td>11.122 History of Architecture II</td>
<td>1</td>
<td>W. 7–8</td>
<td>C31</td>
</tr>
<tr>
<td>11.132 Drawing II (A) Architectural</td>
<td>3</td>
<td>W. 2–5</td>
<td>C30</td>
</tr>
<tr>
<td>(B) Freehand</td>
<td>3</td>
<td>Th. 9–12</td>
<td>C30</td>
</tr>
<tr>
<td>Humanities I</td>
<td>3</td>
<td>M. 9–10, Tu. 9–10,</td>
<td>W. 9–10</td>
</tr>
<tr>
<td><strong>YEAR III</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.113 Design III</td>
<td>13</td>
<td>W. 2–5, Th. 10–1, Th. 2–5, F. 9–1</td>
<td>E38</td>
</tr>
<tr>
<td>11.223 Structures III</td>
<td>2</td>
<td>Tu. 7–9, F. 2–6</td>
<td>C30, E38</td>
</tr>
<tr>
<td>11.233 Building Science III</td>
<td>1</td>
<td>W. 12–1</td>
<td>E38</td>
</tr>
<tr>
<td>11.123 History of Architecture III</td>
<td>1</td>
<td>W. 6–7</td>
<td>C31</td>
</tr>
<tr>
<td>11.241 Building Services A</td>
<td>1</td>
<td>Th. 5–6</td>
<td>E38</td>
</tr>
<tr>
<td>8.411 Surveying</td>
<td>1</td>
<td>W. 7–8</td>
<td>E47</td>
</tr>
<tr>
<td>Humanities II</td>
<td>3</td>
<td>Tu. 10–12, Th. 9–10</td>
<td>E41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>

### PART-TIME DEGREE COURSE XIP

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STAGE I (Unit 1A)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.121 History I</td>
<td>1</td>
<td>Th. 1–2</td>
<td>C31</td>
</tr>
<tr>
<td>11.131 Drawing I (B) Freehand</td>
<td>3</td>
<td>Tu. 9–12</td>
<td>C31</td>
</tr>
<tr>
<td>(C) Descriptive Geometry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.051 Mathematics</td>
<td>2</td>
<td>W. 9–11</td>
<td>C31</td>
</tr>
<tr>
<td>1.011 Physics</td>
<td>2</td>
<td>F. 2–4</td>
<td>M203</td>
</tr>
<tr>
<td><strong>STAGE II (Unit 1B)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.221 Structures I</td>
<td>2</td>
<td>M. 3–5</td>
<td>C31</td>
</tr>
<tr>
<td>11.231 Building Science I</td>
<td>1</td>
<td>M. 1–3</td>
<td>C31</td>
</tr>
<tr>
<td>11.131 Drawing I (A) Architectural</td>
<td>3</td>
<td>M. 6–9</td>
<td>C31</td>
</tr>
<tr>
<td>11.611 Building Trades Workshop</td>
<td>3</td>
<td>Tu. 1–4 ('B' week)</td>
<td>S.B.T.</td>
</tr>
<tr>
<td><strong>PART-TIME DEGREE COURSE XIB (1958 Conditions)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.134* Specifications</td>
<td>1</td>
<td>W. 6–7</td>
<td>E38</td>
</tr>
<tr>
<td>11.135</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.204 Building Services B</td>
<td>2</td>
<td>M. 6–8</td>
<td>C30</td>
</tr>
<tr>
<td>11.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.164* Building Science IV</td>
<td>1</td>
<td>Not offered in 1963</td>
<td></td>
</tr>
<tr>
<td>11.144</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.74 Building Construction IV</td>
<td>3</td>
<td>W. 7–8 (T1 only)</td>
<td>C31</td>
</tr>
<tr>
<td>8.124* Architectural Design IV</td>
<td>1</td>
<td>W. 7–8 (T1 only)</td>
<td>C31</td>
</tr>
<tr>
<td>11.44 History of Architecture IV</td>
<td>3</td>
<td>Th. 1–4</td>
<td>C31</td>
</tr>
<tr>
<td>Humanities II</td>
<td>3</td>
<td>Th. 7–9, W. 8–9</td>
<td>M218</td>
</tr>
<tr>
<td><strong>STAGE V</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.95 Architectural Design V</td>
<td>3</td>
<td>Th. 1–4</td>
<td>C31</td>
</tr>
<tr>
<td>11.105 Structural Design B</td>
<td>2</td>
<td>Th. 8–10</td>
<td>C30</td>
</tr>
<tr>
<td>8.125* Planning Research</td>
<td>1</td>
<td>W. 7–8</td>
<td>E38</td>
</tr>
<tr>
<td>11.115 Professional Practice</td>
<td>1</td>
<td>W. 8–9</td>
<td>E38</td>
</tr>
<tr>
<td>11.215 Estimating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DIPLOMA COURSE XI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.96 Architectural Design D</td>
<td>3</td>
<td>Th. 1–4 (T1 only)</td>
<td>C31</td>
</tr>
<tr>
<td>11.186 Civic Architecture</td>
<td>3</td>
<td>Th. 1–4 (T2 only)</td>
<td>C31</td>
</tr>
<tr>
<td>11.196 Town Planning</td>
<td>2</td>
<td>F. 12–2 (T1 &amp; T2 only)</td>
<td>C31</td>
</tr>
<tr>
<td>11.176 Thesis</td>
<td>3</td>
<td>By appointment with supervisors in T3 only.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ARCHITECTURE DEGREE CONVERSION COURSE XIC</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Details available from the Head of the Department.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Equivalent subjects in Architectural Diploma Course XI. Students concerned should contact the Department of Architecture for further information.

---

256
<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M218</td>
<td>M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M218</td>
<td>12 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5, 6 M233</td>
<td>5, 6 M233</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 M218</td>
<td>11 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M140</td>
<td>12 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M218</td>
<td>M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M140</td>
<td>12 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6, 9 A20</td>
<td>6, 9 A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10, 4 M139</td>
<td>10, 4 M139</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5, 7 M139</td>
<td>5, 7 M139</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 M218</td>
<td>4 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 A1</td>
<td>4 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 M140</td>
<td>1 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 M218</td>
<td>4 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M218</td>
<td>12 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 A1</td>
<td>4 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8 A1</td>
<td>8 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6, 9 A20</td>
<td>6, 9 A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10, 11 E41</td>
<td>10, 11 E41</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7, 8 M218</td>
<td>7, 8 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 A1</td>
<td>2 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 a.m. A1</td>
<td>9 a.m. A1</td>
<td></td>
</tr>
</tbody>
</table>

