Please note

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1991 Calendar

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>New Year’s Day</td>
</tr>
<tr>
<td></td>
<td>Swinburne re-opens</td>
</tr>
<tr>
<td></td>
<td>VCE (HSC) results</td>
</tr>
<tr>
<td></td>
<td>Australia Day</td>
</tr>
</tbody>
</table>

February

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>SCT semester 1 begins</td>
</tr>
<tr>
<td>11</td>
<td>SCT all other classes begin</td>
</tr>
<tr>
<td>14</td>
<td>SCT enrolment period begins for Round 1</td>
</tr>
<tr>
<td>18</td>
<td>SIT teaching begins: Art (Film and Television) and Engineering (final year only)</td>
</tr>
<tr>
<td>21</td>
<td>SIT enrolment period begins for Round 2</td>
</tr>
<tr>
<td>25</td>
<td>SIT teaching begins: Applied Science, Arts, Business (later year) and Engineering (all other years)</td>
</tr>
</tbody>
</table>

March

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>SIT teaching begins: Business (first year)</td>
</tr>
<tr>
<td>11</td>
<td>Labour Day</td>
</tr>
<tr>
<td>27</td>
<td>SIT classes end for Easter break</td>
</tr>
<tr>
<td>28</td>
<td>SCT classes end for Easter break</td>
</tr>
<tr>
<td>31</td>
<td>SIT last day for withdrawal from a first semester subject, unit or course without penalty of failure*</td>
</tr>
</tbody>
</table>

April

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SIT and SCT last day for applications for refund of General Service Fee</td>
</tr>
<tr>
<td>3</td>
<td>SCT classes resume after Easter break</td>
</tr>
<tr>
<td>4</td>
<td>SIT classes resume after Easter break</td>
</tr>
<tr>
<td>8</td>
<td>SCT last day for subject variations to enrolment for semester 1</td>
</tr>
<tr>
<td>12</td>
<td>SCT classes end for mid-semester break</td>
</tr>
<tr>
<td>25</td>
<td>Anzac Day</td>
</tr>
<tr>
<td>29</td>
<td>SCT classes resume after mid-semester break</td>
</tr>
</tbody>
</table>

May

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>SIT Graduation ceremony</td>
</tr>
<tr>
<td>31</td>
<td>SIT last day for application for awards for students completing courses in semester 1, 1991</td>
</tr>
</tbody>
</table>

June

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Queen's Birthday</td>
</tr>
<tr>
<td>14</td>
<td>SIT Business semester 1 examination period begins</td>
</tr>
<tr>
<td>17</td>
<td>SCT semester 1 examination period begins: Applied Science, Arts and Engineering</td>
</tr>
<tr>
<td>20</td>
<td>SCT certificate and award presentation ceremony</td>
</tr>
<tr>
<td>28</td>
<td>SCT and SCT semester 1 examination period ends</td>
</tr>
<tr>
<td></td>
<td>SCT semester 1 classes cease</td>
</tr>
</tbody>
</table>

July

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>SIT inter-semester break (except Art)</td>
</tr>
<tr>
<td>15</td>
<td>SIT classes resume for Engineering (alternate entry only)</td>
</tr>
<tr>
<td>22</td>
<td>SIT classes resume for semester 2</td>
</tr>
</tbody>
</table>

August

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>SCT last day for subject variations to enrolments for semester 2</td>
</tr>
<tr>
<td></td>
<td>SIT last day for withdrawal of a second semester subject, unit or course without penalty of failure*</td>
</tr>
</tbody>
</table>

September

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>SIT and SCT classes end for mid-semester break</td>
</tr>
<tr>
<td>26</td>
<td>Show Day</td>
</tr>
<tr>
<td>30</td>
<td>SIT classes resume after mid-semester break</td>
</tr>
<tr>
<td></td>
<td>SIT last day for application for awards for students completing courses in December 1991</td>
</tr>
</tbody>
</table>

October

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>SIT classes resume after mid-semester break</td>
</tr>
<tr>
<td>16</td>
<td>SIT Graduation ceremony</td>
</tr>
</tbody>
</table>

November

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Melbourne Cup Day</td>
</tr>
<tr>
<td>8</td>
<td>SIT Business semester 2 examination period begins</td>
</tr>
<tr>
<td>11</td>
<td>SCT semester 2 examination period begins: Applied Science, Arts and Engineering</td>
</tr>
<tr>
<td>22</td>
<td>SCT semester 2 examination ends</td>
</tr>
<tr>
<td>25</td>
<td>SCT semester 2 classes cease</td>
</tr>
</tbody>
</table>

December

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>SIT re-enrolments begin</td>
</tr>
<tr>
<td>6</td>
<td>SCT semester 2 examination period ends</td>
</tr>
<tr>
<td>19</td>
<td>SCT semester 2 classes cease</td>
</tr>
<tr>
<td></td>
<td>SIT last day for application for awards for students completing courses in December 1991</td>
</tr>
<tr>
<td></td>
<td>Swinburne closes for Christmas break</td>
</tr>
</tbody>
</table>

*SIT: Swinburne Institute of Technology
*SCT: Swinburne College of TAFE

* Students should be aware that some faculties have an earlier deadline for addition of new subjects. Students should consult their faculty office.
Swinburne Handbook '91
The information given in this Handbook is intended as a guide for persons seeking admission to Swinburne Institute of Technology or Swinburne College of TAFE and shall not be deemed to constitute a contract on the terms thereof between Swinburne Institute of Technology or Swinburne College of TAFE and a student or any third party. Both divisions reserve the right to cancel, suspend or modify in any way the matters contained in this document.

In 1982, the Freedom of Information Act was passed by the Parliament of Victoria. The Act, which applies to Swinburne and other tertiary institutions, came into effect on 5 July 1983. The Act gives (with certain exemptions), legally enforceable rights of access to information. It is the policy of Swinburne to conform with the spirit and intention of the Act in the disclosure to the public of any information they may seek. Enquiries should be made to the Registrar, Swinburne Limited.

Equality of educational opportunity is Swinburne policy.

Swinburne Institute of Technology
and
Swinburne College of TAFE
John Street, Hawthorn 3122
Australia

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Telephone: (03) 819 8911
Telex: Swinb AA37869
Facsimile: (03) 819 5454
Divisions of Swinburne Ltd

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swinburne college of TAFE

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engineering

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Swinburne

Swinburne was established in 1908 under the name of "Eastern Suburbs Technical College". The first students were enrolled in 1909, when classes began in carpentry, plumbing and blacksmithing. The institution grew and prospered. Soon afterwards, a boys junior technical school and the first girls technical school in Victoria, were established.

In 1913 the institution changed its name to Swinburne Technical College to commemorate the Hon. George Swinburne, a former mayor of Hawthorn and a member of the Parliament of Victoria, who was largely responsible for the initial establishment of the college.

In 1965 Swinburne affiliated with the Victoria Institute of Colleges which was established in that year by an Act of the Parliament of Victoria to foster the development and improvement of tertiary education in technical, agriculture, commercial and other fields of learning (including the liberal arts and the humanities) in institutions other than in the universities of Victoria.

The range of courses and the various levels at which they were offered grew to such an extent that in 1969, the boys and girls technical schools were taken over by the Victorian Education Department while the college remained as an autonomous institution.

An extensive re-organisation of advanced education took place in Victoria in the period 1976-78 culminating in the passing of the Victorian Post-Secondary Education Act. Under the Act the Victoria Institute of Colleges was dissolved and the Victorian Post-Secondary Education Commission established. Under the new arrangements, Swinburne Council was given power to grant bachelor degrees. The first of these were awarded at a conferring ceremony held on Thursday 21 May 1981 at the Camberwell Civic Centre.

To facilitate operations, teaching is carried out within two divisions, under the control of one council. They are:

- Swinburne Institute of Technology -- a college of advanced education offering courses for professional qualifications (diploma and degree of Bachelor) and graduate qualifications (diploma and degree of Master). Enrolments in 1989 were 3,999 full-time and 2,821 part-time students.
- Swinburne College of Technical and Further Education -- a technical and further education college, offering courses at middle-level or para-professional, trade, technical and Victorian Certificate of Education (Tertiary Orientation Program) levels. A number of specialist courses are provided also, for industry and the community. Enrolments in 1989 were 957 full-time and 3,082 part-time students.

**Hawthorn Campus**

The campus at Hawthorn, an area of approximately four hectares, is situated 7 km from the City of Melbourne. It is close to Glenferrie railway station, is well served by other means of public transport and is in close proximity to parklands.

**Eastern Campus at Mooroolbark**

In 1991, Swinburne will commence undergraduate programs at its Eastern Campus at Mooroolbark, offering the same excellence of academic programs as already established at the Hawthorn Campus.

The opening of the new Eastern Campus will provide a small friendly environment, easily accessible and directly serving the tertiary educational needs of the outer eastern metropolitan region with all the amenities of a modern tertiary institution. Mooroolbark campus is well-serviced by buses and trains, has excellent facilities and is located in a natural bushland setting.

* Subject to final planning approval.

**Coat of Arms**

The coat of arms conferred on Swinburne by the College of Arms on 25 June 1969 is based on the coat of arms of the Swinburne family.

At a period during the 12th-13th century, when the northern counties of England were ruled by the Scots, a knight of the Swinburne family was created a baronet for his services. The crest became a baronet's coronet, with the boar's head rising from it and the coat of arms, divided horizontally red and silver, was charged three cinquefoils counter-charged.

Swinburne holds a unique place among educational institutions in Australia in that it is a college of advanced education offering courses for professional qualifications, and in that it is a technical and further education college, offering courses at middle-level or para-professional, trade, technical and higher education levels.

The coat of arms of the Swinburne family was a red shield charged with three cinquefoils counter-charged. The arms: the basic colours of red and white, and the cinquefoils charged on the shield, commemorate the arms of the Swinburne family. The omission of the third cinquefoil which appears in the family coat and the addition of the Bordure and the Mullets (Stars) are what are known heraldically as 'differences', which may often serve to indicate an association with another armigerous body or family. The four Mullets in Cross symbolise the Southern Cross.

The **crest:** the demi-Boar and the cinquefoil perpetuate the connection; the book is symbolic of learning. The motto: the College of Arms' translation of the motto is: Achievement through learning.
General Information

Swinburne Council

Membership as at 70 April 7990

Appointees of the Governor-in-Council
J.J. Eastwood, BA(Hons), DipEd(Melb) (Vice-President)
J.P. Hall, BE(Elec)(Melb), FAIM
J.D.W. Marlin, BA(Hons), GradDipT&RP
M.A. Puglisi, LLB(Melb), Barrister and Solicitor (Vic) Supreme Court
L.R. Stephens, BED(MCAE), GradDiplIndRel(PIT)
B. Van Ernst BA, BEd(Mon), MEd(Lat), TPTC, MACE

Nominee of the Minister for Education
M.A. Johns, BBus(SIT), MCom(Melb), AASA, CPA

Members elected by the Council of Swinburne
T.P. Coman, DipAppChem(STC), ARACI (President)
J.M. Day, BE(Mech and Elec)(Syd), FIEAust, SME
J.M. Harrison, CBE, AM, FAIM
J. Short
H.S. Wragge, AM, MEngSc, BEE, FTS. FIEAust, FIREE

Two vacancies

Member ex officio
J.G. Wallace, MA(Glas), MEd(Glas), PhD(Brist), FASSA
(Director and Chief Executive Officer)

Member elected by Academic Board
F.X. Walsh, BA(Melb), BEd(Mon) (Vice-President)

Member elected by Board of Studies
G.A. Harrison, BSc, DipMechEng, TTTC

Member elected by academic staff, SIT
G.C. Morison, BA(Mon), DipSocStud(Melb), GradDipEd(Haw)

Member elected by academic staff, SCT
K.E. Matthiesson, BA(Hons), DipEd

Members elected by general staff
N.H. Nilsen
L.A. Douglas, BA(N’cle), MSc(Strath)

Member elected by students, SCT
T.W. Stuchbery

Member elected by students, SIT
E.M. Abram

Council Secretariat
Secretary
F.G. Bannon, BCom(Melb), FASA, ACIS, LCA
Executive Officer
A.J. Miles, BSc(Melb), BEd(Mon)

Directorate

Director, Swinburne Institute of Technology and Swinburne College of TAFE
J.G. Wallace, MA(Glas), MEd(Glas), PhD(Brist), FASSA

Associate Director
F.G. Bannon, BCom(Melb), FASA, ACIS, LCA

Director, Swinburne College of TAFE
G.A. Harrison (Acting)

Office of the Director

Project Officer
A.R. Grigg, BA(Hons), PhD(Otago)
Swinburne Institute of Technology
Director
J.G. Wallace, MA(Glas), MEd(Glas), PhD(Brist), FASSA

Faculty of Applied Science
Dean
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I.K. Jones, PhD, BAgSc, DipEd(Melb)
Head, Department of Computer Science
D.D. Grant, PhD(Reading), MSc(Melb), MACM, MiEEE
Head, Department of Mathematics
R.P. Kavanagh, MA(Dub), MSc(Gal), MASOR, MORS
Head, Department of Physics
R.B. Silberstein, PhD(Melb), BSc(Hons)(Mon), MAIP, MIBME, MACPSM

Faculty of Art
Dean
To be appointed
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Head, Film and Television School
J. Sabine, BA(ANU)
Head, School of Design
D.G. Murray, BA(Graphic Design)(SIT) TTTC (Acting)

Faculty of Arts
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Chair, Department of Humanities
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Head, Department of Liberal Studies
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Head, Department of Psychology
K. Heskin, PhD(Queens)
Chair, Department of Social & Political Studies
G. Nichols, BA(Mon)

Faculty of Business
Dean
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Head, Department of Accounting
W.C. Nash, BCom, DipEd(Melb), MBA(CranfT)
Head, Department of Information Systems
D.G. Adams, BCom(Melb), MAdmIn(Mon), TSTC
Head, Department of Economics
J.B. Wielgosz, BComm(Hons), MA, DipEd(Melb)
Head, Department of Law
B.R. Clarke, LLB, BEd, LLM(Mon), GradDipMkt(CIT), Barrister and Solicitor (Vic) Supreme Court
Head, Department of Marketing and Organisation Behaviour
L.A.J. Zimmerman, BCom, MBA(Melb)

Faculty of Engineering
Dean
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School of Civil Engineering and Building
Associate Dean
R.B. Sandie, MEngSc, BCE(Melb), FIEAust, MASCE, MACE
School of Electrical Engineering
Acting Associate Dean
B.A. Neyland, ME, BEE(Melb), DipEd(FTC), TTTC, MIE Aust
School of Mechanical and Manufacturing Engineering
Associate Dean
J.K. Russell, MEngSc, BE(Ind)(Melb), CEng, FIProdE, MI MechE, FIEAust
Manager Academic Programs
B.C. McDonald, BCom, DipEd(Melb), FASA, CPA

Swinburne College of TAFE
Director, Swinburne Ltd.
J.W. Wallace
Acting Director, Swinburne College of TAFE
G.A. Harrison, BSc, DipMechEng, TTTC
Acting Assistant Director, Swinburne College of TAFE
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Head, Business Studies Division
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Head, Finance and Information Technology Department
M.J. Joyce, BBus, DipEd, AASA, CPA
Head, Marketing and Administration Department
I.M. Walker, MA, BCom, DipEd
Manager, Centre for Small Business
J. Torbiner, BEd(BusStuds), AIM, AIMM, AITD
Acting Head, Engineering Division
F.A. Gaunt, SEC A Grade Licence, DipIT, TechCert(Electronics)
Head, Electrical and Electronics Technology Department
P.A. Gaunt, SEC A Grade Licence, DipIT, TechCert(Electronics)
Head, Mechanical and Manufacturing Technology Department
J. Brennan, BEng(Mech), DipEng(Naval Arch), DipEd, CEng
Manager, Centre for Engineering Technology
L.J. McLaughlan, T TR 1C, DipIT
Head, Social and Applied Sciences Division
G.A. Hamson, BSc, DipMechEng, TTTC
Head, Industrial Sciences Department
R.J. Fallu, BSc, DipEd
Head, General and Community Studies Department
G. Arnott, BEd, BEd, GradDipBusAdmin
Head, Access Education Department
J.R. Learmont, BA(Hons), MEd(Mon), MACE
Senior Curriculum Development Officer
R.M. Carmichael, BA, BEd
Manager, Computer Services Unit
M. Waterhouse, BEd, DipEd

Swinburne services
Computer-based Developments and Information Systems
Manager, Computer Centre
M.O. Plunkett, BEd(Adel)
Education Unit
Head
B. Hawkings, BA(NewEng), MEd(Melb), MACE
Library and Information Technology Services
Swinburne Librarian
P.C. Simmenauer, BA, Dip(Lib)(NSW)
Head, Information Technology Services
K. Anderson, MA(Adel), BSc(Melb), DipEE, MIEAust, MACE, TTTC
Corporate Division

Director
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Associate Director
F.G. Bannon, BCom(Melb), FASA, ACIS, LCA

Buildings, Grounds and Services
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J.A. Williams, Fi, HospEng, AMCIBSE

Maintenance Officer
S. Blackburn, (Acting)

Planning Officer
T. Rosauer, Arch(Brchl), FRAIA

Central Technical Workshops
Manager
G. Nefteship, CEng, MIMarE

Catering Department
Manager
P. Boxshall, AFCA

Council Secretariat
Executive Officer
A.J. Miles, BSc(Melb), BEd(Mon)

Equal Opportunities Officer
M. Jones, CEd(Wales), BEd(Vic), MEDThesis (Mon)

Finance Department
Manager
J. Varider Pal, DipAccy(PTC), BBus(SIT), AASA, CPA, RCA

Systems Accountant
J.F. Rayner, BSc(Melb), DipEd(Melb)

Divisional Accountant, SCT
P. Wilkins, BBus(Vic), GradDipAIS(CIT), AASA

Divisional Accountant, SIT
P. Hotchin, BA(Deakin), GradDipBusAdmin(SIT), AASA, CPA

Freedom of Information Officer
S.P. Jervis, BA(Adel)

Human Resources Department
Manager
P.D. Mudd, BE(NSW), AFAIM

Safety Co-ordinator
A. Skotch, BAppSc(Adel), GradDiplIndHygine(Deakin)

Planning and Information Systems
Manager
R.D. Sharma, BSc(Tas), DipEd(Tas), MEDAdmin(New Eng), PhD

Institutional Promotion and Development
Manager
To be appointed

Publicity and Information Unit
Head
N. Manning

Swinburne Press
Manager
A.D. McNaughton

Registrar's Department
Registrar
G.L. Williamson, BSc(Adel)

Assistant Registrar (Applied Science)
M.M. Hickey, BA(Deakin)

Assistant Registrar (Arts)
H.M. Ralston, BCom(Melb)

Assistant Registrar (Business)
V. Simms, BA(Melb)

Assistant Registrar (Engineering)
MV. Weir, BA(Mon), GradDipSecStud(CIT)

Assistant Registrar (Services)
L. Scheuch-Evans, BS in Foreign Service (G'town)

Assistant Registrar (Student Administration)
P.E. Kocak, BEd(Lat)

Security Department
Chief Security Officer
Swinburne Student Services
J. Shopland, EdD(Mass), BSc(Melb), TSTC(STC), GradDipEdCouns(RMIT), MAPsS

Eastern Campus at Mooroolbark

Contact B.C. McDonald, Manager Academic Programs, on 819 8144 or general enquiries 819 8444.