FIRST YEAR

No. | Name                      | Hours per week | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M218</td>
<td>M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M218</td>
<td>12 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5, 6 M233</td>
<td>5, 6 M233</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 M218</td>
<td>11 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M140</td>
<td>12 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M218</td>
<td>M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M140</td>
<td>12 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6, 9 A20</td>
<td>6, 9 A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10, 4 M139</td>
<td>10, 4 M139</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5, 7 M139</td>
<td>5, 7 M139</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 M218</td>
<td>4 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 A1</td>
<td>4 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 M140</td>
<td>1 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 M218</td>
<td>4 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M218</td>
<td>12 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 A1</td>
<td>4 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8 A1</td>
<td>8 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6, 9 A20</td>
<td>6, 9 A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10, 11 E41</td>
<td>10, 11 E41</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7, 8 M218</td>
<td>7, 8 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 A1</td>
<td>2 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 a.m. A1</td>
<td>9 a.m. A1</td>
<td></td>
</tr>
</tbody>
</table>

SECOND YEAR

No. | Name                      | Hours per week | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M218</td>
<td>M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M218</td>
<td>12 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5, 6 M233</td>
<td>5, 6 M233</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 M218</td>
<td>11 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M140</td>
<td>12 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6, 9 A20</td>
<td>6, 9 A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10, 4 M139</td>
<td>10, 4 M139</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5, 7 M139</td>
<td>5, 7 M139</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 M218</td>
<td>4 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 A1</td>
<td>4 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 M140</td>
<td>1 M140</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 M218</td>
<td>4 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 M218</td>
<td>12 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 A1</td>
<td>4 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8 A1</td>
<td>8 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6, 9 A20</td>
<td>6, 9 A20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10, 11 E41</td>
<td>10, 11 E41</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7, 8 M218</td>
<td>7, 8 M218</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 A1</td>
<td>2 A1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 a.m. A1</td>
<td>9 a.m. A1</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Hours per week</td>
<td>MONDAY</td>
<td>TUESDAY</td>
<td>WEDNESDAY</td>
<td>THURSDAY</td>
<td>FRIDAY</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------</td>
<td>----------------</td>
<td>--------</td>
<td>---------</td>
<td>-----------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### THIRD YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Type</th>
<th>Hours per week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics III</td>
<td>F/T</td>
<td>7</td>
<td>9, 4</td>
<td>M203</td>
<td>10</td>
<td>M220</td>
<td>10, 11</td>
</tr>
<tr>
<td></td>
<td>P/T</td>
<td>7</td>
<td>5, 6</td>
<td>A2</td>
<td>6</td>
<td>M220</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>M220</td>
<td>7</td>
<td>M233</td>
<td>7, 8</td>
</tr>
<tr>
<td>Education II</td>
<td></td>
<td>3</td>
<td>8, 9</td>
<td>A1</td>
<td>7</td>
<td>M139</td>
<td></td>
</tr>
<tr>
<td>English III</td>
<td>F/T</td>
<td>3</td>
<td>11</td>
<td>M140</td>
<td>10</td>
<td>M140</td>
<td>9, 10</td>
</tr>
<tr>
<td></td>
<td>P/T</td>
<td>3</td>
<td>7</td>
<td>M139</td>
<td>8, 9</td>
<td>M139</td>
<td></td>
</tr>
<tr>
<td>French III</td>
<td></td>
<td>6</td>
<td>3</td>
<td>A2</td>
<td>5</td>
<td>A2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5, 6</td>
<td>M140</td>
<td>6</td>
<td>M139</td>
<td>6</td>
</tr>
<tr>
<td>Geography III</td>
<td></td>
<td>4</td>
<td>5, 7</td>
<td>M140</td>
<td>5, 6</td>
<td>M140</td>
<td></td>
</tr>
<tr>
<td>German III</td>
<td></td>
<td>6</td>
<td>5, 6</td>
<td>M235</td>
<td>6</td>
<td>M140</td>
<td>5</td>
</tr>
<tr>
<td>History III</td>
<td>F/T</td>
<td>4</td>
<td>11, 12</td>
<td>M139</td>
<td>10</td>
<td>A1</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>P/T</td>
<td>4</td>
<td>8, 9</td>
<td>A2</td>
<td>8, 9</td>
<td>M139</td>
<td></td>
</tr>
<tr>
<td>Latin III</td>
<td></td>
<td>4</td>
<td>10</td>
<td>A2</td>
<td>9 a.m.</td>
<td>A20</td>
<td>10</td>
</tr>
<tr>
<td>Philosophy III</td>
<td></td>
<td>4</td>
<td>3</td>
<td>A20</td>
<td>10</td>
<td>A21</td>
<td>4</td>
</tr>
<tr>
<td>Psychology III</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>5, 6, 7</td>
<td>M224</td>
</tr>
</tbody>
</table>

* Times to be arranged with individual students.

### FOURTH YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics IV</td>
<td>8</td>
<td>5, 6</td>
<td>C18</td>
<td>5, 6</td>
<td>C18</td>
<td>5, 6</td>
</tr>
<tr>
<td>Education III</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English IV</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>French IV</td>
<td>5</td>
<td>3, 4, 5</td>
<td>A21</td>
<td>9, 10</td>
<td>A21</td>
<td></td>
</tr>
<tr>
<td>Geography IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>German IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greek IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Times to be arranged with individual students.
DIVISION OF COMMERCE

REVISED COURSE

A new course is being introduced in 1963. Students enrolled in 1962 or earlier years will be given advanced standing in the new course. Each student will receive notification of advanced standing by letter, and should not enrol until this has been received.

Department of Accountancy

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MONDAY</td>
<td>TUESDAY</td>
<td>WEDNESDAY</td>
<td>THURSDAY</td>
<td>FRIDAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accounting I  
F/T  4  
10, 11 M220  
10, 11 M220

Accounting II  
P/T  4  
7, 8 M203  
7, 8 M220

Accounting III  
P/T  4  
7, 8 M220  
7, 8 M220

Accounting IV  
P/T  4  
7, 8 M220  
7, 8 M220

Accounting Seminar III  
P/T  3  
7, 8 M220  
7, 8 M220

Advanced Cost Accounting  
P/T  3  
7, 8 M220  
7, 8 M220

Taxation  
P/T  2  
2, 3 M220  
2, 3 M220

Auditing  
P/T  2  
2, 3 M220  
2, 3 M220

Law I  
P/T  2  
2, 3 M220  
2, 3 M220

Law II  
P/T  2  
2, 3 M220  
2, 3 M220

Business Finance  
P/T  2  
2, 3 M220  
2, 3 M220

Department of Economics

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Microeconomics  
F/T  3  
5, 6 M233  
5, 6 M233