Situated on the site of the former MDA Grammar School in Edinburgh Rd., Mooroolbark, the new Swinburne Eastern Campus will provide courses in the Business, Arts and Engineering Faculties. The proposed courses are the Bachelor of Business in Accounting, Marketing and Economics/Marketing with relevant Business areas. Electrical Engineering will be commencing at the postgraduate level. This will establish a complete and fully accredited tertiary environment by having in place programs ranging from first year undergraduate in Business and Arts, to Masters and PhD studies in Electrical Engineering.

The first student intake at the campus is planned for 1991* and is expected to total between 150-200 students across the three faculties. Student numbers will grow to a maximum of around 600 by 1993 and will remain at this level for the foreseeable future.

* Subject to final planning approval.

Swinburne services

Library and Information Technology Services

Library

Swinburne Librarian (Acting)
P.C. Simmenauer, BA, DipLib(NSW)

Administration
E. Turner, CertAppSocSc(LibTech)

Audiovisual
B. Nichol, BSc(Lib'ship(RMIT), BA(Melb)

A. Davies, BA(Melb), GradDipLib(MCAE)

M. Hawkins, CertAppSocSc(LibTech)

Periodicals
K.M. McGrath, BA(Adel), GradDipLib(RMIT), ALAA

C. Barnes, BA(UNE)

Technical services
K.M. Villwock, BA(Adel), ALAA

C. Ellison, BSc Lib'ship(RMIT), ALAA

M. watson, BA(Adel), GradDipLib(MCAE)

M. Vilkins, AsaAppSocSc(LibTech)

Cataloguing
J. Butler, BA(FIT), GradDipLib(Ballarat CAE)

J. Saul, RAII Lib'ship(RCA)

J. Megguysey, CertAppSocSc(Lib Tech)

Readers' services (Acting)
I.A. Douglas, BA(N'dle), MSc(Statham)

Circulation
E. Carter, BSc(Lib'ship(RMIT)

L. Rutherford, AsaAppSocSc(LibTech)

Reader education
B. Donkin, DipArts(SIT), GradDipEd(Haw), ALAA

Reference (Acting)
J.M. Agar, BA(Melb), GradDipLib(CCAE)
The major purpose of the library is to supplement and support formal course instruction in the two teaching divisions of Swinburne and to provide some opportunity for recreational and general reading. All books, periodicals and other materials in the collection are available for use in the library and most may be borrowed.

In 1990 the collection comprised approximately 170,000 items. 3,000 periodical titles are received, including a wide range of indexes and abstracts. There is also a large collection of audiovisual material, including records, audio and videotapes, slides, films, videodiscs and computer software.

Library staff work in close association with teaching staff in developing these resources, and in helping students by introducing them to a large and diverse collection of literature and a wide range of media on all types of subjects. Formal and informal instruction is given to students on the use of the catalogue, reference works and bibliographical aids. Reciprocal borrowing facilities with other tertiary educational institutions, have been arranged to increase the resources available to students and staff.

Information Technology Services

Head, Information Technology Services
K. Anderson, MA(Brad), BSc(Melb), DipEE, MIEAust, MACE, TTTC

Located in room BA309 of the Business and Arts Building, Information Technology Services is available for use by all full-time and part-time staff of both divisions. The services offered include the locating, booking and screening of educational films; audio and video recording, including micro-teaching; 35mm slide and overhead projector transparency making; general photographic assignments; high speed audio duplicating, sound studio production and editing, and production of computer-based learning resources.

Intending users of audio and video studio recording facilities are advised to consult with the staff of Information Technology Services well in advance of the recording date. Slide projectors, overhead projectors, audio and videotape recorders and other audiovisual equipment are available for short term loan.

Rules and procedures

Persons entitled to use the Library

The library at Swinburne is available for the use of students and staff who accept the following rules and procedures officially decided and agreed upon by the Library and Information Technology Services Committee, the Academic Board, and the Board of Studies.

Members of the general public, including past students and staff, are welcome to use the facilities within the library, provided that they, too, accept the rules. They may also borrow from the library on payment of a memership fee to the Swinburne Library Information Service.

The Swinburne Librarian, or the senior staff member on the premises, may refuse entry to the library to any person not registered as a borrower.

Persons entitled to borrow from the Library

Full-time and part-time staff members of the Institute and the College of TAFE.

Full-time and part-time students of the Institute and the College of TAFE.

Registered borrowers from other educational institutions with which Swinburne has a reciprocal borrowing agreement.

Registered members of the Swinburne Library Information Service.

Such other persons or organisations as the Swinburne Librarian may from time to time approve as borrowers.

Hours of opening

Normal hours of opening for the library during semesters are:

Monday to Thursday inclusive — 8.45am to 10.00pm
Friday — 8.45am to 8.30pm

Public holidays

Anzac Day
2.00pm to 8.30pm
Queen's Birthday
8.45am to 8.30pm
Show Day
2.00pm to 8.30pm
Cup Day
8.45am to 8.30pm

Closed on all other public holidays.

Teaching breaks

Monday to Friday
8.45am to 8.30pm

Long vacation

Monday to Friday
9.00am to 5.00pm

Closed between Christmas and New Year, with limited opening hours in January.

Saturday 12 noon to 5.00pm
From the first Saturday in March, up to and including the Saturday at the end of the first week of examinations in second semester.

Sunday 1.00pm to 5.00pm
A limited number of Sundays towards the end of each semester.

Library loans to students

Loans will only be made on presentation of a valid borrower’s card, which in the case of Swinburne students and staff is the Swinburne identity card.

General

All materials borrowed must be recorded at the loan, reserve, periodical or audiovisual counters and must be returned by the date and time indicated. Items borrowed, with the exception of audiovisual and periodical material, should be returned through the chutes located outside the main entrance.

Borrowing periods

Fortnightly loans

The normal loan period for most books and pamphlets is a fortnight. This period may be extended provided the item has not been placed on hold and it is not overdue. Holds may be placed for books on loan, at the inquiry section of the loans counter.

3-day loans

Available for material on the shelves which is in moderately heavy demand, and is marked ‘3-day loan’. Loans may not be renewed.

24-hour loans

Available for unbound periodicals, including annuals and irregular publications (but excluding display issues).

Overnight loans

A small number of items in the Counter Reserve collection are available for overnight loan. The material may be borrowed after 4.00pm from the Counter Reserve and should be returned by 1/2 hour after opening on the next day the library is open. This condition may be varied for part-time students.

Counter Reserve collection

Material in this collection may, depending on the item, be borrowed for a period of one or two hours for use in the library, by holders of a current Swinburne identity card. In the case of Periodicals Reserve, the card is held until the item is returned.

See the Guide to the Library for further details.
Audiovisual materials and equipment

Many videocassettes are available for 2-day home loan, others together with slide sets are available for classroom use only. Art slides may be borrowed for one week. Language tapes may be borrowed for four weeks. Most other material may be borrowed for one week and all loans may be renewed, unless the item is overdue or reserved.

A range of interactive videodisc programs, including instructions in using personal computers and popular PC applications is available for use on learning stations located in the area. Both programs and equipment must be booked.

Items not available

Items not available for loan outside the library include: material in the Reference collection (distinguished by the prefix ‘R’ in the call number), rare books (‘V’), archives (‘AR’), maps (‘M’), microfilms and those materials marked ‘Not for loan’ or ‘Display’.

Bound periodicals, newspapers and government publications from the deposit collection may not be borrowed. Most video cassettes and slides (other than Art slides) are available for use on the Swinburne campus only.

Fines and penalties

Loans are issued subject to the imposition of penalties for late return as below. Fines will not increase once the item has been returned, but all penalties shall continue to apply until the fine has been paid.

Fortnightly loans and audiovisual loans — per item $0.50 per day or part thereof overdue, to a maximum of $5.00, suspension of borrowing privileges and withholding of examination results.

3-day loans — per item $1.25 per day of part thereof overdue to a maximum of $5.00 per item, suspension of borrowing privileges and withholding of examination results.

Overnight loans — per item $2.00 per day or part thereof, to a maximum of $5.00, suspension of borrowing privileges and withholding of examination results.

Counter Reserve loans (within the Library Building) — per item $0.50 per hour late, to a maximum of $5.00, suspension of borrowing privileges and withholding of examination results.

Recalls

Recalls are not transferable. Loss of an identity card must be immediately reported to the Overdues Section, level 2. The borrower shall be responsible for the replacement cost plus a processing charge, or the cost of repair.

Identity cards

These are not transferable. Loss of an identity card must be immediately reported to the Overdues Section on level 2 of the library otherwise the library can take no responsibility for items borrowed on that card. A current card must be produced when borrowing otherwise service will be refused. Lost or damaged cards must be replaced at a cost of $5.00 each.

Rules for general conduct

Eating is not allowed in areas of the library open to the public. Drinking, except from the drinking fountain, is not allowed in areas of the library open to the public.

Playing games in the library is not allowed. Smoking is not permitted in areas of the library open to the public.

Bags and cases may be brought into the library, but must be offered for inspection on leaving.

An atmosphere of quiet must be maintained in the library so that it is at all times a place conducive to independent study and quiet reading. Silence must be kept in the areas indicated and conversation restricted to the areas set aside for this purpose.

Any person who, in the opinion of a member of the library staff and the senior staff member on the premises, repeatedly fails to observe the above rules, or who disfigures or damages a book, periodical or any other library resource or fitting in any way, may be excluded from the library for the rest of the day, and shall be responsible for all damage caused.

Persistent or serious offenders may be reported by the Swinburne Librarian to the Swinburne Registrar for disciplinary action which may include suspension of borrowing privileges, exclusion from the library, and withholding of examination results.

Power to alter rules

One or more of the rules for general conduct may be changed from time to time by the Director, on the recommendation of the Swinburne Librarian.

At the discretion of the Swinburne Librarian one or more of the rules may, under special circumstances, be temporarily suspended. Each suspension shall be reported at the earliest opportunity to the Director and to the Library and Information Technology Services Committee.

Photocopying

Photocopying machines available to staff and students are located on level 1 of the library building. These are operated by the Berkel Copytex card system; cards for $2.00 and $5.00 can be purchased from dispensers in the library. Users must abide by the relevant provisions of the Copyright Act.

Student Support Services

Manager
J. Shopland, BSc(Melb), GDipEdCouns(RMIT), EdD(U.Mass), MAPsS

Swinburne Student Services Unit staff

Swinburne Student Services Unit staff

Head
J. Shopland, BSc(Melb), GDipEdCouns(RMIT), EdD(U.Mass), MAPsS

Administrative Officer
M. Manel, BSc(Strfl), BED(Couns)(LaT)

Student Counselling staff

Acting Head
R. MacDonald, BA(Melb), DipEdPsych(Mon), MAPsS

Student Counsellors
P. Burton, BA(Melb), DipEd(Staff), MAPsS

V. Fischer, BSc(Mon), BED(Couns)(LaT)

S. Mitchell, BBSc(Hons)

Receptionist
J. Ralph

Housing, Part-time Employment and Financial Advice

B. Graham, BAppSc(Pharm)(TCAE)

Careers Services Staff

Head
R. Ware, BA(LaT), GDipEd(MSC), PostGDipCareers (VicColl)

Careers Counsellors
H. Silberg, BA(Mon), GDipVocCoun(RMIT)

Schools Liaison Officer
L.E. Baron, BA(RMIT), DipEd(LaT)

Careers Information Assistant
M. Barkley BA(Hons)(LaT)

Employment Program Officer
S. Davis

Student Health Service staff

Head
J. Fischer, RN, RM(Vic)(UK), RN(USA)
Medical Director
S. Clarke, MB, BS(Lond)
Sister
A. Hart, RN(Vic)
Administrative Assistant
J. Wright
Chaplaincy
Ecumenical Chaplain
H. Aveling, MA(Syd), BEd(WACAE), TSSF, STM(Weston)
Jewish Chaplain
M. Katz, BJuris(Mon)

Swinburne Student Services

The following services are available to all students:

Counselling — personal, educational, financial
Careers — course information, graduate employment, schools liaison program, counselling

Health
Housing
Part-time employment
Student Counselling
Location: room 206, level 2, Business and Arts Building
Telephone: 819 8025

The Student Counselling Service is available to students, staff, former students, parents and partners of students. The service is free and strictly confidential. Counsellors help in areas such as loneliness, adjustment to life at Swinburne, subject choice, deferment, choosing a course, examination anxiety, exclusion, vocational choice, studying part-time, leave of absence, academic difficulties, concern about others, study problems, marital and pre-marital counselling, relationships, disabilities, sexuality, family, financial problems, career planning and decisions, and student allowances. Our service offers thousands of consultations each year. No problem is considered too small.

The Student Counselling Service endeavours to develop and support procedures which will increase the general welfare of students and enhance their education at Swinburne. To this end, the service seeks representation at relevant levels throughout Swinburne. When appropriate, counsellors act as advocates for students within Swinburne, and with relevant external organisations such as the Department of Social Security and the Commonwealth Department of Education and Training.

The Counselling Service is open from 9:00am to 5:00pm on Monday, Tuesday, Thursday and Friday and from 9:00am to 8:00pm on Wednesday. The service operates on both a fixed appointment and ‘drop-in’ basis.

Careers Service
Location: Room EW108 Conference Centre (opposite Glenferrie Train Station)
Telephone: 819 8621

The Careers Service is available to Swinburne students, prospective students, graduates and staff. The service is free and offers comprehensive career, course and employment information and counselling.

The Careers Library is maintained with up-to-date information about courses from TAFE to postgraduate levels, careers news, and graduate employment. Students can receive assistance in processing and understanding the information available.

Careers Counselling is available for all those requiring professional assistance in exploring the many issues involved in career and course planning. Demand for this service is high, so it is necessary for an appointment to be made.

Graduate placement and student employment advice is also available for students and graduates seeking full-time employment. Services include vacation employment, employer visits, campus interview programs, assistance with job applications, interview techniques and resumes. These are offered individually or in group workshops. An employment register is also maintained for the use of students and graduates.

The Schools Liaison Program is an integral part of the service and facilitates communication between secondary schools and Swinburne. Through this program prospective students are asked to explore the educational opportunities available at Swinburne.

CAREERS SERVICES

Swinburne Careers Services

Student Health
Location: laneway behind library between John and William Street.
Telephone: 819 8483 & 819 8703

The service is available to all students. It is free and strictly confidential. The service is available to staff for emergency treatment only.

The service offers to all students the opportunity to seek help and answers to their problems in a confidential and non-judgemental atmosphere; and to promote a positive and confident attitude towards their health maintenance. We offer emergency treatment, general first-aid, medical consultation by appointment, nursing and medical counselling on such issues as contraception, sexually transmitted diseases, sports injuries, nutrition, immunizations, health insurance advice. Classes in cardio pulmonary resuscitation and first-aid are also offered as well as eye tests and hearing tests (audiograms) and referral information (e.g. physiotherapy, dental care and local doctors).

The service is open during teaching time, Monday to Friday: 8:45am — 5:00pm.

Doctor by appointment — 4 hours daily.

Student housing, part-time employment and financial advice
Location: BA206, level 2, Business and Arts Building.
Telephone: 819 8982

The housing service provides addresses of a wide range of accommodation, including full board, single rooms, houses, flats and hostels. Many students also use the service to find other students to share accommodation. Advice on living away from home, and the legal and financial problems associated with renting is also available to all Swinburne students.

Assistance is also provided for students seeking part-time, and casual employment. This service includes advice on techniques of obtaining part-time work, and information on specific vacancies. Students are notified of available work via the part-time employment notice-board.

The office is open from 9:00am to 5:00pm Monday to Friday.

The Swinburne Hostel
Contact the Manager for details — 819 4036.

Students with a disability
Students with a disability are encouraged to first advise their department. They may also wish to make contact with the Student Counselling Service. The counsellors can advise or act as advocates on specific study needs, career planning, examination arrangements, access to buildings, use of lifts, telephones and parking facilities, etc. Responding to the various needs of students is a continually developing process.

It is important, therefore, that you make your particular needs known. Swinburne is a participant in the State and Federal Governments’ equal opportunity program.

The Student Counselling Service is located in room 206 on level 2, Business and Arts Building.
Telephone: 819 8622

Swinburne Chaplaincy
Location: room 207, level 2, Business and Arts Building
Telephone: 819 8489

The Chaplain provides spiritual support and pastoral care to
members of specific faiths, those seeking a personal framework of meaning and purpose for their own lives and to persons of no particular commitment at all. The Chaplain can provide spiritual advice and direction as well as counselling in an open manner aimed at assisting the individual to find his or her own personal solution to a particular problem or problems. He is also involved in the community life of Swinburne and takes part in student activities where appropriate. In particular, he seeks to promote a deeper awareness of the dignity and value of human life in all its aspects, and is available to celebrate weddings and christenings for members of the Swinburne community. The Chaplain works in close co-operation with Swinburne Student Services. Students and staff are invited to drop into the Chaplaincy at any time. New students especially, are encouraged to introduce themselves early during their course.

**Student loans**

With approval of the Loans Fund Committee, financial assistance may be obtained for full-time students from the following emergency loan funds, some of which are restricted to SIT:
- Commonwealth Help for Needy Students Loan Fund
- Special Assistance for Students Program
- Student Aid Fund
- Student Union Aid Fund
- Rotary Swinburne Bursary Fund

Enquiries should be made to Student Finance.

**Student assistance schemes**

**AUSTUDY**

The Commonwealth Government provides financial assistance for students aged 16 and over engaged in full-time secondary or tertiary study. To be eligible, students must meet certain requirements regarding previous study, income, other awards held, etc.

As from 1 January 1990 the following weekly benefits were available. These will be adjusted in 1991.

<table>
<thead>
<tr>
<th>How much is the maximum AUSTUDY living allowance?</th>
<th>16-17 years</th>
<th>18+ years</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent students at home</td>
<td>$57.60</td>
<td>$69.20</td>
<td>$82.10</td>
</tr>
<tr>
<td>Dependent students away from home</td>
<td>$95.10</td>
<td>$105.15</td>
<td>$124.75</td>
</tr>
<tr>
<td>Independent students</td>
<td>$95.10</td>
<td>$105.15</td>
<td>$124.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$146.50 for sole parents</td>
</tr>
</tbody>
</table>

The maximum allowance for a dependent spouse is $42.70 p.w. ($2,226). Some students are eligible for a fares allowance.

There is an education supplement of $30.00 p.w. ($1,560) for certain groups of pensioners and beneficiaries (normal AUSTUDY requirements must also be met).

**Health Care Card**

Students who qualify for AUSTUDY may also be eligible for a Health Care Card from The Department of Social Security.

**Child Care Assistance for Sole Parents**

From 1 January 1990 assistance of up to $92.50 per week has been available to sole parents without access to a Commonwealth subsidised child care place.

**Assistance for Isolated Children Scheme (AIC)**

For students under 16 years of age who, because of geographic isolation or a physical or intellectual disability, must live away from home to attend school, study by correspondence, or live at a second family home which provides daily access to schooling, Students aged 16 years and over can apply for an income test-free amount of $98.99, or they can apply for AUSTUDY.

**Aboriginal Secondary Assistance Scheme (ABSTUDY)**

For students of Aboriginal or Torres Strait Islander status undertaking an at least part-time secondary or tertiary course.

**Young Homeless Allowance**

This scheme was introduced in July 1986 for full-time secondary or tertiary students or people receiving a Social Security benefit.

**Family Allowance Supplement**

From $17.50, $34.10 per child per week for some categories of students who do not already get AUSTUDY or a Social Security payment (other than the Family Allowance).

**Concession tickets**

Concession tickets are available for travel to and from Swinburne on public transport.

**Student Union Aid Fund**

For further information about the schemes mentioned contact Student Finance, BA266, Business and Arts Building.

**Scholarships and Awards**

There are a number of scholarships and awards for which students from Swinburne College of TAFE may be eligible. Enquiries about these awards should be directed to Student Counselling Service, 819 8025.

**Postgraduate awards**

Commonwealth postgraduate awards assist people studying full-time for Master's degrees. Contact Services, 477 Burwood Rd., Room B205.

**Compensatory Education**

Individual assistance in English and mathematics is available to students of all courses at Swinburne. The need for tuition may be related to a student’s problems with a mathematics and/or English subject. Alternatively, difficulties in English or mathematics may affect a student’s progress in a range of subjects of their particular course of study. Particular attention is paid to students who are part of groups receiving compensatory education.
Tuition may be short-term to overcome aspecific difficulty or arranged on a weekly basis over a longer period of time.

Community Access Programs
Staff at the Centre are also responsible for providing access to any members of the community who wish to improve their English and/or mathematics skills.

Consequently, a variety of courses in mathematics and English are available at a range of different skill levels from 1:1 tuition to small group classes. In addition, courses are provided with appropriate mathematics and English content to cater for students interested in sitting an entrance examination in nursing, the police force or the fire brigade.

The Centre operates from the houses located at 42 and 44 William Street, staff are available to discuss people’s problems in English and/or mathematics and follow up with appropriate tuition.

Catering Department
Manager
P. Boxhall, AFCIA, 819 8174

The Cafeteria is located above the Ethel Swinburne Hall (shown as building no. 10 on campus map on inside back cover of this Handbook). Entrances are from the corner of John Street and Burwood Road, from level 3 of the South Engineering Building and level 3 of the new Union Building. The Cafeteria provides a range of hot food including casseroles, sandwiches, cakes, fruit. home-made soup and vegetarian lines. We also have a range of fruit juices, yoghurt and hot drinks.

The Department also operates a Coffee Shop in the SCT area (no. 30 on campus map). Hot and cold drinks and food are available.

The Staff Dining Room is located on level 3 of the South Engineering Building, Room no. SE318.

Central Technical Workshops
Manager
G. Netteship, CEng, MIMarE, 819 8326

The technical workshop manufactures teaching aids and prepares experimental work for staff and students (in consultation with lecturers).

Equipment available includes lathes, milling machines, sheet metal, welding facilities including aluminium and stainless steel.

The instrument workshop repairs and maintains instrumentation in the electronic, mechanical, optical, and to a minor degree, optical fields. Some manufacturing for student projects in consultation with lecturers, is also undertaken.

Child-care Centre
Co-ordinator
S. Kelly, 819 8519

A co-operative was formed in 1975 to provide child-care facilities at Swinburne for parents in need of this service. The primary objective of the Centre is to meet the needs of the children by providing a secure and happy atmosphere combined with experiences which will foster their development. The aims of the Centre revolve around encouraging a beneficial and creative environment for children. The Centre’s two houses can cater for up to thirty-five children at one time with six caring staff. The children are not separated into age groups but form one large, if rather noisy, family. A combination of structured and free-choice experiences have created a warm, relaxed program. The children are encouraged to go at their own pace, to develop their own style, to find their own solutions and enjoy their own creativity.

The Centre caters for children up to five years of age, not only from Swinburne parents, but other members of the community. A sliding scale of fees has been adopted. Early application for use of this service is advised as there is a waiting list in existence.

Computer Centre
Manager
M. Plunkett, BEng(Adel)

Enquiries
I. Carthy
Senior Programmer
R. Schorer, BSc(Hons)M(Adel)

Operations Supervisor
L. McGie

Telephine: 819 8509

The Swinburne Computer Centre provides computing and data processing facilities for teaching, research and administrative applications.

In 1990 the Computer Centre will have two processors available to students who require access to Swinburne’s central computing facilities. These machines will be located in the Computer Centre’s main computer room.

(a) IBM 3090/120E
The largest of these systems is the IBM 3090 Model 120E. The 3090 represents a closer association with the mainstream requirements of the computing industry. This association is reflected in the curriculum of the new Bachelor of Information Technology degree and Swinburne’s association with IBM which sees Swinburne staff members involved with IBM in the presentation of training programs to industry.

The 3090 is configured with 32 Mb main memory, 16 channels, 15 gigabytes of disc storage and a communication subsystem to support synchronous and asynchronous terminals, local area and wide area networks and several remote user sites. Local terminal facilities are distributed through the Applied Science, Art, Arts, Business and Engineering faculties and the TAFE college. Users have access to a range of programming languages (including COBOL, FORTRAN, PASCAL, RPG, APL, C, Modula 2, BASIC and Assembler) and software packages (including SPSS, SIR, SAS, IMSL, NASTRAN, CADAM and CATIA). Data base products available on the 3090 are CICS/DB2 and CULLINET IMS; support for artificial intelligence applications is provided by IBM’s Expert System Environment (ESE) and the operating systems available include VM/XA and MVS/XA.

Swinburne has entered an arrangement with McCormack and Dodge which has resulted in that company’s financial software being included in Swinburne’s undergraduate accounting programs. Along with our arrangements with IBM (Aust) Limited this is further evidence of commitment to the provision of industry standard computing facilities for our students.

(b) UNIX
The UNIX operating system is supported at the Swinburne Computer Centre on an Encore Multimax 310. The parallel architecture of the Encore will facilitate low-cost upgrades which in turn will ensure our ability to expand the configuration, at a reasonable cost, in line with the growth in demand for UNIX resources.
The Computer Centre is also responsible for the development, maintenance and production of a number of systems used by the non-teaching sector of the Institute. The major applications are Student Administration, General Ledger and the Library circulation and cataloguing systems. Basic maintenance of the Institute’s terminal network is also administered by staff of the Computer Centre.

Most of a student’s computing requirements can be satisfied by using a PC connected to either the UNIX or IBM systems and the different teaching departments maintain their own internal booking procedures to allow access to those terminals.

Assistance to students is provided through a duty programmer service for those problems that cannot be solved by the teaching staff. In addition, seminars are conducted specifically to ensure that teaching staff and students use the computing facilities in an efficient and co-ordinated manner. The Computer Centre produces a publication ‘User News’ several times throughout the academic year. Designed to assist and acquaint users in the application of Swinburne’s hardware and software facilities ‘User News’ is commended to all students.

Students may, on application to the Centre, be allocated an account and budget for computer facility usage. The allocation controls disc space, input, output and central processor facilities and is determined according to the requirements of the student’s course.

The accounts are allocated only for the direct requirements of a student’s course of study. Any student who uses the facilities for game playing or matters not associated with a course, or who interferes with other users through manipulation of passwords or files, can expect, at minimum, immediate suspension of their usage rights to Swinburne computing facilities as well as any other penalties which may be determined from time to time.

Overseas Student Unit
Manager
I. A. McCormick, BCom(Melb), MAdmin(Mon), FASA, CPA
Assistant Manager
Foong Y. Wong, BEc(Mon)
Fees
H. G. Lim
Admissions
Issy Yip, BA(Mon)
Location
473 Burwood Road, 819 8151

The Overseas Student Unit is responsible for the recruitment and welfare of all overseas students studying at Swinburne. Any difficulties overseas students have with non-academic matters can be discussed with the unit’s staff, including visa renewals.

Applications from overseas students wishing to study at Swinburne are also processed by the unit.

Swinburne Advising Centre for Women

Swinburne Advising Centre for Women has a two-fold purpose:
1) to provide careers and course advice for women interested in pursuing studies in Business, Engineering and Applied Science.
2) to provide a support service for women studying in the above area.

For more information please contact:
The Advising Centre for Women
463 Burwood Road, Hawthorn 3122
Ph: 819 8633

Publicity and Information Unit

Head
N. Manning, 819 8847
Handbook and Course Brochures
H. Hayes, DipArts(Media), DipEd, 819 8548
General Enquiries
R. Boschen
E. O’Brien, 819 8444

The role of the Publicity and Information Unit is to publicise, both internally and externally, the activities of the Swinburne Institute of Technology and College of TAFE. The specific functions of the unit include the provision, production and distribution of information relating to Swinburne courses, and staff and campus activities. This is achieved through media liaison and advertising, specific course brochures and external publications such as Swinburne News, the annual Swinburne handbooks, an internal staff newsletter and the staffing and resourcing of the Enquiries Office.

One of the unit’s highest priorities is to actively promote Swinburne’s public profile and the quality and range of education offered. To this end, the unit plays a major role in the coordination and organisation of exhibitions which includes Swinburne’s annual Open Day.

Hire of Swinburne facilities

Outside groups wishing to use Swinburne facilities should contact the P.I.U. to discuss their requirements. Swinburne lecture theatres and classrooms may be booked for use by outside organisations.

Education Unit

Head, Education Unit
B. Hawkins, BA(New Eng), MEc(Melb), MACE, 819 8384

The function of the Education Unit is to assist the teaching and learning departments throughout the Institute by keeping them informed of developments in education and related disciplines through seminars, workshops and a newsletter; by working with staff who are developing and introducing new methods and courses; by channelling funds to staff who need to be relieved temporarily, of teaching duties or who require special equipment or other arrangements in order to introduce new methods of technology; and by providing facilities for research into specific educational topics.

Equal Opportunity Office

Equal Opportunity Officer
Location: 463 Burwood Road, 819 8855

Equality of educational opportunity is Swinburne policy. Council’s policy on equal opportunity forbids discrimination on the grounds of sex, race, marital status, impairments, religious or political beliefs, age, sexual preference, and being a parent, childless and de facto spouse. Council is committed to providing an environment which is free from sexual harassment. Admission to courses and assessments of student performance will be conducted according to merit. Special efforts will be made to address imbalances in the distribution of male and female students in some disciplines.

Shalini Reilly may be contacted for advice and assistance.

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Overseas Student Unit

Manager
I. A. McCormick, BCom(Melb), MAdmin(Mon), FASA, CPA
Assistant Manager
Foong Y. Wong, BEc(Mon)
Fees
H. G. Lim
Admissions
Issy Yip, BA(Mon)
Location
473 Burwood Road, 819 8151

The Overseas Student Unit is responsible for the recruitment and welfare of all overseas students studying at Swinburne. Any difficulties overseas students have with non-academic matters can be discussed with the unit’s staff, including visa renewals.

Applications from overseas students wishing to study at Swinburne are also processed by the unit.

Swinburne Advising Centre for Women

Swinburne Advising Centre for Women has a two-fold purpose:
1) to provide careers and course advice for women interested in pursuing studies in Business, Engineering and Applied Science.
2) to provide a support service for women studying in the above area.

For more information please contact:
The Advising Centre for Women
463 Burwood Road, Hawthorn 3122
Ph: 819 8633

Publicity and Information Unit

Head
N. Manning, 819 8847
Handbook and Course Brochures
H. Hayes, DipArts(Media), DipEd, 819 8548
General Enquiries
R. Boschen
E. O’Brien, 819 8444

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Swinburne Conference Centre
The Swinburne Conference Centre is located at the northwest end of the campus. It is a pleasantly situated centre, ideal for small conferences, seminars and training courses. It comprises a large seminar room, one smaller discussion room and a dining room, all available for outside hire. Enquiries about the facilities available or booking of the centre should be directed to the office staff, 819 8172.

Student parking
Enquiries
Buildings, Grounds and Services, 819 8243 or 819 8760
Limited off-street car parking facilities are provided for students, part-time and full-time. No charge is made.

Conditions of use
Use of these facilities is strictly at the car owner's risk and is subject to:
- a current Swinburne parking permit or sticker valid for the car park in question being clearly displayed on the windscreen;
- availability of space in the car park;
- the car being within a marked parking bay; and
- the driver's observance of directions given by any of Swinburne's Parking or Security Officers.

Parking permits
Available free of charge from Buildings, Grounds and Services. Student ID card is required.

Part-time students
Evening and other part-time students may not leave cars in Swinburne car parks during the day while they attend work.

Short course students
Students require a parking permit issued by the office organising the course. Availability of space is not assured.

Hours of access
The main car parks are opened at 7.45am and close at 10.00pm.