Elementary Economic Statistics  
P/T  1  
3, 4 M233  
3, 4 M233

Macroeconomics  
P/T  1  
3, 4 M233  
3, 4 M233

Money, Credit and Financial Institutions  
P/T  2  
3, 4 M233  
3, 4 M233

Labour Economics  
P/T  2  
3, 4 M233  
3, 4 M233

International Economics  
P/T  1  
3, 4 M233  
3, 4 M233

Public Economics  
P/T  1  
3, 4 M233  
3, 4 M233

Statistical Methods II  
P/T  2  
3, 4 M233  
3, 4 M233

Seminar in Economic Theory and Problems  
P/T  2  
3, 4 M233  
3, 4 M233

History of Economic Thought  
P/T  2  
3, 4 M233  
3, 4 M233

Fluctuations and Growth  
P/T  2  
3, 4 M233  
3, 4 M233

Industry Economics  
P/T  2  
3, 4 M233  
3, 4 M233

Welfare Economics  
P/T  2  
3, 4 M233  
3, 4 M233

* Part of year only.
**DIVISION OF ENGINEERING**

For Students in Other Divisions

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>5.001A/B Tu. 6-9 or F. 2-5 ......... E33</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.001C Th. 2-4 ............... E33</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.001D Th. 4-5 ............... E41</td>
<td></td>
</tr>
</tbody>
</table>

For Full-time Engineering Students

COMMON FIRST YEAR

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics I</td>
<td>6</td>
<td>Lect. Tu. 12-1, W. 11-12, Th. 10-11 ............... S52</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab. W. 1-4 ............... S42</td>
<td></td>
</tr>
<tr>
<td>Chemistry I</td>
<td>6</td>
<td>Lect. M. 9-10, Tu. 11-12, Th. 11-12 ............... S35</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab. Tu. 2-5 or F. 1-4 ............... S25</td>
<td></td>
</tr>
<tr>
<td>Mathematics I</td>
<td>6</td>
<td>Tu. 9-11, W. 9-11, Th. 9-10, Th. 12-1 .......... M203</td>
<td></td>
</tr>
<tr>
<td>Engineering I</td>
<td>6</td>
<td>5.001A/B M. 1-4 .......... E41, 10, 33, 5.001C M. 10-12 .......... 40, 44, 47</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.001D M. 4-5 .......... E41</td>
<td></td>
</tr>
</tbody>
</table>

YEAR II

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics II</td>
<td>4½</td>
<td>Tu. 12-1, F. 9-10, F. 10-12.30, Th. 9-10, W. 9-10 .......... M233, 235, 238</td>
<td></td>
</tr>
<tr>
<td>5.002 Descriptive Geometry</td>
<td>2</td>
<td>Tu. 2-4 .......... E33</td>
<td></td>
</tr>
<tr>
<td>5.501 Fluid Mechanics</td>
<td>2</td>
<td>Tu. 10-12 .......... E48</td>
<td></td>
</tr>
<tr>
<td>5.701 Thermodynamics</td>
<td>2</td>
<td>M. 2-3.30-4.30 .......... E48</td>
<td></td>
</tr>
<tr>
<td>8.112 Materials and Structures</td>
<td>3</td>
<td>Th. 2-5 .......... E40</td>
<td></td>
</tr>
<tr>
<td>Mathematics II</td>
<td>4</td>
<td>W. 2-4, Th. 9-11 .......... M233</td>
<td></td>
</tr>
<tr>
<td>Humanities I</td>
<td>3</td>
<td>M. 9-10, Tu. 9-10, W. 9-10 .......... M218</td>
<td></td>
</tr>
<tr>
<td>4.922 Materials Science</td>
<td>2</td>
<td>W. 4-6 .......... E33</td>
<td></td>
</tr>
<tr>
<td>(for Elec. and Mech. students only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.202 Mechanical Technology</td>
<td>1</td>
<td>Th. 11-12 .......... E41</td>
<td></td>
</tr>
<tr>
<td>(for Mech. students only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.101 Electric Circuit Theory</td>
<td>3</td>
<td>F. 2-5 .......... Wood St.</td>
<td></td>
</tr>
<tr>
<td>(for Elec. students only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geology II</td>
<td>3</td>
<td>To be arranged</td>
<td></td>
</tr>
<tr>
<td>(for Civil students only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.421 Surveying</td>
<td>2½</td>
<td>W. 10-12.30 .......... E48</td>
<td></td>
</tr>
<tr>
<td>(for Civil students only)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

YEAR III

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil Engineering</td>
<td>4</td>
<td>F. 9-1 .......... Wood St.</td>
<td></td>
</tr>
<tr>
<td>6.801 Electrical Engineering</td>
<td>6</td>
<td>W. 2-5, Th. 10-1 .......... E40</td>
<td></td>
</tr>
<tr>
<td>8.122 Structures</td>
<td>5½</td>
<td>W. 10-11, W. 11-12, Th. 2-4.30, Tu. 7-9 .......... E47, E47, E43, E48</td>
<td></td>
</tr>
<tr>
<td>8.221 Engineering Materials</td>
<td>3</td>
<td>F. 2-5 .......... E47</td>
<td></td>
</tr>
<tr>
<td>8.423 Surveying</td>
<td>2½</td>
<td>Tu. 2-4.30 .......... E46</td>
<td></td>
</tr>
<tr>
<td>8.611 Civil Engineering</td>
<td>3</td>
<td>Tu. 10-12, Th. 9-10 .......... E41</td>
<td></td>
</tr>
<tr>
<td>Humanities II</td>
<td></td>
<td>(Terms 1 and 2 only)</td>
<td></td>
</tr>
</tbody>
</table>

**YEAR IV**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Engineering</td>
<td>5</td>
<td>M. 9-12, W. 11-1 .......... E38</td>
<td></td>
</tr>
<tr>
<td>5.204 Mechanical Technology</td>
<td>2</td>
<td>W. 9-11 .......... E10</td>
<td></td>
</tr>
<tr>
<td>5.302 Theory of Machines</td>
<td>3</td>
<td>Th. 10-1 .......... E33</td>
<td></td>
</tr>
<tr>
<td>5.502 Fluid Mechanics</td>
<td>3</td>
<td>F. 2-5 .......... E44</td>
<td></td>
</tr>
<tr>
<td>5.702 Thermodynamics</td>
<td>3</td>
<td>Th. 1.30-4.30 .......... E44</td>
<td></td>
</tr>
<tr>
<td>6.801 Electrical Engineering</td>
<td>4</td>
<td>F. 9-1 .......... Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.133 Structures</td>
<td>3</td>
<td>W. 2-5 .......... E40</td>
<td></td>
</tr>
<tr>
<td>8.142 Engineering Computations</td>
<td>2</td>
<td>Tu. 2-4 .......... E48</td>
<td></td>
</tr>
<tr>
<td>Humanities II</td>
<td>3</td>
<td>Tu. 10-12, Th. 9-10 .......... E41</td>
<td></td>
</tr>
<tr>
<td>Honours Mathematics</td>
<td>2</td>
<td>To be arranged</td>
<td></td>
</tr>
</tbody>
</table>

**Mechanical Engineering**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.101 Mechanical Engineering Design</td>
<td>5</td>
<td>M. 2-5, Tu. 11-1 .......... E46, E47</td>
<td></td>
</tr>
<tr>
<td>5.204 Mechanical Technology</td>
<td>2</td>
<td>Tu. 2-4 .......... E48</td>
<td></td>
</tr>
<tr>
<td>5.302 Theory of Machines</td>
<td>5½</td>
<td>Th. 10-12.30, F. 9-12 .......... E47</td>
<td></td>
</tr>
<tr>
<td>5.502 Fluid Mechanics</td>
<td>3</td>
<td>Th. 2-5 .......... E46</td>
<td></td>
</tr>
<tr>
<td>5.611 Mechanical Engineering</td>
<td>4½</td>
<td>M. 6-8, W. 6-8.30 .......... E46</td>
<td></td>
</tr>
<tr>
<td>Honours Mathematics</td>
<td>2</td>
<td>To be arranged</td>
<td></td>
</tr>
<tr>
<td>Honours Structures</td>
<td>1</td>
<td>M. 12-1 .......... E47</td>
<td></td>
</tr>
<tr>
<td>Honours Materials</td>
<td>1</td>
<td>Tu. 10-11 .......... E47</td>
<td></td>
</tr>
<tr>
<td>Honours Hydraulics</td>
<td>1</td>
<td>Tu. 9-10 .......... E47</td>
<td></td>
</tr>
<tr>
<td>Thesis</td>
<td>4</td>
<td>W. 9-12, W. 2-5 .......... E46</td>
<td></td>
</tr>
</tbody>
</table>

**Civil Engineering**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.801 Electrical Engineering</td>
<td>4</td>
<td>F. 9-1 .......... Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.122 Structures</td>
<td>6</td>
<td>W. 2-5, Th. 10-1 .......... E40</td>
<td></td>
</tr>
<tr>
<td>8.221 Engineering Materials</td>
<td>5½</td>
<td>W. 10-11, W. 11-12, Th. 2-4.30, Tu. 7-9 .......... E47, E47, E43, E48</td>
<td></td>
</tr>
<tr>
<td>8.423 Surveying</td>
<td>3</td>
<td>F. 2-5 .......... E47</td>
<td></td>
</tr>
<tr>
<td>8.611 Civil Engineering</td>
<td>2½</td>
<td>Tu. 2-4.30 .......... E46</td>
<td></td>
</tr>
<tr>
<td>Humanities II</td>
<td>3</td>
<td>Tu. 10-12, Th. 9-10 .......... E41</td>
<td></td>
</tr>
</tbody>
</table>

**Mechanical Engineering**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.101 Mechanical Engineering Design</td>
<td>3</td>
<td>Tu. 2-5 .......... E38</td>
<td></td>
</tr>
<tr>
<td>5.321/2 Automatic Control Engineering</td>
<td>3</td>
<td>M. 9-12 .......... E43</td>
<td></td>
</tr>
<tr>
<td>5.304/5 Theory of Machines</td>
<td>3</td>
<td>Tu. 9-12 .......... E40</td>
<td></td>
</tr>
<tr>
<td>5.503 Fluid Mechanics</td>
<td>2</td>
<td>W. 9-12 .......... E43</td>
<td></td>
</tr>
<tr>
<td>5.703 Thermodynamics</td>
<td>2</td>
<td>F. 9-12 .......... E46</td>
<td></td>
</tr>
<tr>
<td>6.802 Electrical Engineering</td>
<td>3</td>
<td>Th. 6.30-9.30 .......... Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.121 Engineering Administration</td>
<td>3</td>
<td>W. 2-5 .......... E44</td>
<td></td>
</tr>
<tr>
<td>Seminar</td>
<td>1½</td>
<td>F. 12.30-2 .......... E43</td>
<td></td>
</tr>
<tr>
<td>5.601 Mechanical Engineering</td>
<td>6</td>
<td>W. 9-12, Th. 9-12 .......... E43</td>
<td></td>
</tr>
<tr>
<td>Honours Mathematics</td>
<td>2</td>
<td>To be arranged</td>
<td></td>
</tr>
<tr>
<td>Thesis</td>
<td>4</td>
<td>M. 1-5 .......... E43</td>
<td></td>
</tr>
</tbody>
</table>
### STAGE IV

#### Civil Engineering

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.122/2 Structures</td>
<td>3</td>
<td>Th. 10-1 or F. 6-9. . . . . . . . . . E48</td>
<td></td>
</tr>
<tr>
<td>8.23D Materials of Construction</td>
<td>2½</td>
<td>Th. 6-8.30 or Th. 2-4.30 E47, E43</td>
<td></td>
</tr>
<tr>
<td>8.53D Fluid Mechanics</td>
<td>1</td>
<td>Tu. 7-8. . . . . . . . . . . . . . . . E48</td>
<td></td>
</tr>
<tr>
<td>8.63A Engineering Construction</td>
<td>1</td>
<td>W. 8-9 (Terms 1 and 2 only) . . . . . E48</td>
<td></td>
</tr>
<tr>
<td>8.73D Soil Mechanics</td>
<td>1</td>
<td>W. 7-8 (Terms 1 and 2) . . . . . . . . E48</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>W. 6-9 (Term 3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil Mechanics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics II (Statistics part only)</td>
<td></td>
<td>Humanities I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M. 6-7, Tu. 6-7, W. 6-7. . . . . . . . M218</td>
<td></td>
</tr>
</tbody>
</table>

#### Electrical Engineering

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.23B Electric Power Engineering</td>
<td>3</td>
<td>W. 1.30-4.30 . . . . . . . . . . . . . . Wood St.</td>
<td></td>
</tr>
<tr>
<td>6.303B Electronics</td>
<td>3</td>
<td>Th. 6.30-9.30 . . . . . . . . . . . . . . Wood St.</td>
<td></td>
</tr>
</tbody>
</table>

#### Mechanical Engineering

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.302 Theory of Machines</td>
<td>2½</td>
<td>Th. 9-12 . . . . . . . . . . . . . . . . E33</td>
<td></td>
</tr>
<tr>
<td>5.501 Fluid Mechanics</td>
<td>2</td>
<td>Tu. 3-5 . . . . . . . . . . . . . . . . E48</td>
<td></td>
</tr>
<tr>
<td>5.702 Thermodynamics</td>
<td>2½</td>
<td>Th. 12-1, Th. 1.30-3 . . . . . . . . . . E44</td>
<td></td>
</tr>
<tr>
<td>6.802 Electrical Engineering</td>
<td>3</td>
<td>Th. 6.30-9.30 . . . . . . . . . . . . . . Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.123 Structures</td>
<td>3</td>
<td>Tu. 7-8.30, W. 7-8.30 . . . . . . . . E43</td>
<td></td>
</tr>
<tr>
<td>Humanities I</td>
<td>3</td>
<td>M. 6-7, Tu. 6-7, W. 6-7. . . . . . . . M218</td>
<td></td>
</tr>
</tbody>
</table>