Infringement of parking rules
Parking infringement on Swinburne land attract the same fines that apply on public roads, currently $30.00. Under the Road Safety Act 1986, the fines are enforceable in court. Those who abuse the system are also liable to have their parking privileges withdrawn and the parking permits for their cars revoked.

Students with disabilities
Consideration is given to the provision of reserved spaces for students with physical disabilities. Enquiries should be directed to Student Administration.

Motorcycles and bicycles
Convenient parking for motorcycles is available in John Street, while the Business and Arts Building and Applied Science Building car parks offer undercover racks for bicycles.

Location of car parks
On-campus parking areas are indicated on the map on the inside back cover of this Handbook. In addition, the staff car parks in Wakefield Street (except for marked reserved bays) and Paterson Street may be used by students after 5.00pm only.

Additional parking areas which can be used are located immediately behind the Hawthorn Football Ground, accessible from Linda Crescent (off Glenferrie Road). Only 7 minutes walk from Swinburne, that area offers ample parking.

Swinburne Press
Manager
D. McNaughton, 819 8123

The publications department was established in 1952 with a staff of three and one duplicating machine. Over the years this department has developed into the Swinburne Press with a staff of 12 and a full offset printing capacity.

The Press is primarily designed to give a fast print service geared to meet requirements for the production of class notes, students material and various types of administrative stationery. The major requirement is for single colour work but in addition the Press has a limited line colour production capacity.

In support of its printing element the Press operates a small bindery to collate, staple and trim publications and a computer typesetting service.

Swinburne Press is registered under the Business Names Act 1962 and is a recognised printing and publishing house.

Swinburne Student Bookshop Co-operative Limited
Manager
R. Wilkens, 819 8225

General enquiries: 819 4406

History
The Co-operative began trading in February 1978, its objective being to provide an efficient and convenient service to the Swinburne community.

The Bookshop was set up as a Co-operative structure to raise working capital via the sale of shares and also to ensure that the control of the operation remained with the members who use the Co-operative. The Co-operative's profits remain with the organisation to ensure its continued growth and viability. No external beneficiaries exist.

Membership
For the Co-operative to continue to operate successfully it must have members. By members buying shares and patronising the bookshop they are in turn ensuring the Bookshop has an inflow of share capital for growth and the patronage ensures its viability.

In return the Co-operative provides a convenient and efficient service on campus. Members are also entitled to attend and vote at all A.G.M.'s and are also eligible to be elected a Board member of the Co-operative as per the society's rules.

To become a member of the Co-op you simply fill in a share application form and pay $5.00 for 5 x $1.00 shares. You will then be issued with a membership card which should be presented when making a purchase at the Co-op to receive your discount.

How to make the best use of the services offered by your bookshop
Familiarise yourself with the many services offered by your bookshop. Here is a convenient list for your information.

- Text and references, novels, and general interest books.
- Secondhand books.
- Full range of stationery supplies.
- Full range of office supplies.
- Gifts, cards, wrapping paper and novelties.
- Audio and video cassettes.
- Film and film processing.
- Graphic and artist supplies.
- Calculators and accessories.
- Computers, monitors, printers etc.
- Typewriters.
- Binding service for presentation of assignments etc.
- You are also able to sell your used and unwanted books through the bookshop.
We suggest that if you are intending to purchase a required text or reference, that you do so at the beginning of each semester. If you cannot afford to purchase it immediately, have it put aside. This will help to alert us to any possible shortages early in the semester. Top up orders can then be placed where necessary to ensure the book arrives in a time to be of use for that semester.

If you find the book is unavailable ask the staff when it will arrive and place a personal order at the information counter to secure a copy when supplies become available.

**Co-operative hours**

**Hours of opening**

Normal hours of opening for the **bookshop** during terms and semesters are:

- **Monday to Thursday inclusive**
  - 8:30am to 7:30pm
- **Friday**
  - 8:30am to 5:00pm
- **Public holidays**
  - Closed

**During vacations**

- **Mid-semester, term and semester breaks:**
  - Monday to Friday:
    - 9:00am to 5:00pm with a lunch break between 12:00pm and 1:00pm
- **Christmas vacation:**
  - Closed mid-December to early February

**Services**

The **bookshop** offers a variety of services to students and staff and is receptive to any new ideas.

Further information, rules and regulations can be sought from the **Registered Office of the Co-operative**, situated in the **Union Building**, **John Street**, **Hawthorn**.

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**Student activities**

**Student Union — what is it?**

This is a campus-based organisation that is independently managed by students. It unites all students who are enrolled at Swinburne. It is like a trade union in its role of representing and fighting for the rights and entitlements of students. Through the **Student Representative Council**, the Union allows students to have input into, and be creative with, their academic courses. Fundamentally, the Student Union strives to ensure that the time a student spends on campus is rewarding, educational, memorable and safe.

**Membership and its aims**

The Student Union is an incorporated association under the Victorian Government’s **Association Incorporation Act 1981**. Under this Act the Student Union is a legal entity and membership to the Union is automatic on receipt of your general service fee. The purposes for which the Union is established are:

1. to advance the social, educational and general welfare of the student body of Swinburne and to provide services for the student body;
2. to represent and safeguard the students in matters affecting their interests and privileges and to afford a recognised means of communication between the students and the authorities of Swinburne Ltd and other educational bodies;
3. to promote, encourage and coordinate the activities of student committees and societies;
4. to promote and foster a corporate spirit amongst the student body;
5. to strive for wider recognition and greater appreciation of the standard of all academic awards of Swinburne Ltd.

The **1990 Executive of the Union** consisted of:

- **President**
  - Esther Abkam
- **Vice-President**
  - Kathy Don
- **Activities Director**
  - Richard Denton
- **Education Director**
  - Lisa Ferguson
- **Media Director**
  - Vacant
- **Finance Director**
  - Jeremy Edwards

The role of the Executive is to control and manage the business and affairs of the Union. The meeting of the Executive occurs at least once a month from February to November and is open to all members.

The affairs of the Union fall principally into the following areas: education and welfare, resource, social activities, and media. These areas are governed by management committees, whose responsibility is to develop and implement the policies of the Union in the areas of their activity. The management committees consist of: the relevant Executive member as Chairperson, two to three members from the Union Executive, two to four persons elected from the student body. The Executive shall convene a general meeting to receive and consider the statement submitted by the management committees.

In February or March of each year the Executive calls an **Annual General Meeting** of the members of the Union. In October or November of each year the Executive convenes a **Budget Meeting**. At this meeting the proposed **Budget** for the next financial year is presented by the Executive to the student body for their approval. Further, the Executive reports on the activities of the Union during the period since the preceding Budget Meeting.

All student members are eligible to stand and vote in elections and all have the same rights in respect to the Union and thus are entitled to use the services provided by it.
Orientation Week
Orientation occurs during the first week of academic classes. During orientation a diversity of entertainment is provided to encourage students to become involved and participate in the campus activities. Orientation week provides the opportunity for students to familiarise themselves with services and to establish friendships with other new and returning students. A program of activities for the week is available prior to the commencement of Orientation.

Club and Societies
For further information about activities functions call the Activities Officer on 819 8520. The Contact Centre is responsible for co-ordinating and assisting the student based clubs and societies on campus. Those active in 1990 included:

- ACES (Association of Civil Engineering Students)
- ASPS (Association of Swinburne Psychology Students)
- Baha ’i Faith
- BIT.PC (Bachelor of Information Technology PClub)
- BFC (Blood Film Club of Swinburne)
- Christian Association
- Croatian Club
- Explorers Club
- Greek Club
- Italian Club
- Korean Club
- Morantha Christian Fellowship
- MEKS (Mechanical Engineering Klub of Swinburne)
- Mental Health Club
- Photographic Society
- Students for Christ
- SAM (Swinburne Association of Marketing)
- SCABS (Swinburne Chemical and Biology Students)
- SIS (Swinburne Islamic Society)
- SSOA (Swinburne Overseas Students Association)
- Swinburne Campus Chapter of Engineers
- SWINJSS (Swinburne Jewish Students Society)
- SPACE (Swinburne Production Chemical Engineers)
- SYE (Swinburne Young Engineers)
- Vietnamese Society
- Wargaming and Role-Playing Society
- Women’s Support Network

For further information on clubs and societies, and general information on various groups, issues and organisations are located in the Union Office, located on the 4th level of the Union Building. Various services are provided here including room bookings, Legal Advisor bookings, insurance claims, administration forms for clubs and societies, and general information. Union personnel that are located in the Union Office include the President, Manager, Education Research Officer and Assistant, and the Administration Officer.

Union Staff
The following are a list of personnel staff:
- Union Director
- Activities Officer
- Media Officer
- Word Processing Officer
- TAFE Officer
- Catering Officer
- Union van
- Personal Accident Insurance Scheme
- Union Office

Reading Room
The room is designed for quiet reading and discussion, in a non-smoking environment. Newspapers, magazines and information on various groups, issues and organisations are located in this area. Also located in the lounge are two photocopiers. These copiers are cheaper than the library - only five cents per copy (A3 or A4). The Reading Room is open Monday to Thursday from 9.00am to 6.00pm and Friday from 9.00am to 4.00pm. It is located in the Student Services Centre.

Tool Library
The Tool Library is located in the Student Services Centre, telephone 819 8291. As the library is a non-profit organisation, its hire rates are very reasonable. All equipment requires a student/staff ID for borrowing. Deposits can be waived for student/staff if current ID is left in lieu of deposit. Library catalogues are available from the Contact Information Desk, Tool Library and the Union Office.

The Glasshouse Coffee Lounge
Situated on the third level of the Union Building, this is a comfortable and popular lounge which serves tea, cappuccinos, iced coffee, fresh fruit juices, and quality cakes and pastries. Ideal for those who only want a ‘cuppa’ without queuing in the cafeterias with the noisy lunch and dinner crowds. Seats 100.
The Union Cafe provides an extensive range of foodstuffs including hot and cold drinks, sandwiches, salads, cakes and pastries, hot take-away food and confectionery. With prices designed for student pockets, and home of the famous 'Budget Meal', the Union Cafe is conveniently located on the ground floor of the Union Building (next to the Bookshop).

Ethel Hall

Clubs and societies can use the hall for their functions. Bookings must be made at least two weeks in advance. All bookings must be made on prescribed forms available from the Student Union Office.

SCT Resource and Drop-in Centre

To meet the needs of TAFE students a Resource and Drop-in Centre is located on the TAFE campus. In this Centre, parlour games, magazines and tea and coffee making facilities are available free of charge to students. A lounge and study area is also provided for student use.

Radio Station

3SSR — Swinburne Student Radio.

Location: fourth level of the Union Building.

The Radio Station is run by a committee which consists of:

- Programme Director
- Publicity and Promotions Director
- Station Manager
- Technical Officer

3SSR provides students with a variety of music and other programmes which are broadcast to a number of outlets throughout the Swinburne campus. Students are involved in various activities at the station including supervisory work, production of 'on air' programs (DJ'ing), and the general running, management and organisation of station activities.

Facilities at 3SSR include a comprehensive record library, cartridge production facilities, an 'on air' broadcast studio, sound-proof recording studios and various related equipment including an eight-channel mixing desk, a four-track reel to reel, a half-track mastering reel to reel and an assortment of microphones and leads.

Anyone interested in becoming involved in any 3SSR activities should contact the station's supervisory staff in the radio station offices located on the fourth level of the Union Building.

Legal Advisor

The Student Union provides a free legal service for full and part-time students. The solicitor is available every Tuesday during the academic year, between 2.15pm and 6.15pm. Appointments must be made at the Union Office, on 819 9820.

Education, Welfare and Research Department

All matters pertaining to the quality of education and the socio-political welfare of students on campus are handled by this department. The Union employs a Co-ordinator (on a full-time basis) who oversees the activities of this department. The Co-ordinator is available for consultation on any facet of the department and can be contacted at the Union Office, 4th floor of the Union Building. There are three sections within this department:

Student Appeals and Advocacy Unit

This is designed to assist students who believe that they have been subject to any discrimination or injustice, whether in regard to their course assessment, teacher relationship, enrolment process, or whatever. The unit can also help prepare students to appear before the Progress Review Committee or an Exclusion Board, on the best manner in which to present their case.

Students seeking assistance can discuss their concerns, in total confidence, with the Student Advocacy and Liaison Officer, or the Union President. Both are located in the Union Office.

Education and Welfare Research Unit

This evaluates Student Services and also conducts the Course Evaluation Survey. The latter helps assess the quality of education that students are receiving in various subjects. The subjects covered depend entirely on those Course convenors who allow the Union to enter their classes and distribute the questionnaires. The information collected is processed, and the results are published in booklet form. The results are also forwarded to convenors and Heads of departments for further analysis and comment.

The Union employs an Education Research Officer to undertake this program. This person is situated in the Union Office.

Campaigns and Pressure Group Co-ordination Centre

The Union undertakes actions against those organisations/institutions (e.g. the Government) which implement policies seen as deleterious to the welfare of students. To meet the organisational requirements of such campaigns, students volunteer their time, and the Education, Welfare and Research Committee assist these students in regard to rallies, marches, lobbying, etc. Examples of such actions are: Anti-Tuition Fees, Anti-Education Tax, Travel Concession for all Tertiary Students, and Stop the Closure of the TAFE College.

All students interested in participating in social action to achieve beneficial change and progress can attend the Management Committee meetings by contacting the Union Desk (Union Office), or by ringing same on 819 2966.

Student Publications

The Student Union publishes one weekly newspaper called "The Swine", "The Swine", published on Thursday, covers broader news and entertainment. It provides a forum for students to present and discuss their views on all matters. This publication is produced by the Student Union Media Office. Contributions by students including graphic, cartoons and articles are welcomed. If you want to learn how its done, contact the Student Union Media Director or come to the Office. The Student Union also produces a free diary and Year planner which are available from the Contact Desk and at re-enrolment.

Club printing

Clubs and societies can have their publicity material printed by the Student Union Media Office at minimal cost.

Campus Typing

Campus Typing is a quick efficient typing service available to help you complete your assignments and gain the best possible results.

We will word process your assignments, job applications, resume, letters and theses, all printed out on a high quality Apple Laser Printer.

Student Computer Centre

Desperately seeking computers

Now there is a solution, students will have access to an ergonomically designed Computer Centre, consisting of 24 brand new computers and access to popular software packages, such as Microsoft Word 4, Database III, Lotus 1-2-3, as well as your own software packages.

For further information contact Andrea at Campus Typing, 4th floor S.U. Building or telephone 819 2966 or 8553.

The winning edge can be yours

Campus Bind

Campus Bind perfectly bound documents are the hard wearing, functional, simple and cost effective way to present your valuable assignments, computer printouts, manuals and reports of all kinds.

For excellent presentation, Campus Bind will give your assignments the professional edge.

Covers are A4, white, clear plastic with cardboard backing. Available at Campus Typing, 4th floor Union Building for a mere $2.00.

General Information
Tax Return Lodgement Advisor
Prior to the period when Tax returns have to be completed for lodgement, the Union organise a Tax Accountant who has a specialist knowledge regarding students, to give seminars free of cost to full and part-time students. Special one-to-one sessions are held at a small cost for those who need extra advice.

Sports Association
Executive Officer
A. Clarke, BAppSci(FTT), DipEd(Hav), 819 8018
Physical Education/Recreation Officer
D. Shanahan, BAppSci(FTT)
Administrative Assistant
B. Wright
Swinburne Sports Association is located in the Sports Centre in John Street, central to the Institute and TAFE areas of the campus.

The Association is run by students and aims to meet the sporting and recreational pursuits of all students and staff. All currently enrolled students are members of the Association. Sports Centre facilities include four glass backed squash courts, a well equipped weight training area, locker, shower and change facilities, multi-purpose clubs and aerobics room, fitness appraisal and meetings room. The Sports Store and Reception/Administration Office areas are also located in the Centre.

Currently, over twenty sports clubs exist at the Association, all of which are run by students. Members are encouraged to involve themselves in the clubs of their choice.

The Sports Association employs three full-time staff to oversee the day to day administration of the centre. The qualified Physical Education Officer offers members advice on weight training and health as well as conducting fitness appraisals. The Recreation Officer ensures a wide variety of recreation activities that are not offered by any of the existing sports clubs.

Clubs and Recreations offered to members include: Aerobics, Athletics, Badminton, Bowling, Car, Circuit training, Cycling, Football, Golf, Hanggliding, Hockey, Horseiding, Indoor cricket, Indoor soccer, Meditation, Motorcycle, Netball, Nordic skiing, Orienteering, Sailboarding, SCUBA diving, Skydiving, Snowski, Soccer, Squash, Surfing, Tai Chi, Taekwon Do, Tang Soo Do, Tennis, Volleyball and Waterskiing.

Swinburne competes in many intercollegiate sports and recreation events throughout the year. Affiliation with Victorian and Australian college sports associations create a calendar of over twenty events that give ample opportunity for students to compete for Swinburne.

Further information on the Swinburne Sports Association’s facilities, clubs, services and recreations are available from their information Handbook, available free of charge at the Sports Centre.
TAFE Board of Management

In 1990 Swinburne Council approved the establishment of a TAFE Board of Management. The function of the Board is to administer the affairs of Swinburne College of TAFE under authority delegated by Council. Membership of the TAFE Board of Management as at 27 August is:

President, Swinburne Council: Mr. T.P. Coman.