### STAGE V

#### Civil Engineering

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.801 Electrical Engineering</td>
<td>3</td>
<td>Th. 6-9 . . . . . . . . . . . . . . . . Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.44D Surveying</td>
<td>1½</td>
<td>Tu. 6-8 . . . . . . . . . . . . . . . . E44</td>
<td></td>
</tr>
<tr>
<td>8.63B Hydrology</td>
<td>2½</td>
<td>Tu. 2-4.30 . . . . . . . . . . . . . . . . E46</td>
<td></td>
</tr>
<tr>
<td>8.64A Public Health Engineering</td>
<td>2</td>
<td>Th. 11-12 or M. 8-9 . . . . . . . . . . M203</td>
<td></td>
</tr>
<tr>
<td>8.64B Road Engineering</td>
<td>2</td>
<td>Th. 11-12 or M. 8-9 . . . . . . . . . . M203</td>
<td></td>
</tr>
<tr>
<td>8.65A Railway Engineering</td>
<td>2</td>
<td>Th. 11-12 or M. 8-9 . . . . . . . . . . M203</td>
<td></td>
</tr>
<tr>
<td>8.65B Harbours and Rivers Engineering</td>
<td>3</td>
<td>Th. 6.30-9.30 . . . . . . . . . . . . . . Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.65C Irrigation Engineering</td>
<td>3</td>
<td>Th. 6.30-9.30 . . . . . . . . . . . . . . Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.65D Hydro-Electric Engineering</td>
<td>2</td>
<td>Th. 6.30-9.30 . . . . . . . . . . . . . . Wood St.</td>
<td></td>
</tr>
<tr>
<td>8.924 Properties of Materials</td>
<td>3</td>
<td>F. 2-5 . . . . . . . . . . . . . . . . E48</td>
<td></td>
</tr>
<tr>
<td>11.196 Town Planning</td>
<td>2</td>
<td>To be arranged</td>
<td></td>
</tr>
<tr>
<td>Seminar</td>
<td>1</td>
<td>To be arranged</td>
<td></td>
</tr>
</tbody>
</table>

#### Electrical Engineering

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.922 Materials Science</td>
<td>2</td>
<td>W. 4-6 . . . . . . . . . . . . . . . . E33</td>
<td></td>
</tr>
<tr>
<td>5.304 Theory of Machines</td>
<td>2</td>
<td>Tu. 7-9 . . . . . . . . . . . . . . . . E40</td>
<td></td>
</tr>
<tr>
<td>8.42A Surveying</td>
<td>1</td>
<td>Th. 6-7 (Term 3) . . . . . . . . . . . . . E44</td>
<td></td>
</tr>
</tbody>
</table>

The timetables from this point refer to the old part-time B.E. course, details of which are in the 1959 Handbook.
## STAGE V

### Mechanical Engineering

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
<th>Times of Classes</th>
<th>Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.103 Mechanical Engineering Design</td>
<td>3</td>
<td>Th. 6–9</td>
<td>E38</td>
</tr>
<tr>
<td>5.502 Fluid Mechanics</td>
<td>2½</td>
<td>F. 2–5</td>
<td>E44</td>
</tr>
<tr>
<td>5.703 Thermodynamics</td>
<td>1½</td>
<td>F. 12.30–2</td>
<td>E43</td>
</tr>
</tbody>
</table>

### STAGE VI

#### Civil Engineering

- Physics II
- Geology IIE
- Structures
- Applied Hydraulics
- Mathematics II Part 2

#### Mechanical Engineering

- Theory of Architecture
- Humanities II
- Thermodynamics
- Fluid Mechanics

#### Electrical Engineering

- Humanities II
- Electrical Machines

### STAGE VII

#### Civil Engineering

- Engineering Computation
- Engineering Construction
- Engineering Administration
- Professional Elective A
- Professional Elective B
- Thesis

#### Mechanical Engineering

- Fluid Mechanics
- Thermodynamics
- Theory of Machines
- Engineering Computation
- Mechanical Engineering Design

#### Electrical Engineering

- Power Systems
- Project/Thesis/Seminar

### SERVICING FOR OTHER DEPARTMENTS AND DIVISIONS

- Engineering Administration
- Humanities II

### EQUIVALENT SUBJECTS

Students in the later stages of the old part-time B.E. course will do the following subjects from the new course in lieu of the old subjects indicated below:

- Fluid Mechanics
- Thermodynamics
- Fluid Dynamics
- Theory of Machines
- Design
- Fluid Mechanics

---

**Note:**

- Time by arrangement
- Not available 1963
- To be arranged
- Subjects from the new course in lieu of the old subjects indicated below:
# DIVISION OF SCIENCE

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ROOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## FIRST YEAR

- **Chemistry I**
  - Lectures F/T: 3 hours per week
    - Mon: 9:00 S35
    - Tue-Wed: 11:00 S35
    - Thu: 11:00 S35
  - P/T: 3 hours per week
    - Mon: 5:00 S35
    - Tue-Wed: 6:00 S35

- **Geology I**
  - Lectures F/T: 2 hours per week
    - Mon: 10:00 S37, S33
  - P/T: 2 hours per week
    - Mon: 6:00 S37

- **Geology II**
  - Lectures F/T: 1 hour per week
    - Mon: 11:00 S37
  - P/T: 1 hour per week
    - Mon: 7:00 S37

- **Geology IE**
  - Lectures F/T: 3 hours per week
    - Times to be arranged
  - P/T: 3 hours per week
    - Times to be arranged

## Mathematics I

- F/T: 6 hours per week
  - Mon: 9:00 M233
  - Tue: 9:00 M235
  - Wed: 9:00 M238
  - Thu: 9:00 M235
  - Fri: 9:00 M238

- P/T: 6 hours per week
  - Mon: 9:00 M233
  - Wed: 9:00 M238

- (Science)
  - P/T: 6 hours per week
    - Mon: 9:00 M233
    - Wed: 5:00 M233
    - Thu: 7:00 M233

- (Applied Science)
  - P/T: 6 hours per week
    - Mon: 7:00 M233
    - Wed: 5:00 M233

- (Engineering)
  - P/T: 6 hours per week
    - Mon: 7:00 M233
    - Wed: 7:00 M233

- (no day training)
  - P/T: 6 hours per week
    - Mon: 7:00 M233

## 10.051 Mathematics

- F/T: 2 hours per week
  - Mon: 12:00 S52
  - Tue: 11:00 S52
  - Wed: 10:00 S52

## Physics I

- Lectures F/T: 3 hours per week
  - Mon: 5:00 S52
  - Tue-Wed: 5:00 S52
  - Thu: 6:00 S52

- Laboratory F/T: 3 hours per week
  - Mon: 2-5 S42
  - Tue-Wed: 1-4 S42

- P/T: 3 hours per week
  - Mon: 4-5 S30

*Engineering only.
†Excluding Engineering.
## SECOND YEAR

### Chemistry II Lectures 4

|  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| F/T | 12 | S35 | 10 | S35 | 10 | S35 | 12 | S52 |
| P/T | 5  | S37 | 5  | S35 | 5  | S35 | 5  | S52 |

**Laboratory 5**

|  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| F/T | 2-4.30 S3* | 2-4.30 S3* | 2-4.30 S42* | 2-4.30 S3* |
| P/T | 7-9.30 S42* | 7-9.30 S3* | S3† | MG24† |

### Chemistry IIT Lectures 3

|  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| F/T | 12 | S35 | 10 | S35 | 12 | S52 |
| P/T | 5  | S37 | 5  | S35 | 5  | S52 |

**Laboratory 5**

|  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|
| F/T | 2-4.30 S3* | 2-4.30 S3* | 2-4.30 S42* | 2-4.30 S3* |
| P/T | 7-9.30 S42* | 7-9.30 S3* | S3† | MG24† |

* First half-year.
† Second half-year.

### Schedule

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
<td>ROOM</td>
<td>TIME</td>
</tr>
<tr>
<td>9</td>
<td>Geology II F/T and P/T</td>
<td>2-5</td>
<td>S12</td>
<td>6-9</td>
<td>S1</td>
<td>2-5</td>
<td>S12</td>
</tr>
<tr>
<td>5</td>
<td>Pure Mathematics II F/T</td>
<td>10, 11</td>
<td>M203</td>
<td>12, 2, 3</td>
<td>M203</td>
<td>5</td>
<td>M235</td>
</tr>
<tr>
<td>5</td>
<td>P/T</td>
<td>7, 8</td>
<td>M203</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Applied Mathematics II F/T</td>
<td>10, 11</td>
<td>M203</td>
<td>5</td>
<td>M203</td>
<td>9, 10</td>
<td>M236</td>
</tr>
<tr>
<td>5</td>
<td>P/T</td>
<td>7, 8</td>
<td>M236</td>
<td>5</td>
<td>M235</td>
<td>7, 8</td>
<td>M238</td>
</tr>
<tr>
<td>4</td>
<td>Mathematics II F/T</td>
<td>2, 3</td>
<td>M233</td>
<td>9, 10</td>
<td>M233</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>P/T</td>
<td>7, 8</td>
<td>M233</td>
<td>7, 8</td>
<td>M218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Additional for Mathematics IIE</td>
<td>11er, 8er</td>
<td>M203</td>
<td>12sc</td>
<td>M203</td>
<td>8sc</td>
<td>M236</td>
</tr>
<tr>
<td>2</td>
<td>Mathematics II Part I P/T</td>
<td>2 - 4t</td>
<td>M233</td>
<td>7 - 9t</td>
<td>M218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mathematics II Part II P/T</td>
<td>7 - 9u</td>
<td>M233</td>
<td>9 - 11u</td>
<td>M233</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mathematics IIT F/T</td>
<td>2d</td>
<td>M233</td>
<td>9</td>
<td>M233</td>
<td>10a</td>
<td>M233</td>
</tr>
<tr>
<td>2</td>
<td>P/T</td>
<td>7</td>
<td>M233</td>
<td>7d</td>
<td>M218</td>
<td>8a</td>
<td>M233</td>
</tr>
<tr>
<td>4</td>
<td>Physics II Lectures F/T</td>
<td>12</td>
<td>S35</td>
<td>11</td>
<td>S37</td>
<td>11</td>
<td>S52</td>
</tr>
<tr>
<td>4</td>
<td>P/T</td>
<td>5</td>
<td>S40</td>
<td>5</td>
<td>S37</td>
<td>6</td>
<td>S35</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Hours per week</td>
<td>MONDAY TIME</td>
<td>TUESDAY TIME</td>
<td>WEDNESDAY TIME</td>
<td>THURSDAY TIME</td>
<td>FRIDAY TIME</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>--------------</td>
<td>----------------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ROOM</td>
<td>ROOM</td>
<td>ROOM</td>
<td>ROOM</td>
<td>ROOM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory F/T</td>
<td>5</td>
<td>2-4.30 S53</td>
<td>4-6.30 S53</td>
<td>2-4.30 S53</td>
<td>10-12.30 S53</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physics IIT Lectures F/T</td>
<td>2</td>
<td>12 S35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>5 S37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory F/T</td>
<td>2½</td>
<td></td>
<td></td>
<td></td>
<td>7-9.30 S53</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7-9.30 S53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physics IIE</td>
<td>5½</td>
<td></td>
<td></td>
<td></td>
<td>7-9.30 S53</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7-9.30 S53</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 S52</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemistry III Lectures</td>
<td>4</td>
<td>2 S1</td>
<td>12 S40</td>
<td>9 S1</td>
<td>10 S40</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory</td>
<td>8</td>
<td>6-10 S42*</td>
<td>1-5 S3*</td>
<td>MG24†</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 S42†</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemistry III N</td>
<td>12</td>
<td>5 S1</td>
<td>5 S1</td>
<td>5 S1</td>
<td>5* S1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 S1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* First half-year.
† Second half-year.
<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Hours per week</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MONDAY</td>
<td>TUESDAY</td>
<td>WEDNESDAY</td>
<td>THURSDAY</td>
<td>FRIDAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
<td>TIME ROOM</td>
</tr>
<tr>
<td></td>
<td>Laboratory F/T</td>
<td>5</td>
<td>2-4.30</td>
<td>S53</td>
<td>4-6.30</td>
<td>S53</td>
<td>2-4.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10-12.30</td>
</tr>
<tr>
<td></td>
<td>P/T</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7-9.30</td>
<td>S53</td>
<td>7-9.30</td>
<td>S53</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physics III T Lectures F/T</td>
<td>2</td>
<td>12</td>
<td>S35</td>
<td>6</td>
<td>S35</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>S37</td>
<td>9</td>
<td>S52</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laboratory F/T</td>
<td>2</td>
<td>7-9.30</td>
<td>S53</td>
<td>2-4.30</td>
<td>S53</td>
<td>10-12.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physics III E</td>
<td>sj</td>
<td>5</td>
<td>Times to be arranged</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**THIRD YEAR**