Seven members who have knowledge of the State Training System and who are closely associated with an industry or field sewed by Swinburne College of TAFE, but are not members of staff or students of Swinburne:

- Mr. K. Adamson, Grad Dip Management, MIFE
- Mr. K. Deutsch, BSc, BEd
- Ms. W. Dietman, BA, BSoCWork
- Mr. J. Hughes, MBA, B MechEng
- Mr. R. Paroissen, FASA
- Mr. K. Richardson, SAMI
- Mr. T. Zammit, BAppSc, DipEd

Two members elected by and from the academic staff of Swinburne College of TAFE:

- Mr. R. Carmichael, BA, BEd
- Mr. M. Joyce, BBus, DipEd, AASA, CPA

One member elected by and from the general staff of Swinburne College of TAFE:

- Mr. S. Fisher, TradeCert.

One member elected by and from the students of Swinburne College of TAFE:

- Ms. L. Jenkins (acting), BSc, DipMechEng, TTTC

Director, Swinburne College of TAFE: Mr. G.A. Harrison

Membership of Board of Studies

Members ex-officio
- President of Council
- Director
- Associate Director
- Assistant Director, SCT
- Heads of Division (3)
- Senior Curriculum Development Officer
- Elected members

4 heads of teaching departments elected by and from the heads of teaching departments, with one to be elected from each division.

6 teaching staff elected from and by the members of the TTS at Swinburne with at least two from each division.

6 members drawn and elected by the general staff of Swinburne College of TAFE and the staff of the Corporate Division, with at least one member to be drawn from the general staff of Swinburne College of TAFE.

5 students one to be elected by the Executive Committee of the Students Union and 4 SCT students elected in such a way that there is at least one from each division.

Application procedure

Entrance requirements

The entrance requirements for courses are described within the respective divisional entries in the Handbook. It should be noted that there are two categories of applicants who may be given special consideration. These are: mature-age applicants, and socially or physically disadvantaged applicants.

In relation to the latter, a number of places are reserved for such applicants, in particular for applicants who are in the following categories:

- non-English speaking background,
- hearing impaired,
- long-term unemployed,
- women in non-traditional courses,
- sole-supporting parents.

Closing dates for applications

Full-time study
For consideration in the first round of offers:

- Industrial Sciences 25 January 1991
- Business Associate Diploma 22 January 1991
- Certificate Course 14 December 1990
- General and Community Studies 26 November 1990
- Engineering Associate Diplomas 25 January 1991
- Mechanical & Manufacturing Technology 25 January 1991

(Further applications received after these dates will be considered if places are available).

Part-time study
Applicants should contact the appropriate department for information on application procedures.

Credit transfer

The College gives recognition to course applicants for relevant experience and prior formal and informal learning obtained through training and education. The recognition may result in the granting of unit exemptions. At enrollment time students should discuss with department staff regarding the relevance of their experience, education and training. Students can submit a formal application on the Application for Exemption form.

Students who are nearing the completion of their course and who plan to undertake further study at TAFE or Higher Education are advised to contact the Head of department of division in which they are enrolled, in order to discuss the course articulation and credit transfer opportunities which may be available to them.

For all associate diplomas offered by the College, arrangements have been negotiated for entry with credits into related degree programs. Details of credit transfer arrangements will be available to students, through the respective departments, at enrollment time. Updated information will also be provided to students during their courses.

Student Administration Office

The Student Administration Office provides information for students on admissions, enrollment and examination regulations and procedures. Other functions include processing, maintenance and storage of students’ academic records and personal details.

A more detailed description of the various enrolment and examination regulations and procedures is outlined as follows.
Location and office hours
The Student Administration Office is located in Room AD109, Administration Building (AD), John Street, opposite the Business and Arts Building (BA) and the Library. (See map inside back cover).
Office hours are as follows:
During teaching weeks
8.30am — 6.30pm Monday to Thursday
8.30am — 5.00pm Friday
During non-teaching weeks
9.00am — 5.00pm Monday to Friday
Note:
The Office is closed on public holidays.

Enrolment regulations
Definitions
In this section:
Enrolment includes ‘re-enrolment’.
Enrolment form includes ‘re-enrolment form’.
Subject means any area of study which is part of a course leading to an award and which has a title and code number in the subject register maintained by the Student Administration section of the Registrar's Department; the singular includes the plural.
Awarding department means the department responsible for the particular course.
Amendment to enrolment means the addition, deletion or changing of subject enrolments in a student's course of study.
Abandonment means the discontinuation of enrolment without formal notification.

Conditions of enrolment
Enrolment at Swinburne College of TAFE is conditional upon:
• the information which is supplied by the applicant upon which an offer of a place in a course is based, being accurate;
• the approval of the head of the awarding division (or a nominee) of the subjects concerned;
• the completion of the requisite enrolment and statistical information forms required by the College;
• the undertaking of the student to abide by the regulations, procedures and standards of conduct of Swinburne College of TAFE and to grant to the Registrar the power to provide appropriate authorities who have permitted a particular student to enrol at the College, details of that person’s academic progress as may be required as a condition of approval by that department or authority;
• the payment of any prescribed tuition fee (unless exempt);
• the payment of the prescribed general service fee;
• the establishment of viable class numbers.
Note:
Enrolment is not completed until the fee is paid.
Students whose fees are to be paid by an employer or other body must bring written evidence at the time of enrolment so that the College may send to the body an invoice for fees.
The College reserves the right to withdraw any class which does not attract viable student numbers.

Late enrolment fees
Students who do not attend for enrolment (including any required review of second semester subjects) on the date and at the time specified by their faculty or awarding department, will be required to pay a late fee of $10.00 (where re-enrolment is completed before the commencement of the following semester’s teaching); or $20.00 (where re-enrolment is completed after the commencement of teaching for the semester).

Additional fees
A part-time student who adds any subject to those for which he or she was enrolled and thereby increases the number of contact hours involved in his or her course to more than 75% of the full-time course load, will be required to pay the difference between the part-time and the full-time general service fee.

Amendment to enrolment details
Change of subjects
If any of the subjects, after the initial enrolment, have been dropped, or any new subjects added, the student must complete an Amendment to Enrolment form (available from Student Administration and departments) which must be presented to the head of department for approval, then lodged at the Student Administration Office immediately.

Students must notify the Student Administration Office of any withdrawal and/or additions of subjects:
(a) by 31 March 1991 for subjects with a mid-year final examination result, and
(b) by 31 August 1991 for subjects with an end of year final examination result.
Failure to notify will affect the student’s examinations and results in those subjects.
Note:
If a class has been cancelled by the department due to insufficient enrolments after a student’s official enrolment, students are still required to lodge an Amendment to Enrolment form.

Adding subjects
No subject may be added to a student's enrolment without the approval of both the teaching and the awarding departments. Students should be aware that some faculties have restrictions on the period during which subjects can be added.
Notwithstanding any department rules, after 31 March 1991 (for subjects concluding at the end of the first semester) or 31 August 1991 (for subjects concluding at the end of the second semester) an amendment will be permitted only where special circumstances exist and the approval of the head of awarding department concerned and the Registrar has been given. A fee of $5.00 per subject will be charged. Students not enrolled in a subject during examination period must seek approval of the department concerned. A fee of $20.00 per subject added will be charged.

Students should note that the addition of subjects may result in a change from part-time to full-time status. In such circumstances the amendment will only be recorded when an amount of money being the difference between the part-time and full-time general service fee paid has been paid. It is the responsibility of students to ensure that they are aware of any additional fees required and to arrange for their payment at the Cashier’s Office.

Withdrawal from all study
A student who is withdrawing from all study for the year — whether or not leave of absence is being sought — should complete an Amendment to Enrolment form.

A form is available from Student Administration. Students are strongly urged to discuss a proposed withdrawal from studies with the head of the department or contact teacher before taking any action.
Failure to notify withdrawal will result in enrolled subjects remaining on the record and failing grades being recorded.

Refund of fees as a result of cancellation
Application for refund of fees is provided for on the same form, and is valid until 31 March 1991 for Semester 1 and 31 August 1991 for Semester 2. Applications received after this date will be considered in exceptional circumstances only. A College service fee is deducted from the refund. Students must provide a copy of their enrolment receipt with their application.
Enrolling in an additional course

Students who enrol for a course and then later decide to do extra subjects in the same or a different course should only complete an Amendment to Enrolment form to add those subjects. A new enrolment form is not required and additional fees are not required to be paid except in circumstances where enrolment changes from part-time to full-time status, where a student continues to study in Semester 2 and has only paid fees for Semester 1, or where the additional subject is part of a fee paying short course.

Enrolling in a different course

In this case students are also required to fill in an Amendment to Enrolment form to change their course and subjects information. A new enrolment form is not required and additional fees are not required to be paid except in circumstances as outlined in the previous paragraph.

Residential address for correspondence

Throughout the year information regarding courses, examination results and other special notices are sent to students. Students must provide a correct address so that they may be contacted at a moment’s notice, otherwise they may jeopardise their chances of meeting deadlines and observing other special requirements.

If a student changes a name, an address, or employer, an Amendment to Personal Details form must be completed and lodged immediately at the Student Administration Office.

Recognition of prior learning

The College gives recognition to course applicants for relevant experience and prior formal and informal learning obtained through training and education. The recognition may result in the granting of unit exemptions. At enrolment time students should consult with department staff regarding the relevance of their experience, education and training. Students can submit a formal application on the Application for Exemption form.

Exemptions

Students seeking exemptions from subjects should complete an Application for Exemption form obtainable from Student Administration or from the department controlling the subject. The purpose of granting exemptions is to establish the equivalence of alternative studies. If there is doubt as to whether an exemption should be recommended, the matter should be referred to the appropriate head of the subject area.

Provision of additional information

If the alternative subject is not part of a widely recognised course the provision of results will not be sufficient. Applicants should also provide details of:
- syllabus content,
- length of course,
- assessment procedures.

Sighting of original documents

Original documents should be submitted in person so that they may be photocopied by an officer of the College and returned immediately.

Identity cards

When on campus, all enrolled students are required to carry, and to produce on request of a member of staff, the photographic identity card issued to them. The card, which has a maximum life of four years, must be presented for update/validation for the forthcoming year on re-enrolment. The card includes the authorisation for borrowing from the Swinburne Library.

A student who loses an identity card should notify student administration as soon as the loss is detected. Cardholders are, under library rules, responsible for any transaction made on the card up to the time of notification of the loss. A replacement card will be issued for a fee of $5.00.

No refund of the general service fee will be made unless the identity card is returned to Student Administration with the notice of withdrawal from a course.

Fare concessions

Metropolitan Transit Authority, country and interstate rail concession application forms are available from the Student Administration Office. Students must present their student card when applying for a concession form. Australian Airlines and Ansett Airline concessions are available from the Sports Association. Only full-time students are eligible for fare concessions.

Full-time students are also eligible for an international student card which is available from the Student Union Office.

General Service Fee

All enrolling students are required to pay a general service fee. At the time of printing, fees for 1991 had not been determined:

As a guide, fees for 1990 were:
- Full-time students — more than one semester academic $146.00
- Full-time students — at least one semester work experience $82.00
- Part-time students — $69.00

For all College purposes, a full-time student is one enrolled for subjects which require a total class, tutorial and laboratory contact time of 14 or more hours per week.

Resident students enrolling at Swinburne for the first time will be required to pay an additional $20.00 towards the Student Union Capital Reserve Fund.

• The General Service Fee has 2 components:
  (1) Student Union
  (2) Sports Association.

Awards

Students eligible to receive certificates are required to apply on the form prescribed, available from Student Administration. Applications close on 30 September each year and for applicants who anticipate completing the academic work in the following year.

Any request for exemption(s) must be approved in writing by the College before an application for a certificate can be made, in order to prevent delays in granting of the certificate.

Original evidence of same subject(s) completed elsewhere must be supplied with applications together with an additional photocopy which will be retained by Student Administration. For more information refer to section on exemptions.

General Policy and Procedure

Student Discipline

Introduction

The following sets out the College policy for a campus wide student discipline procedure and appeals process in order to regulate acceptable standards of student behaviour within the College of TAFE. This is to ensure that the advancement of education is maintained at the highest level, by promoting communication between students and staff on this issue.

The policy is based on natural justice principles and as such is consistent with the United Nations Charter of Human Rights, and Acts of Parliament such as Victorian Equal Opportunity Act, Commonwealth Sex Discrimination and Racial Discrimination Acts.
1. Requirements of students

Each Division of Swinburne College of TAFE has developed rules and regulations concerning such things as attendance, social behaviour, and compliance with course and college regulations for the programs under its jurisdiction. Students will be informed of these requirements at the time of their initial enrolment by the enrolling division. Any activity that is in breach of the requirements of the Division in which a student is enrolled, and which have been circulated by authorized Heads of Divisions or Departments, will be considered as misbehaviour, and thus be subject to disciplinary action being taken.

2. Informal and formal procedures

This section contains the following:
- Definition of misbehaviour which could result in disciplinary action.
- Procedure to follow to consider misbehaviour.
- Degrees of Punitive Action.

2.1 General definition

Any activity within the College precincts that harms or threatens to harm the well being and the educational welfare of a person or persons or is likely to bring the college into disrepute may be considered as misbehaviour.

Furthermore, misbehaviour will be defined as any activity which is in breach of the Requirements of the Division in which the student is enrolled. Any person or persons who are considered to be in breach of the above will be subject to the following procedure:

2.2 Procedure — conciliation and resolution

PHASE (1) INFORMAL PROCEDURE
(Stages One, Two and Three)

Stage — One

2.2.1 On the instance of an act being reported or identified as unacceptable, the teaching or administrative staff member will attempt to resolve the matter on a one-to-one or one-to-many basis.

Stage — Two

2.2.2 If the first action does not resolve the matter then the staff member concerned will raise the matter with the immediate supervisor who will attempt an informal discussion with both parties with the aim of resolving the concern.

Stage — Three

2.2.3 If the second action (stage two) is not successful, then the staff member concerned will raise the matter with the Head of Department. If the staff member involved in the first and second stage is the Head of Department the Head of Division will act as the conciliator in the third action (stage three).

PHASE (2) FORMAL PROCEDURE

Stage — Four

2.2.4 If the action at stage three fails to achieve a resolution, then the Head of Department or Head of Division (see paragraph 2.2.3) will:
- speak to the complainant
- speak to the person or persons against whom the complaint has been made
- raise the matter with the Student Union
- make a decision on punitive action to be taken after all parties have been heard
- make a written report outlining the complaint, the action (Stages One, Two and Three) and the decision taken

23.3 Exclusion from the College.

3. Appeals

31 If the Complainant or the person or persons the decision is against is dissatisfied with the decision or the punitive action, then the aggrieved party has a right of appeal. The appeal should be in writing and directed to the Head of Division or the Director of the College if appropriate.

32 The Head of Division will assemble an impartial panel consisting of:
- the Head of Division or nominee, as chair of the panel
- an independent staff member who is a nominee of Head of Department
- the President of the Student Union or nominee.

33 The terms of reference of the Panel will be to:
- hear evidence from the Appellant
- call for other witnesses or evidence
- decide if there has been an injustice or breach in procedure
- communicate their decision to the Director of the College for further action.

4. Confidentiality

All proceedings pursuant to this policy and all material brought forward in connection with such proceeding shall be treated as confidential.

5. General grievances procedure

At any point in the execution of the procedures the student may wish to make an official complaint and thereby have the issue considered in accordance with the Swinburne Ltd. "General Grievances Procedure for Students".

Examinations

General

1. Timetables

Approximately half-way through each semester, a provisional examination timetable is displayed on the examinations notice-board. Students should note their examination times and immediately report any clashes to the Examinations Officer who is located in the Student Administration Office.

The final timetable is displayed on the examinations notice board approximately two weeks before the commencement of examinations.

The final timetable is printed and copies are available to students. They are distributed from several points, including the Student Administration Office.

It is the responsibility of students to obtain a copy of the timetable and to be aware of their examination commitments. No information is given by telephone.

2. Identity cards

Students must take their identity cards into the examination room.
3. Absence from examinations

The Assessment Regulations (Section 6) make specific reference to absence from examinations due to genuine inability to attend. Misreading the examination timetable is not regarded as "inability to attend".

4. Publication of results

Examination results will not be given over the telephone. Results are displayed on the windows of the Ethel Swinburne Hall in Burwood Road on the date or dates announced by the Registrar.

Internal examinations

Swinburne College of TAFE
Examinations and Assessment Regulations

1. Scope
   1.1 The following rules apply to all courses and subjects taught and examined by the Swinburne College of TAFE, except where external examinations may require otherwise.

2. Definitions
   2.1 An examination is a formal assessment undertaken during the period proclaimed for examinations by the Board of Studies and which is subject to the control of the Registrar through a designated officer.
   2.2 A test is an assessment scheduled at any time during the course of a subject by the subject panel.
   2.3 An assignment may cover the following: laboratory work, field work, projects, class problems, essays, folios, design reports and general reports.
   2.4 A final result is a formal notation of achievement derived from one or more the above definitions.
   2.5 The Chief Examiner is the Director of Swinburne.
   2.6 An awarding division board is the Division Board controlling the Registrar through a designated officer.
   2.7 The subject panel must check the times and rooms allocated for examinations in the subjects for which it is responsible, and notify the Examinations Officer of any irregularities.
   2.8 The subject panel must ensure that one of its members be on campus and immediately available to the Examinations Officer for the duration of those examinations for which the panel is responsible.
   2.9 The panel shall carry out any further duties as required by the head of department.

4. Conduct of examinations

4.1 General

Unless otherwise stated on the timetable, morning examinations will commence at 9.00am and afternoon examinations at 1.30pm. Students will not be permitted to enter the examination room after 30 minutes have elapsed from the commencement of the examination, and will not be permitted to leave during the first 30 minutes nor during the last 30 minutes of the examination.

At the end of the examination students are required to remain seated until the room supervisor has collected all scripts and Swinburne material.

4.2 Specials provisions for students with disabilities

Special examination arrangements may be made for students with temporary or permanent disabilities. Applications for special arrangements are to be made to the head of departments who will recommend appropriate arrangements to the Examinations Officer who will be responsible for their implementation.

4.3 Collection and despatch of papers

The Examinations Officer is solely responsible for redirecting all completed examination scripts to the appropriate marking authority. Internally marked examination scripts will be available at the Examination Centre when all relevant documents have been cleared but, in any case, not before the afternoo of the day following the examinations.

4.4 Examination discipline

4.4.1 When an apparent irregularity is observed in an examination room, the student will be informed immediately by the supervisor but will be permitted to finish the examination.
5. Processing results

5.1 The convener shall within 14 days of the completion of the examination period, submit to the head of the teaching department the following:

5.1.1 The result recommended for each student enrolled for the subject;

5.1.2 A signed subject report form approved by the awarding faculty board, including:
   (a) certification that the results have been carried out;
   (b) a statement of the assessment procedure followed;
   (c) copies of all examinations, tests and assignments;
   (d) where appropriate, copies of solutions or statements of minimum qualities;
   (e) an appraisal of the subject as a whole.

5.1.3 Before recommending the results to the awarding division board or its committee established for the purpose, the head of the department shall ensure that a review has been carried out of the work of all candidates who are recommended as having failed a subject, or whose results are borderline to an assessment category.

5.1.4 After the awarding division board (or the Board Committee established for the purpose) has approved the results the chair shall advise Student Administration of the final result category for each student.

5.1.5 Student Administrations shall arrange for the publication of the results in a public place as soon as practicable after the determination by the division board or its committee and for the posting to each student a certificate showing his or her results for the semester concerned.

5.2 Result categories

5.2.1 Unless indicated below, for subjects which are internally assessed shall use the following gradings:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>75-100%</td>
</tr>
<tr>
<td>CR</td>
<td>50-74%</td>
</tr>
<tr>
<td>F</td>
<td>0-49%</td>
</tr>
</tbody>
</table>

5.2.2 Subjects undertaken as part of a Victorian Certificate of Education (Tertiary Orientation Program) will be recorded and reported using the following grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>80% - 100%</td>
</tr>
<tr>
<td>B</td>
<td>70% - 79%</td>
</tr>
<tr>
<td>C</td>
<td>60% - 69%</td>
</tr>
<tr>
<td>D</td>
<td>50% - 59%</td>
</tr>
<tr>
<td>E</td>
<td>40% - 49%</td>
</tr>
<tr>
<td>F</td>
<td>0% - 39%</td>
</tr>
</tbody>
</table>

5.2.3 Subjects undertaken as part of a Victorian Certificate of Education (Higher School Certificate) will use the following grades where report by grades is used:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>80% - 100%</td>
</tr>
<tr>
<td>B</td>
<td>70% - 79%</td>
</tr>
<tr>
<td>C</td>
<td>60% - 69%</td>
</tr>
<tr>
<td>D</td>
<td>50% - 59%</td>
</tr>
<tr>
<td>E</td>
<td>40% - 49%</td>
</tr>
<tr>
<td>F</td>
<td>0% - 39%</td>
</tr>
</tbody>
</table>

and, where reports are in two categories only:

- Satisfactory
- Unsatisfactory
6. Absence from examinations
Students who are absent from an examination due to illness or other reason may apply through the Student Administration Office for a special examination. Such application must be accompanied by evidence of a genuine inability to attend the examination, and must be lodged no later than midday of the third working day after the examination.

7. Deferred results
7.1 A deferred result may be granted only by the head of a teaching department. The special circumstances justifying the grant of a deferment must be set out in writing to the chair of the awarding division board.

7.2 When a deferred result has been granted, the result must be finalised in readiness for notification to the awarding division board by a date, to be fixed by the board, not later than three months after the date of publication of the deferment. The student and the subject convener shall be advised of the date and conditions set for the finalisation of the result.

7.3 The deferred result shall be recorded as "DEF" in the result listings for the subject.

7.4 Any extension of the period of deferment must have the prior approval of the head of the awarding division who shall fix an alternative date by which the student must have completed the requirements of the subject. Details of the extension granted and the reasons for it shall be notified to the next meeting of the division board.

7.5 As soon as the final result has been determined, the subject convener shall submit an Alteration to Result form, via the head of department, to the head of division for onward transmission to the division board.

9. Retention of examination scripts
All examination scripts, papers and records of raw assessments must be retained by the department for a period of six months.

10. Reports
On payment of the appropriate fee within thirty (30) days of publication of the results, a candidate is entitled to a full report on his/her final written examination paper. This does not apply to practical examinations.

Reports are in the following categories:
(a) breakdown of marks allocated for each question,
(b) a full report.

Fees
Fees for such reports shall be determined from time to time by the Director.

Enquiries regarding marks or access to scripts should be made directly to the appropriate department or division office.

11. Alteration of original result
Any amendment to internally assessed results will be accepted upon presentation of a Result Amendment form duly signed by the subject teacher, the head of department, and authorised by the head of the teaching division.

The head of division can authorise amendments to results within two (2) months after the date of original publication of the result. Any amendments proposed after two (2) months must be submitted to the divisional board responsible for the teaching department involved for approval.

General grievance procedure for students

1. Policy
1.1 Swinburne Council adopted an Equal Opportunity Policy in 1984. The policy affirms commitment to the principles of equal opportunity with regard to employees of, and applicants for employment within Swinburne, and to students admitted to, and prospective students of Swinburne.

1.2 The policy and its successive amendments stipulate that there shall be no discrimination on the grounds of sex, marital status, disability, race, religious or political beliefs, age, sexual preference, or being a parent, childless or a defacto spouse.

2. Definition of terms used in grievance procedure
2.1 Grievance: a complaint presented by an individual, or a group, based on the opinion that they are, or have been, receiving treatment that differs from the treatment received by other individuals or groups.

2.2 Discrimination:
a) Direct Discrimination — any decision or action which specifically excludes a person or group of people from a benefit or opportunity, or significantly reduces their chances of obtaining it, because a personal characteristic irrelevant to the situation is applied as a barrier.

b) Indirect Discrimination — attitudes and assumptions which are incorporated into rules, policies and practices, that appear to be neutral or to treat everyone equally, but may in fact disadvantage one group.
23 Status or Private Life: The Victorian Equal Opportunity Act 1984 stipulates that no person shall experience discrimination on the grounds of that person's status or private life. ‘Status’ refers to a person's sex, marital status, age, impairment, being a parent, childless or a defacto spouse. ‘Private Life’ refers to the holding or not holding of any lawful religious or political beliefs and engaging or refusing to engage in any lawful religious or political activities. The Act applies to education and employment.

2.4 Complainant: person who lodges a grievance.

2.5 Respondent: person who it is alleged undertook the behaviour which resulted in the grievance.

2.6 Grievance Procedure: a prescribed set of actions to be followed when a grievance is presented.

3. Behaviours or actions which give rise to a grievance

3.1 A grievance arises when a student cannot obtain redress through normal channels for what he/she considers to be unfair or different treatment. Such treatment may occur in course assessment, or in classroom behaviour and interactions.

3.2 A grievance may include behaviour outlawed by the Victorian Equal Opportunity Act, the Federal Racial Discrimination Act or the Federal Sex Discrimination Act, such as discrimination on the basis of sex or marital status, or racial harassment.

A separate grievance procedure exists to handle cases relating to sexual harassment.

4. Resolving a grievance

Informal procedure

4.1 In the first instance, the student should discuss the complaint where relevant, with the lecturer (SIT), member of teaching staff (SCIT) or member of administrative staff in an attempt to resolve the complaint.

4.2 If the grievance cannot be resolved in this way, the student may then raise the matter with the Head of Department.

4.3 Where a student has a complaint against a member of staff who is also the Head of Department, or in a case where the student feels that to approach the Head of Department is not appropriate, the student may take his/her complaint to the Dean or Head of Division. The Dean or Head of Division will carry out the role otherwise assigned to the Head of Department, in these grievance procedures.

4.4 The Head of Department will discuss the complaint with the student and advise the student where documentation describing the grievance procedure is available.

4.5 If the student's preference is for internal resolution of the complaint, the Head of Department will take a written record of the complaint on a pro forma grievance form.

It will contain:
- a) the name of the complainant;
- b) the name of the person(s) against whom the complaint is made;
- c) the date the complaint is made;
- d) the date(s) the behaviour resulting in the grievance took place;
- e) a brief description of the nature of the complaint;
- f) a summary of follow-up actions taken.

5. Conciliation and resolution

5.1 The Head of Department will meet informally with the respondent for the purposes of:
- a) outlining the grievance and naming the complainant (except as covered by Clause 4.7);
- b) making a written record of the respondent's reply to the complaint, which is signed and considered a true record;
- c) attempting to reach an agreement with the respondent that is acceptable to the complainant;
- d) attempting to ensure that there are no reprisals taken against a student who has made a complaint in good faith;
- e) outlining the requirements of State and Federal Government antidiscrimination legislation or Swinburne Council policy, where relevant;
- f) advising the respondent that another staff member will be nominated to re-assess the student's written work in complaints relating to course assessment.

5.2 If the grievance is successfully resolved to the satisfaction of the complainant the informal procedure will cease at this point.

5.3 The written record of the informal complaint will be retained for a period of 12 months in a confidential file in the office of the Head of Department.

6. Re-assessment of submitted work or exam paper

6.1 If the complaint concerns assessment of written work which includes assignments, reports or exam papers, the Head of Department may after discussing the complaint with the staff member named as the respondent, nominate another staff member to re-assess the student's work.

6.2 In the case where the respondent is also the Head of Department, the Dean or Head of Division, acting as the student's contact person may nominate a member of staff from another discipline or a member of staff from the same discipline in another institution to undertake a re-assessment of the student's work.

7. Follow-up actions

7.1 The Head of Department will meet with the student each semester for a period of 12 months following successful resolution of the complaint, to ensure that retaliatory actions were not taken against the student by virtue of the complaint.
7.2 The Head of Department will ensure wherever practically possible, that work presented by the complainant will be marked independently for the period of one year, following successful resolution of the complaint.

7.3 Where the student is subjected to retaliation he/she may approach the Head of Department or Head of Division or Dean where appropriate and an investigation will be instituted.

7.4 Where a member of staff is found to have retaliated against the student, disciplinary procedures will be instituted. Such disciplinary action may be taken against the member of staff complained of in the original complaint or any other member of staff undertook retaliatory action.

8. Formal procedure

8.1 If a grievance cannot be successfully conciliated by the Head of Department to the satisfaction of the complainant, the complainant may instruct the Head of Department to proceed with a formal complaint.

8.2 All formal complaints will be presented to the Appeals Committee.

8.3 The Appeals Committee will comprise:
   a) the Director's nominee from within the Directorate, who shall act as the Chair;
   b) a representative of either the TTUV, SASO, or VCUSA, depending upon the constituency of the respondent; and
   c) a representative of the Student Union.

8.4 The written reports, compiled by the Head of Department and signed by the complainant and the respondent will be forwarded by the Head of Department to the Chair of the Appeals Committee.

8.5 The complainant or the respondent may submit any other written material to the Committee in support of their case. Any additional evidence so provided, should first be submitted to the other party or parties named in the complaint.

8.6 The Chair of the Appeals Committee will advise the Equal Opportunity Officer if the grievance includes allegations of behaviour outlawed under State or Federal Government anti-discrimination legislation or Council Policy on Equal Opportunity.

9. Investigation of complaint

9.1 The Appeals Committee will investigate the grievance in the following manner:
   a) the Committee will meet within seven working days of the date the formal complaint is made and consider all written documentation including the written statements of the complainant and respondent and the written statements of witnesses;
   b) the Committee may call the complainant or the respondent to attend the meeting to explain any aspect of their written statement. If the complainant is required to appear before the Appeals Committee he/she may be accompanied by his/her Head of Department. If the respondent is required to attend he/she may be accompanied by his/her staff association or union representative. The complainant and respondent would not normally appear before the Appeals Committee at the same time;
   c) the Committee may call any witnesses who have submitted written statements concerning the grievance to appear before the Appeals Committee;
   d) if the complaint contains allegations of behaviour outlawed by Federal or State Government antidiscrimination legislation or Council Policy on Equal Opportunity, the Equal Opportunity Officer will attend the Appeals Committee meeting and advise the Committee accordingly. The Equal Opportunity Officer will not have voting rights.

9.2 Following deliberations the Committee will make appropriate recommendations. Committee decisions will be achieved through consensus or agreement reached between all members.

9.3 The Committee will forward its written recommendation to the Director together with documentation of the grievance. Actions which may be taken are limited to:
   a) not upholding the case;
   b) upholding the case and stating that the following be considered, where relevant:
      — ordering that the Director make a recommendation to the Director for any loss of academic credit or achievement suffered as a consequence of the behaviour
      — re-admitting a student who has been excluded from a course
      — directing the respondent to undertake appropriate staff development programs
      — reprimanding the respondent
      — ensuring that the complainant is not subjected to retaliatory action by virtue of the complaint
   c) in the case where a grievance which concerned discrimination against a student on the grounds of status or private life being upheld, the following action may also be recommended:
      — suggesting that the respondent undertake counselling.

9.4 All grievances shall have undergone the process of a formal resolution within a period of three months of the receipt by the Chair of the Appeals Committee of the formal written complaint.

9.5 The complainant and the respondent will be advised in writing by the Chair of the Appeals Committee of the decision made within seven days of submission of the Appeals Committee's recommendation to the Director.

10. Appeals

10.1 Either party shall have the right of appeal. The appeal should be submitted in writing to the Director within seven days of the receipt of the Committee's decision. The appellant shall be entitled to present new evidence or to re-argue his/her case.

10.2 The finding of such an appeal shall be communicated to the appellant within fourteen days of the appeal being lodged.

11. Complaints of discrimination — external procedures

11.1 In the case of a grievance being concerned with allegations of discrimination against the complainant on the grounds of that person's status or private life, the complainant has the right to present a complaint to the appropriate external authority.

11.2 Where external grievance procedures are being followed, the complainant may wish to refer the matter to the appropriate external authority at any stage of the process, and in particular:
   a) when no further action is taken;
   b) when he/she may wish to appeal against the Committee's decision.
11.3 Where the matter is taken up with the external authority, the internal grievance procedure shall cease to apply in the case.

11.4 The appropriate external authority in the case of discrimination complaints is the Office of the Commissioner for Equal Opportunity in Victoria.

12. Confidentiality

12.1 Confidentiality will be strictly observed throughout the conciliation and resolution process. Information and records related to complaints will be considered exempt documents under Freedom of Information legislation.

13. Record keeping and storage

13.1 The written record of the complaint will be retained for a period of 12 months in a confidential manner.

13.2 Where all appeal mechanisms are exhausted or where the complaint is not sustained, written documentation of the case will be destroyed.

13.3 The Equal Opportunity Officer shall have access to statistical information concerning discrimination related complaints.

14. Conflict of interest

14.1 If the Head of Department feels that to undertake conciliation of a complaint would place him/herself in the situation of a conflict of interest, the Head of Department will direct the student to take the grievance to the Dean or the Head of Division.

14.2 A complainant may at any stage of the informal procedure seek the assistance of the Dean or Head of Division if he/she believes a conflict of interest exists or may arise as a result of the complaint.

15. Resources

15.1 The complainant may at any stage of the grievance procedure approach where relevant, the following offices or persons for advice and/or support:
   a) Student Union;
   b) Swinburne Student Services;
   c) Equal Opportunity Office.

15.2 Members of staff so contacted are advised to direct the complainant to his/her Head of Department.

15.3 The respondent may approach the staff association or union for advice and support.


State Training Board External Examinations and special consideration applications

The following is an extract from STB Regulations Examination Instruction Booklet (TEX1).