Chemistry III Lectures

F/T | 2 | S1 | 12 | S40 | 9 | S1 | 10 | S40
| P/T | 5 | S1 | 5  | S40 | 6 | S35| 5  | S40

Laboratory

F/T | 9-1 | S42* | 6-10 | S3* | 1-5 | S3* | MG24†
| P/T | 9-1 | S42* | 6-10 | S3* | MG24†

Chemistry III N

12 | 6  | S1 | 5† | S1 | 6  | S1 | 5 | S1

* First half-year.
† Second half-year.
# INDEX

<table>
<thead>
<tr>
<th>Category</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Advisers</td>
<td>30</td>
</tr>
<tr>
<td>Academic Board of Studies</td>
<td>22</td>
</tr>
<tr>
<td>Academic Dress</td>
<td>45</td>
</tr>
<tr>
<td>Academic Staff</td>
<td>17</td>
</tr>
<tr>
<td>Academic Year</td>
<td>6</td>
</tr>
<tr>
<td>Accountancy—</td>
<td></td>
</tr>
<tr>
<td>Degree Course Outlines</td>
<td>86</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>159</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>206</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>19</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>27</td>
</tr>
<tr>
<td>Advisers, Academic</td>
<td>30</td>
</tr>
<tr>
<td>Amendments to Enrolments</td>
<td>31</td>
</tr>
<tr>
<td>Annual Examinations</td>
<td>40</td>
</tr>
<tr>
<td>Applied Science—</td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>54</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>17</td>
</tr>
<tr>
<td>Architecture—</td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>79</td>
</tr>
<tr>
<td>Degree Course Outlines</td>
<td>71</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>129</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>194</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>17</td>
</tr>
<tr>
<td>Arts—</td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>75</td>
</tr>
<tr>
<td>Subjects Available</td>
<td>77</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>17</td>
</tr>
<tr>
<td>Attendance at Classes</td>
<td>38</td>
</tr>
</tbody>
</table>

## Bachelor of Architecture Courses
- Conditions for Award of the Degree of... | 71   |

## Bachelor of Arts
- Bachelor of Commerce (Accountancy) Courses | 86   |
- Bachelor of Commerce (Economics) Courses   | 89   |

## Bachelor of Engineering Courses
- Civil Engineering                          | 93   |
- Electrical Engineering                      | 101  |
- Mechanical Engineering                      | 107  |

## Bachelor of Engineering and Bachelor of Science
- Combined Courses—                          |      |
  - Civil Engineering                         | 95   |
  - Mechanical Engineering                    | 109  |
- Bachelor of Science Courses—               |      |
  - Chemical Engineering                      | 55   |
  - Industrial Chemistry                      | 59   |
  - Metallurgy                                 | 63   |
  - Science                                  | 115  |

## Bachelor of Science (Technology) Courses—
- Chemical Engineering                        | 56   |
- Civil Engineering                            | 97   |
- Electrical Engineering                       | 103  |
- Industrial Arts                             | 56   |
- Industrial Chemistry                         | 67   |
- Mechanical Engineering                       | 60   |
- Metallurgy                                  | 111  |
- Metallurgy                                  | 64   |

## Bachelor of Science (Technology) Accelerated Courses—
- Chemical Engineering                        | 58   |
- Civil Engineering                            | 98   |
- Industrial Chemistry                         | 62   |
- Mechanical Engineering                       | 112  |
- Metallurgy                                  | 66   |

## Bachelor of Science (Technology) Conditions—
- Calendar of Dates                           | 6    |
- Chancellor                                  | 15   |
- Chaplains                                   | 21,50|

## Chemical Engineering—
- Bachelor of Science Course                  | 55   |
- Bachelor of Science (Technology) Course     | 56   |
- Bachelor of Science (Technology) Accelerated Course | 58 |
- Conditions                                 | 58   |

## Chemistry—
- Bachelor of Science Course                  | 115  |
- Description of Subjects                     | 161  |
- Prescribed Texts                            | 211  |
- Teaching Staff                              | 19   |