EXTRACT:

1. Applications — Consideration and special examinations

1.1 Application for special consideration or admission to a special examination shall reach the office of the STB within 72 hours of the examination. Such applications will be accepted only on the appropriate form and should be sent to:

Examinations Branch
State Training Board
PO Box 266D
MELBOURNE VIC 3001

Swinburne College of TAFE

1.1.1 A candidate who applies on medical grounds for special consideration or a special examination shall submit an application and medical certificate. Students must use the comprehensive form available from college student administration/records.

1.1.2 A medical certificate relating to a candidate’s condition at the time he/she sat for or should have sat for an examination, must be signed by a medical practitioner no later than two days after the date of the examination.

1.1.3 A candidate who applies for special consideration or a special examination other than on medical grounds, shall submit with his application, a statutory declaration stating the facts upon which he/she relies and shall furnish any corroborative evidence which may be required.

1.1.4 The decision of the Director Programs Planning shall be final. Any special examination will be conducted in accordance with directions issued from time to time by the Director, Programs Planning and procedures issued by Examinations Branch.

2. Students with disabilities

2.1 Special examinations facilities may be made available for students with disabilities. On application to the Examinations Branch, arrangements can be made for additional reading or writing time, special seating or rooms or any other assistance which may be necessary.

2.2 Application for such facilities should be made in the first instance to the college which should then consult with Examinations Branch.

2.3 Applications will only be accepted on the appropriate form.

3. Special Examinations

3.1 A candidate does not have an automatic right to sit for a special examination and special examinations are not available in Electrical Wiring, Plumbing, or any trade practical examination.

3.2 The provision of special examinations are costly, have limited life and present a security risk.

3.3 The provision of special examinations will only be undertaken in commonly called for examinations and cost considerations will be taken into account before the granting of any special examination.

3.4 The State Training Board provides in many cases multiple attempts at examinations in a year and while accident and illness may be unfortunate candidates should not expect the provision of examinations as a compensation for personal trauma.

3.5 No more than three special examinations per semester will be granted in State Training Board examinations. Candidates should only apply for critical subjects to maintain their course objectives.

3.6 The inability to attend examinations is not grounds for a special examination. Misreading of timetables, diaries, pressure of work, overseas trips and similar reasons put forward for non attendance are not acceptable grounds for an application.

3.7 Time limits will be strictly applied and the 72 hour deadline from the day of the examination will be essential in any submission. The application must reach the State Training Board examinations physically within that time limit.
38 Acceptable grounds for application are restricted to: —
(a) Severe current illness at time of the examination preventing the candidate from sitting that day. This must be verified by a medical examiner immediately and a comprehensive medical report presented. Unspecific certificates are not accepted. The report must be on the specified form and in the prescribed manner.
(b) Mild Complaints
Mild complaints such as migraine, stomach upsets, colds may not be sufficient grounds for the granting of special examinations. Candidates therefore, should not expect that a medical report will automatically provide them with access to examinations.
(c) Close family death applications must be supported with printed evidence and a Statutory Declaration. The supporting evidence must be complete.
(d) Attendance at a court of law which is scheduled and unavoidable. Evidence must be presented 14 days prior to the normal examination sitting date. Where possible reschedule the time of sitting will be arranged rather than a granting of a special examination therefore prior notice is essential.

39 In certain circumstances, Colleges who strongly feel that a special examination should be provided (and if a special examination does not exist) may be requested to provide the examination. The procedure is set out clearly on page 4 of the State Training Board Examinations Branch. Colleges must not proceed without the permission of the STB Examinations Branch.

3.10 Guidelines for Special Consideration
Students cannot ask for special consideration for a pre-existing illness. The fact that a student was ill prior to or while study was in progress, does not in itself constitute grounds for special consideration. The inability to study is definitely not grounds for consideration.

3.10.1 Special consideration is requested from examiners in the following instances:
(a) Sudden severe illness certified on a written report on the appropriate form. Other unspecific doctor’s certificates are not acceptable.
(b) Close death in a family involving immediate family members.
(c) Chronic handicapped disabilities.
(d) Court appearances.

3.10.2 Applications for above must reach the State Training Board Examinations within strict time limits.

3.10.3 (a) & (b) must be received by State Training Board Examinations within 14 days prior to the examination. Evidence must be provided to support the application.

3.10.4 (a) & (b) must be received by State Training Board Examinations within 72 hours from examination.

3.10.5 Special consideration will only assist the student in limited cases. General exemptions are not given in any subject. Therefore special consideration is extended to the opportunity to sit, or to attempt the paper. The student can be given marginal allowances for actual inability to perform with the examination content. The candidate must be able (in general) to reach the common standard expected with only the borderline cases being considered.

3.10.6 Special consideration will only be requested, and examiners are asked to apply a valued judgement if possible. No criteria is therefore imposed on examiners to consider or take into account such requests. The final judgement remains with the referee decision given to the examiners in their appointment.

3.11 Chronic or Long Term Handicapped

3.11.1 A candidate with a history of disability need only apply once and if application has been approved, that student is issued with a letter showing any extra time allowance or special provisions. The student should thereafter enclose photocopies of that letter with each examination script so that further consideration can be given by the examiner who actually marks the paper.

3.11.2 Chronic recognizable complaints such as Dyslexia, hearing, sight and cerebral palsy problems are usually easily verified. Any such evidence from handicapped rehabilitation centres or prior medical and College records as to the complaint will usually be acceptable and need not be further verified (by additional medical reports) other than by a letter from the Centre/College involved. However, the student must still fill in the form so that details are complete and further work is not needed by College or Examinations staff to glean missed particulars. Common allowances are: —
(a) Extra examination
(b) extra reading time,
(c) provision of scribe,
(d) isolation provision.

3.11.3 College student administration/record sections of colleges must retain the appropriate form for distribution to all candidates on request.

STB — Application for Examiners report

Recorrections
1 Any candidate who fails an externally set and marked examination other than a practical examination may, on payment of a fee of $20.00 (made payable to the STB, Victoria), have his/her examination paper re-marked if the student requests it within 14 days. This fee is non-refundable.

2 Any application for a recorrection must be lodged, together with the prescribed fee, to the Examinations Branch not later than the end of August for first semester exams and the end of February for second semester exams.

2.1 Applications will only be accepted on the appropriate form which is available from the Student Administration Office.

2.2 Applications should be addressed to:
Branch Examinations
State Training Board, Victoria
PO Box 266D
Melbourne, Victoria, 3001

P.O. Box 266D
Melbourne, Victoria, 3001
2. The result of the recorrection will be provided as soon as possible though not necessarily before the supplementary examinations are held, if applicable.
   (a) Where a candidate's eligibility to sit for a supplementary examination depends on the result of a recorrection, and where the recorrection result is not available before the time set for the examination, the candidate should be allowed to sit for the examination and an appropriate endorsement of the fact should be made on the front of his/her answer papers.
   (b) A candidate who is not granted a pass on a recorrection of his/her examination paper will be furnished with a report on that examination paper.
   (c) Students who have passed in any subject cannot apply for a remark in that paper.
   (d) Where a paper is externally set but internally marked by the college it is then a matter between the candidate and the college. Recorrections are only available for examinations that are both externally set and marked by the STB.

STB Examinations — Application for access to examinations script
Applications must be made on appropriate form available from Student Administration.
A fee of $8.00 per examination script requested is payable to the following address:
   — Branch Examinations
   — State Training Board
   — PO. Box 266D
   — Melbourne, 3001

The following points should also be noted:
— Copy drawings larger than A4 are not available however inspection is possible.
— Papers are only kept for 6 months after examination date.
— Practical assessments are not kept, theory scripts only may be applied for.
— College and student number must be quoted.
— A separate form must be completed for each subject requested together with $8.00 payment per examination script.

Swinburne College of TAFE
Centre for Engineering Technology
Manager: L.J. McLaughlan
Co-ordinator, CAD: E.G. Oliver
Co-ordinator, Communication Systems: P.S. Strouda
Technical Officer: H. Ramaekers

The Centre for Engineering Technology was established in November 1986. Its aim is to integrate the specialist disciplines within the Engineering Division and to use these cumulative skills to assess and service the high technology needs of industry.

This service to industry involves:
— Training
— Consultative interaction
— Research and development projects
— Prototype development

Current offerings in short courses are:
— Computer aided drafting (CAD)
— Computer aided manufacture (CAM)
— Combined computer aided drafting and computer aided manufacture (CAD/CAM)

The CAD/CAM course uses a CAM package in association with Autocad. This CAM package was developed for industry by the Centre (CAMPAC).

Swinburne College of TAFE
Centre for Small Business
Manager: J. Torbiner, BEd(BusStuds), AIM, AIMM, AITD
Technical Officers: S. Catton and Melissa Lukies

The Centre was established in July 1986. Its aim is to provide a service for the needs of the small business community. At present the following services are provided:
— A variety of short courses and workshops specialising in:
   — Small business establishment and management
   — Secretarial and word processing
   — Computer business applications
   — Selling and marketing techniques
— A reference and consulting service concentrating on advising small business on:
   — Setting up a business
   — Bookkeeping/accounting requirements
— A resource centre with printed and audio-visual material for reference or loan.
— A training service that can organise and design day or evening in-house training courses to suit individual needs.

Swinburne College of TAFE
Computer Services Unit
Manager: Mary Waterhouse, BEd, DipEd
Technical Officers: S. Catton and Melissa Lukies

The Swinburne College of TAFE Computer Services Unit provides modern computing facilities for teaching computer related subjects and offers some computer aided instructional facilities. It offers hardware and software support to all users. Computing facilities are located in rooms N7 to N15 and in the Centre for Small Business Rooms. The Unit is equipped with 150 IBM compatible microcomputers arranged in local area networks. A substantial software library is maintained, which includes languages, current application packages and development tools. Communications facilities are also available.

Curriculum Development Unit

The Curriculum Development Unit carries out a support role for teachers involved in curriculum development projects by providing advice, consultancy and active assistance in such tasks as: new course design and development, course accreditation/re-accreditation, course evaluation/validation and course approval processes. The unit also provides a number of curriculum related staff development activities including: Curriculum Writing Skills Training, Part Time (and initial) Teacher Training Programs, Occupational and Training Needs Analysis.
National Scientific Instrumentation
Training Centre

The NSITC is a joint venture between Swinburne College of TAFE, Swinburne Institute of Technology, Varian Pty. Ltd. and Foss Electric (Australia) Pty. Ltd. The Centre offers a comprehensive range of "hands-on" training in modern scientific instrumentation including:

- high performance liquid chromatography,
- nuclear magnetic resonance spectroscopy,
- gas chromatography,
- electrochemistry including potentiometry,
- atomic absorption spectrophotometry,
- FT-IR and GS-mass spectrometry.

NSITC Manager: Jon Hall, PhD, BSc(Hons), ARACI
Technical Staff: Louis Kyratzis
Administrative Officer: Jacqui Flowers

Programs for Overseas Students

The College accepts students into full-time accredited programs in applied science, business, computing, engineering, secretarial and foundation studies. Through the English Language Centre, English for Academic Study courses of various lengths are offered. These are government accredited courses.

Details on courses for overseas students are available from the Manager, Overseas Student Unit, 819 8235.
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Business Studies Division

Head
R.W. Conn, BBus, DipEd, AASA, CPA

Finance and Information Technology Department

Head
M.J. Joyce, BBus, DipEd, AASA, CPA

Academic Staff
M. Aronfeld, DipAcc, DipEd, AASA
S. Bouse, BCom, BBus, GradDipBIT, Advanced Diploma in Business Management and Accounting, Advanced Diploma in Information Technology
P. Browster, BBus
J. Chong, BEc
C. Davy, BBus, DipEd, AASA, CPA
L.G. Corrie, BCom, TSTC
M.G. Doig, BBus, AASA, CPA, DipEd
M. Hakim, BCom, MBA, DipEd
B. Halloran, BEc
M. Hamilton, BS(Hons), PhD
F.M. Lawlor, BA, DipBusStuds, DipEd, GradDipAcc, AASA
R.N. Lewis, BCom, DipEd, AASA, CPA
E. McLennan, BSc, BA, DipEd
M. Reaper, BEc
R.E. Rimington, BCom, DipEd
F. Rossi, BEc, GradDipLS, DipEd
J. Rudolph, BEc, DipEd
G. Senaratne, FCM(AUK), GradDipEd, GradDipBusTech, AASA
M. Waterhouse, BEc, DipEd

Marketing and Administration Department

Head
I.M. Walker, MA, BCom, DipEd

Academic Staff
K. Allen, BCom, DipEd
L. Cimino, AssDipBusStudsLaw, DipTT
B. Havenhand, BA, DipEd, GradDipMktg
C.M. Kent, BA, NZTC
J.A. Mullen, AssDipPSP, DipTT, AIPS
M. Neilson, DipBusStud
S.E. Quail, BA, DipEd
M. Reardon, DipTT, AssDipSecStud, CertSupervision
J. Ryan, AssDipBusStud, TTC
G.I. Scott, BA, DipComPac, TTC
C.P. Trahair, BA, DipEd, GradDipSecStud
J. Tulka, BEc, GradDip, AppSci(BusTech)
N. Zubeckis, BA, DipEd, Off&SecStudCert

Business associate diploma courses

The following associate diploma courses are offered by the Business Studies Division:

Accounting
Microcomputing
Marketing
Office Administration

Business certificate courses

The following advanced certificate courses are offered by the Business Studies Division:

Advanced Certificate in Sales Management
Advanced Certificate in Marketing
Advanced Certificate in Accounting
Advanced Certificate in Management Accounting
Advanced Certificate in Taxation Practice
Advanced Certificate in Information Technology
Advanced Certificate in Computer Operations
Advanced Certificate in Personnel
Advanced Certificate in Office Administration
Computer Business Applications Certificate
Certificate of Office and Secretarial Studies
Certificate of Business Studies — Operations Management: Occupational Health and Safety
Certificate of Office and Secretarial Studies

Full-time Courses

All Associate Diplomas (Accounting, Microcomputing, Marketing and Office Administration) are offered on a full-time basis over two years. The Advanced Certificates in Accounting, Information Technology, Computer Operations, Office Administration and the Certificate of Office and Secretarial Studies are one year full-time courses.

Part-time Courses

All courses except the Associate Diploma of Business (Office Administration) and the Office and Secretarial Studies Certificate are also available as part-time, evening study programs. In addition, it is unlikely that the Associate Diploma of Business (Microcomputer Systems) will be offered part-time.

The Computer Business Applications Certificate is a one-year part-time evening course.

The length of courses vary but generally students take four units a year. Further information on the estimated time required to complete a course can be found with the details of each course.

Students pursuing the Operations Management course in any of the three specialist areas may be awarded a Short Middle Level certificate on completion of the eight compulsory specialist units.

Students pursuing other certificate courses, with the exception of the Computer Business Applications, the Certificate in Retailing and the Advanced Certificate in Personnel, may attend for one full year in common subjects followed by two year's part-time evening studies in specialised subjects.
Specialist areas
In addition to the above areas of study a wide range of specialist units may be incorporated by attending other TAFE colleges for a few subjects. These include:

Advertising
Banking
Book trade
Building societies
Credit management
Customs procedures
Insurance

Any students interested in these specialist areas should also enquire for advice regarding a plan of study.

Entrance requirements
The usual entrance requirements are a pass in Year 11 or an equivalent course for Certificate courses and a pass in Year 12, an equivalent course or mature background for Associate Diplomas or Advanced Certificates.

Career potential
The general aim of the Certificate, Advanced Certificate and Associate Diploma courses is to provide a variety of para-professional courses which are designed to suit the needs of potential section or department supervisors, senior clerical staff, industrial supervisors, sales supervisors, account staff, secretarial support staff and other supporting staff with specialist areas of responsibility.

Membership of associations
These courses are recognised for the purpose of admission to membership of a number of professional institutes, these are listed under the individual courses.

Applications for exemptions
Certificate, Advanced Certificate and Associate Diploma units passed at other colleges.

If a TAFE Victorian Certificate, Advanced Certificate or Associate Diploma of Business Studies unit has been passed at another institution other than Swinburne it is not necessary to apply for an exemption. The unit will count towards a certificate regardless of where it was studied. When applying for your award simply provide the awarding college (where you passed the last unit) with result statements from the colleges where you studied the other units.

Subjects other than Advanced Certificate or Associated Diploma units
(a) Where less than twelve units are applied for: these are granted by Swinburne and the application forms are available from Student Administration. The Head, Business Studies Division should be consulted if the student requires advice.
(b) Where more than twelve units are applied for: these applications can only be granted by the TAFE Board. Application forms are available from and must be submitted to the Head, Business Studies Division.

Practical experience
Students cannot be granted an exemption solely on the basis of practical experience.

Specialist units
Students will not be granted exemptions for all the specialist units in a particular course. They are required to pass at least two Business Studies specialist units.

General rules for granting exemptions
(1) Credit will not be given for subjects which are at or below Australian university entrance standard, i.e. the equivalent of the Victorian Certificate of Education (Higher School Certificate).

(2) Credit will be given only if there is a substantial overlap of topics, except where alternative subjects provide a suitable basis for study in an area of specialisation then exemptions may be granted for introductory specialist units even though the content of the alternative subject does not overlap.

Provision of additional information
If the alternative is not part of a well-known course, it may be necessary to provide extensive details on the:
(a) subject matter covered by the syllabus;
(b) length of the course;
(c) assessment methods used.