## Classics—
- See Greek, Latin.                           |      |

## Closing Dates for Enrolments                | 28   |

## Commerce—
- Conditions                                 | 83   |
- Teaching Staff                              | 19   |
<table>
<thead>
<tr>
<th>Committees of the College Council</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common First-Year Rules</td>
<td>42</td>
</tr>
<tr>
<td>Conferring of Degrees, 1962</td>
<td>243</td>
</tr>
<tr>
<td>Council of the Newcastle University College</td>
<td>13</td>
</tr>
<tr>
<td>Counselling</td>
<td>50</td>
</tr>
<tr>
<td>Courses of Study—</td>
<td></td>
</tr>
<tr>
<td>Postgraduate</td>
<td>216</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>53</td>
</tr>
<tr>
<td>Deans of Faculties</td>
<td>15</td>
</tr>
<tr>
<td>Deferred Examinations</td>
<td>41</td>
</tr>
<tr>
<td>Degrees and Diplomas Granted</td>
<td>10</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>120</td>
</tr>
<tr>
<td>Diploma in Education—</td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>81</td>
</tr>
<tr>
<td>Course Outline</td>
<td>204</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>155</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>18</td>
</tr>
<tr>
<td>Divisions</td>
<td>30</td>
</tr>
<tr>
<td>Doctor of Philosophy—</td>
<td></td>
</tr>
<tr>
<td>Conditions for Award</td>
<td>218</td>
</tr>
<tr>
<td>Doctor of Science—</td>
<td></td>
</tr>
<tr>
<td>Conditions for Award</td>
<td>217</td>
</tr>
<tr>
<td>Economics</td>
<td></td>
</tr>
<tr>
<td>Bachelor of Commerce Courses</td>
<td>89</td>
</tr>
<tr>
<td>Description of Subjects—(Arts)</td>
<td>138</td>
</tr>
<tr>
<td>Description of Subjects—(Commerce)</td>
<td>162</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>207</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>19</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>141</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>196</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>19</td>
</tr>
<tr>
<td>Electrical Engineering—</td>
<td></td>
</tr>
<tr>
<td>Bachelor of Engineering Course</td>
<td>101</td>
</tr>
<tr>
<td>Bachelor of Science (Technology) Course</td>
<td>103</td>
</tr>
<tr>
<td>Conditions</td>
<td>92</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>171</td>
</tr>
<tr>
<td>Pre-requisites and Co-requisites</td>
<td>108</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>208</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>19</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
</tr>
<tr>
<td>Conditions</td>
<td>92</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>19</td>
</tr>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td></td>
</tr>
<tr>
<td>Teaching Staff</td>
<td></td>
</tr>
<tr>
<td>Enquiries, Academic</td>
<td></td>
</tr>
<tr>
<td>Amendment</td>
<td></td>
</tr>
<tr>
<td>Closing Dates</td>
<td></td>
</tr>
<tr>
<td>Procedure</td>
<td></td>
</tr>
<tr>
<td>Withdrawal</td>
<td></td>
</tr>
<tr>
<td>Examinations</td>
<td></td>
</tr>
<tr>
<td>External Examiners</td>
<td></td>
</tr>
<tr>
<td>Fees</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td></td>
</tr>
<tr>
<td>Teaching Staff</td>
<td></td>
</tr>
<tr>
<td>Full-time Degree Courses</td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td></td>
</tr>
<tr>
<td>Teaching Staff</td>
<td></td>
</tr>
<tr>
<td>Geology</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td></td>
</tr>
<tr>
<td>Teaching Staff</td>
<td></td>
</tr>
<tr>
<td>German</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td></td>
</tr>
<tr>
<td>Teaching Staff</td>
<td></td>
</tr>
<tr>
<td>Greek</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td></td>
</tr>
<tr>
<td>Teaching Staff</td>
<td></td>
</tr>
<tr>
<td>Graduates, List of</td>
<td></td>
</tr>
<tr>
<td>Heads of Divisions</td>
<td></td>
</tr>
<tr>
<td>Heads of Schools</td>
<td></td>
</tr>
<tr>
<td>Higher Degrees—See Postgraduate Courses.</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Teaching Staff</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td>Description of Subjects</td>
<td></td>
</tr>
<tr>
<td>Subject</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>Industrial Arts— Bachelor of Science (Technology) Course</td>
<td>68</td>
</tr>
<tr>
<td>Conditions</td>
<td>67</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>128</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>193</td>
</tr>
<tr>
<td>Industrial Chemistry— Bachelor of Science Course</td>
<td>59</td>
</tr>
<tr>
<td>Bachelor of Science (Technology) Course</td>
<td>60</td>
</tr>
<tr>
<td>Bachelor of Science (Technology) Accelerated Course</td>
<td>62</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>121</td>
</tr>
<tr>
<td>Pre-requisites and Co-requisites</td>
<td>62</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>102</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>17</td>
</tr>
<tr>
<td>Instructions for Enrolment</td>
<td>28</td>
</tr>
<tr>
<td>Laboratory Fees</td>
<td>36</td>
</tr>
<tr>
<td>Latin— Description of Subjects</td>
<td>152</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>202</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>17</td>
</tr>
<tr>
<td>Late Fees</td>
<td>35</td>
</tr>
<tr>
<td>Librarian</td>
<td>17</td>
</tr>
<tr>
<td>Library</td>
<td>49</td>
</tr>
<tr>
<td>List of Graduates</td>
<td>247</td>
</tr>
<tr>
<td>Master, Conditions for the Award of— Architecture</td>
<td>221</td>
</tr>
<tr>
<td>Arts</td>
<td>223</td>
</tr>
<tr>
<td>Commerce</td>
<td>225</td>
</tr>
<tr>
<td>Engineering</td>
<td>227</td>
</tr>
<tr>
<td>Science</td>
<td>229</td>
</tr>
<tr>
<td>Mathematics— Description of Subjects</td>
<td>185</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>213</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>20</td>
</tr>
<tr>
<td>Matriculation Requirements</td>
<td>24</td>
</tr>
<tr>
<td>Mechanical Engineering— Bachelor of Engineering Course</td>
<td>107</td>
</tr>
<tr>
<td>Bachelor of Science (Technology) Course</td>
<td>111</td>
</tr>
<tr>
<td>Bachelor of Science (Technology) Accelerated Course</td>
<td>112</td>
</tr>
<tr>
<td>Bachelor of Science and Bachelor of Engineering Combined Course</td>
<td>109</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>178</td>
</tr>
<tr>
<td>Pre-requisites and Co-requisites</td>
<td>114</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>209</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>19</td>
</tr>
<tr>
<td>Metallurgy— Bachelor of Science Course</td>
<td>63</td>
</tr>
<tr>
<td>Bachelor of Science (Technology) Course</td>
<td>64</td>
</tr>
<tr>
<td>Bachelor of Science (Technology) Accelerated Course</td>
<td>68</td>
</tr>
<tr>
<td>Description of Subjects</td>
<td>127</td>
</tr>
<tr>
<td>Pre-requisites and Co-requisites</td>
<td>66</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>193</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>17</td>
</tr>
<tr>
<td>Outlines of Courses of Study— Undergraduate</td>
<td>53</td>
</tr>
<tr>
<td>Post-Graduate</td>
<td>216</td>
</tr>
<tr>
<td>Part-time Courses</td>
<td>12</td>
</tr>
<tr>
<td>Philosophy— Description of Subjects</td>
<td>153</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>203</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>18</td>
</tr>
<tr>
<td>Physics— Description of Subjects</td>
<td>187</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>214</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>20</td>
</tr>
<tr>
<td>Post-Graduate Degrees— Conditions for the Award of— Doctor of Philosophy</td>
<td>218</td>
</tr>
<tr>
<td>Doctor of Science</td>
<td>217</td>
</tr>
<tr>
<td>Master of Architecture</td>
<td>221</td>
</tr>
<tr>
<td>Master of Arts</td>
<td>223</td>
</tr>
<tr>
<td>Master of Commerce</td>
<td>225</td>
</tr>
<tr>
<td>Master of Engineering</td>
<td>227, 231</td>
</tr>
<tr>
<td>Master of Science</td>
<td>229</td>
</tr>
<tr>
<td>Fees</td>
<td>36</td>
</tr>
<tr>
<td>General Information</td>
<td>216</td>
</tr>
<tr>
<td>Scholarship</td>
<td>232</td>
</tr>
<tr>
<td>Post-Graduate Diploma Course—See Diploma of Education. Preface</td>
<td>8</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>191</td>
</tr>
<tr>
<td>Prizes</td>
<td>239</td>
</tr>
<tr>
<td>Progression in Courses</td>
<td>42</td>
</tr>
<tr>
<td>Psychology— Description of Courses</td>
<td>154</td>
</tr>
<tr>
<td>Prescribed Texts</td>
<td>203</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>18</td>
</tr>
<tr>
<td>Re-enrolment, Restrictions on</td>
<td>43</td>
</tr>
<tr>
<td>Registrar</td>
<td>17</td>
</tr>
<tr>
<td>Requirements for Admission</td>
<td>24</td>
</tr>
<tr>
<td>Rules</td>
<td>38</td>
</tr>
<tr>
<td>Science—</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Conditions</td>
<td>115</td>
</tr>
<tr>
<td>Subjects Available</td>
<td>115</td>
</tr>
<tr>
<td>Teaching Staff</td>
<td>19</td>
</tr>
<tr>
<td>Scholarships—</td>
<td></td>
</tr>
<tr>
<td>Post-Graduate</td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>232</td>
</tr>
<tr>
<td>Sports League</td>
<td>51</td>
</tr>
<tr>
<td>Staff</td>
<td>48</td>
</tr>
<tr>
<td>Standing Committees of the College Council</td>
<td>14</td>
</tr>
<tr>
<td>Students' Association</td>
<td>47</td>
</tr>
</tbody>
</table>

| Table of Contents                              | 2    |
| Teaching Staff                                 | 17   |
| Technical Staff                                | 21   |
| Timetables                                     | 253  |

| Undergraduate Awards—See Prizes.               |      |
| Union                                          | 46   |
| Unisearch Ltd.                                 | 51   |
| University of New South Wales—                 |      |
| Deans of Faculties                             | 15   |
| Heads of Schools                               | 15   |

| Vice-Chancellor                                | 15   |

| Warden                                         | 17   |
| Withdrawals from Course or Subjects            | 33   |