Sighting of original documents
Photocopied documents supporting applications must be marked 'original sighted' by an officer of the College, therefore it is suggested that applications be submitted in person to Student Administration so that original documents are not left at Swinburne.

Early application
It is advisable to apply for exemptions as soon as possible after enrolling. This will allow you to select subjects at re-enrolment knowing exactly which units are needed to complete the course; it also avoids problems caused by possible changes in the rules for granting exemptions.

Approval limits
Applications are checked by heads of departments before being recommended to the Business Studies Division Board which meets monthly. Exemptions for Communication Skills 1 & 2 must be recommended by the Head of Social Science & Humanities. After approval, letters of notification are prepared and rechecked, therefore students should expect this process to take approximately two to three months.

Further information
Additional details about Associate Diploma or Certificate Courses may be obtained from:

Mr. M.J. Joyce
Head, Finance & Information Technology Dept.
Telephone: 819 8721
OR
Mr. I. Walker
Head, Marketing & Administration Dept.
Telephone: 819 8165

Changes in course structures
Due to a major review of all TAFE courses and the resulting changes that are being implemented, it is extremely important that students obtain up-to-date information on course structures before they enrol.

If a course is altered, students may continue on their original course or elect to adopt the new course structure. The only acceptable course structures are the ones current in the year the student first enrolled or any subsequent structure. Any student who elects to adopt a new course structure should obtain advice as to what credit will be given for completed units.

This Handbook only lists the current course structures (and subjects). Students needing information on previous course structures should consult earlier handbooks which are available in the Business Studies Division and the Library.

3500DBB Associate Diploma of Business
(Accounting)

Career potential
The Associate Diploma in Accounting encompasses practical training for a variety of para-professional accounting positions. Candidates will be able to work independently in small organisations or be involved in positions requiring a minimum of supervision while working under a professional accountant.
The course provides participants with the opportunity to obtain knowledge and skills relating to manual and computerised bookkeeping, costing, budgeting, taxation, financial accounting and financial management.

Course structure

The structure of the Associate Diploma in Accounting requires the successful completion of twelve compulsory units to be undertaken in the first year of full-time study, followed by three alternative accounting specialisations, one of which is to be chosen and undertaken in the second year of full-time study. Each area of specialisation consists of twelve units (compulsory units plus electives).

Part-time students will be required to complete first-year units prior to commencing the second-year specialisation.

Note: This course is post Year 12 or mature age entry level

Duration of course

The course may be undertaken by two years of full-time study or approximately five years of part-time study.

Part-time study is normally conducted on an evening basis.

Career potential:
The course is primarily designed to prepare students for employment in four key areas of the computer industry. Although some graduates will find work in other related fields, the four labour market areas targeted are computer sales, computer operation, computer programming and microcomputer user support. Daily newspapers and trade publications carry many advertisements seeking skilled personnel for computer industry jobs relevant to this course. Further indications of strong employment demand have been provided by a number of recent research studies on the computer industry labour market.

This course offers four major qualifications:

Course structure

This course offers four major qualifications:

- Advanced Certificate — Information Technology
- Advanced Certificate — Computer Operations
- Associate Diploma of Business (Computer Programming)
- Associate Diploma of Business (Micro-computer Systems)

Students wishing to complete the Associate Diploma of Business in either Computer Programming or Micro-computer Systems must have successfully completed the Advanced Certificate — Information Technology. Students entering into the Advanced Certificate — Computer Operations are advised to complete the Associate Diploma of Business (either stream) must also complete the outstanding units from the Advanced Certificate — Information Technology.

Course participants may exit at Advanced Certificate or Associate Diploma level. The integration of common elements of study in this course facilitate job retraining and enable qualification upgrading.
Compulsory units

Advanced Certificate — Information Technology

Semester 1: 
TS711 Intro to Micro-computer Applications A
TS715 Programming Concepts A
TS727 Computer Architecture
TS729 Using a Micro-computer
TS739 Business Organisations
TS713 Keyboarding
TS712 Intro to Micro-computer Applications B
TS723 Communication Skills B
TS716 Programming Concepts B
TS728 Introduction to Peripheral Devices

Semester 2: 
TS710 Intro to Micro-computer Applications
TS716 Communication Skills C
TS717 Programming Concepts C
TS751 Operating Systems
TS741 Data Processing System
TS743 User Needs Analysis

Electives:
TS740 Business Information Processing
TS741 Accounting Concepts

Advanced Certificate — Computer Operations

Semester 1: 
TS711 Intro to Micro-computer Applications A
TS721 Communication Skills A
TS715 Programming Concepts A
TS727 Computer Architecture
TS729 Using a Micro-computer
TS739 Business Organisations
TS713 Keyboarding
TS722 Communication Skills B
TS714 Accounting Concepts
TS716 Programming Concepts B
TS726 Computer Sales & Marketing

Semester 2: 
TS712 Intro to Micro-computer Applications B
TS713 Keyboarding
TS722 Communication Skills C
TS719 Cobol Programming A
TS780 Console Operation A
TS731 Operating Systems
TS762 Operations of Peripheral Devices
TS724 Communication Skills D
TS761 Console Operations
TS720 Cobol Programming B
TS733 Introduction to Data Communications & Networks

Electives:
TS759 Production Control
TS763 Computer Room Layout & Procedures

Associate Diploma of Business
(Micro-computer Systems)

Semester 1: 
TS781 DBH Application Project A
TS757 Advanced Business Services
TS755 3GL Programming Option A

Semester 2: 
TS786 Application Project C

Electives:
TS741 DBH 3GL Programming Option B
TS758 Micro-computer Development Tools
TS771 User Training Techniques
TS769 Multiuser Micro-computer Systems
TS772 User Documentation

Advanced Certificate in Accounting

Semester 1: 
TS730 Intro to Micro-computer Applications
TS721 Communication Skills A
TS715 Programming Concepts A

Semester 2: 
TS710 Intro to Micro-computer Applications

Electives:
TS740 Business Information Processing
TS741 Accounting Concepts

3300DBH Advanced Certificate in Accounting

Students who successfully complete all the first-year units of the Associate Diploma in Accounting are eligible to obtain the Advanced Certificate in Accounting. For a list of the subjects, see the first-year subjects for the Advanced Diploma in Accounting.

3300DBC Advanced Certificate in Management Accounting

Students who successfully complete the eight compulsory units of the Management Accounting Specialisation plus four elective units from the Associate Diploma in Accounting are eligible to obtain the Advanced Certificate in Management Accounting. For the list of subjects, see the second-year specialisations of the Associate Diploma in Accounting.
3300DBD Advanced Certificate in Taxation Practice

Students who successfully complete the compulsory units of the Taxation Practice Specialisation plus five elective units from the Advanced Diploma in Accounting will be eligible to obtain the Advanced Certificate in Taxation Practice.

For the list of subjects, see second-year specialisations of the Associate Diploma in Accounting.

3500DGA Associate Diploma of Business (Office Administration)

This is a two year full-time course with either a general program offering broad-base skill development or the choice and specialist streams provide extensive training for students seeking employment in middle management positions requiring secretarial and administrative expertise. After the successful completion of first year, students are eligible for the award of the Advanced Certificate in Office Administration (3300DGA). Students who successfully complete the second year will be awarded the Associate Diploma.

Prerequisites
Normal prerequisite is satisfactory completion of Year 12 or the Certificate in Office and Secretarial Studies. Mature background students with suitable business background will also be admitted to the course.

Course structure
First year
- TS872 Document Production 1
- TS873 Document Production 2
- TS874 Office Administration 1
- TS875 Office Administration 2
- TS121 Introduction to Business Computing Concepts
- TS122 Business Computer Applications
- TS301 Introduction to Accounting
- TS247 Business Law 1
- TS800 Practical Placement

Second year
- TS887 Document Production 3
- TS896 Document Production 4
- TS899 Office Supervision 1
- TS800 Office Supervision 2
- TS801 Practical Placement

In addition to the compulsory units, students must also complete either the general program or one of the three specialist subject areas.

General Program
First year
- Students complete the compulsory units and two other elective units.

Second year
- Students complete the compulsory units and six other elective units specialisations accounting.

Accounting
First year
- Students complete the compulsory units, TS302 Accounting Reports and one other elective unit.

Second year
- Students complete the compulsory units, TS315 Computer Based Accounting, TS303 Accounting Systems and four other elective units.

Stenography
First year
- Students complete the compulsory units, TS876 Shorthand 1 and TS877 Shorthand 2.

Second year
- Students complete the compulsory units, TS863 Stenography 1 and TS864 Stenography 2 and two other elective units.

Information Technology
First year
- Students complete the compulsory units, TS727 Computer Architecture and three other elective units.

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3222DYC Computer Business Applications Certificate

Career potential
The general aims of the course are to provide computer users in business with the skills to use computers efficiently in their workplace; and an understanding of a wide range of computer concepts and a knowledge of business information requirements, such that they will be able to identify ways of improving their own productivity and the productivity of others, by applying computer technology. It is especially suited to employees of smaller organisations/lacking in-house specialist data processing professionals.

Prerequisites
Students are eligible to enter this course of study if they have satisfactorily completed an approved course at Year 11 level or an approved equivalent. The course is not designed for school leavers. Applicants should have at least one year of appropriate industrial experience before undertaking the course. However, applicants who do not have the required industrial experience could still be eligible if they have current employment in an appropriate position.

Duration of course
The course is offered on a part-time evening basis. The minimum completion time is one year. This will require two nights per week attendance.

Course structure
- All units are compulsory.
- TS731 Introduction to Computers
- TS732 Keyboarding
- TS733 Using Systems Software
- TS736 Business Information Systems
- TS797 Business Software Applications

Duration of course
This course is offered on a part-time, evening basis, two nights per week. The minimum completion time is one year.

3300DGK Advanced Certificate in Management

This course is unlikely to run in 1991. Please contact the Head, Marketing and Administration Department on 819 8165.

3222DDA Certificate in Office and Secretarial Studies

This course is designed to equip students with the necessary skills and knowledge necessary to work efficiently in today’s changing office environment as secretaries, typists, word processing operators or receptionists.

Career potential
The general aim of this certificate course is to provide a range of middle-level/vocational courses designed for students who wish to become secretaries to middle-level management. Students are admitted with or without a background in stenographic skills, additional time being allocated within the course for the development of these.
**Course details**

**Compulsory units**
- TH133 Communication Skills 1
- TH134 Communication Skills 2
- TS890 Typing Production 1
- TS881 Typing Production 2
- TS885 Administrative Procedures 1
- TS886 Administrative Procedures 2
- TS883 Word Processing 1
- TS884 Word Processing 2
- TS885 Introduction to Computing 1
- TS896 Introduction to Computing 2
- TS800 Practical Placement

Students studying for the Certificate in Office and Secretarial Studies have the option of selecting specialist units from the accounting or shorthand areas.

**Duration of course**
This course is offered on a one year full-time basis only.

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**3000DFJ Certificate of Business Studies — Operations Management**

This course provides three areas of specialisation:

1. Occupational Health and Safety
2. Purchasing and Planning
3. Work Study

The course structure can best be explained by dividing the full Certificate of Operations Management into three:

- **Module A**
- **Module B**
- **Module C**

Module A consists of eight compulsory units. The units to be studied depend upon the area of specialisation chosen by the student.

A Short Middle Level Certificate will be awarded to students who successfully complete Module A.

Module B consists of six common non-specialist compulsory units.

Module C consists of any six elective units. This group must include at least four of the specialist units not already selected.

Full list of Module A subjects:
- TS501 Method Study
- TS502 Implementation of Changes
- TS507 Plant Layout and Network Analysis
- TS508 Management — Team Techniques
- TS521 Safety 1
- TS522 Safety 2
- TS523 Safety 3
- TS524 Safety 4

Completion of this group of units (Stage 1 of the course) leads to the award of an Occupational Health and Safety Certificate. This is an eight-unit intermediate qualification which forms part of the CBS — Operations Management. The Occupational Health and Safety Certificate is a TAFE accredited Short Middle Level Certificate.

Six compulsory general units
- TH133 Communication Skills 1
- TH134 Communication Skills 2
- TS112 Business Mathematics 1
- TS113 Business Mathematics 2
- TS226 Middle-management Practices 1
- TS222 Middle-management Practices 2

Six elective units from the Certificate of Business Studies subjects. This group must include at least four of the specialist Operations Management units not already studied. The specialist electives may be chosen from the following:
- TS503 Time Study
- TS504 Predetermined Motion Time Standards
- TS505 Statistical and Estimating Techniques
- TS506 Financial Analysis and Labour Control
- TS507 Plant Layout and Network Analysis
- TS508 Management — Team Techniques
- TS510 Minicomputer Applications
- TS521 Safety 1
- TS522 Safety 2
- TS523 Safety 3
- TS524 Safety 4
- TS526 Planning Procedures 1
- TS527 Planning Procedures 2
- TS528 Planning Procedures 3
- TS529 Planning Procedures 4
- TS530 Materials Management 1
- TS533 Materials Management 2
- TS534 Materials Management 3
- TS535 Materials Management 4
- TS536 Materials Management 5
- TS537 Purchasing 1
- TS538 Purchasing 2
- TS539 Purchasing 3
- TS540 Purchasing 4

**Duration of course**
On a study pattern of two nights per week, the full course could be completed in four to five years.

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**3000DFJ Certificate of Business Studies**

— Operations Management
— Occupational Health and Safety

**Career potential**

The general aim of this course is to provide a range of middle-level vocational subjects designed to educate staff who will be responsible for evaluating the need for and nature of accident prevention; to apply the techniques of accident reporting, accident investigation, and safety management systems and implement occupational health and safety training programs for all levels of management and employees.

**Prerequisites**

Students are eligible to enter this course of study if they have completed satisfactorily an approved course at Year 11 level or an approved equivalent course or are considered to be sufficiently mature and experienced enough to undertake the course successfully.

**Course structure**

Eight compulsory specialist units
- TS501 Method Study
- TS502 Implementation of Changes
- TS507 Plant Layout and Network Analysis
- TS508 Management — Team Techniques
- TS521 Safety 1
- TS522 Safety 2
- TS523 Safety 3
- TS524 Safety 4

Six compulsory general units
- TH133 Communication Skills 1
- TH134 Communication Skills 2
- TS112 Business Mathematics 1
- TS113 Business Mathematics 2
- TS226 Middle-management Practices 1
- TS222 Middle-management Practices 2

Six elective units from the Certificate of Business Studies subjects. This group must include at least four of the specialist Operations Management units not already studied. The specialist electives may be chosen from the following:
- TS503 Time Study
- TS504 Predetermined Motion Time Standards
- TS505 Statistical and Estimating Techniques
- TS506 Financial Analysis and Labour Control
- TS507 Plant Layout and Network Analysis
- TS508 Management — Team Techniques
- TS510 Minicomputer Applications
- TS521 Safety 1
- TS522 Safety 2
- TS523 Safety 3
- TS524 Safety 4
- TS526 Planning Procedures 1
- TS527 Planning Procedures 2
- TS528 Planning Procedures 3
- TS529 Planning Procedures 4
- TS530 Materials Management 1
- TS533 Materials Management 2
- TS534 Materials Management 3
- TS535 Materials Management 4
- TS536 Materials Management 5
- TS537 Purchasing 1
- TS538 Purchasing 2
- TS539 Purchasing 3
- TS540 Purchasing 4

**Study sequence**
It is not necessary to complete the compulsory specialist units before progressing to the other units. Students may choose to study units from all three groups concurrently or complete the specialist units for the Short Middle Level Certificate before the remainder of the course. However, where there is a sequence of units, students must study these in the order indicated by the subject title (Safety 1, 2, 3 and 4).

**Duration of course**
On a study pattern of two nights per week, the full course could be completed in four to five years.

**Membership of associations**

Students completing the course of study can apply for membership of the Safety Institute of Australia.
Support staff for professional officers and higher-level management, including department supervisors, senior clerical staff and staff with important specialist areas of responsibility, e.g., production managers, purchasing and supply officers.

(2) Smaller operators who need to be proficient in a variety of technical or business tasks as well as management decision-making.

Prerequisites

Students are eligible to enter this course of study if they have completed satisfactorily an approved course at Year 11 level or an approved equivalent course or are considered to be sufficiently mature and experienced enough to undertake the course successfully.

Course structure

Eight compulsory specialist units

- TS501 Method Study
- TS502 Implementation of Changes
- TS511 Planning Procedures 1
- TS512 Planning Procedures 2
- TS531 Materials Management 1
- TS534 Materials Management 2
- TS571 Purchasing 1
- TS572 Purchasing 2

Completion of this group of units (Stage 1 of the course) leads to the award of a Purchasing and Planning Certificate. This is an eight-unit intermediate qualification which forms part of the CBS — Operations Management. The Purchasing and Planning Certificate is a TAFE accredited Short Middle Level Certificate.

Six compulsory general units

- TH133 Communication Skills 1
- TH134 Communication Skills 2
- TH112 Business Mathematics 1
- TH113 Business Mathematics 2
- TS226 Middle-management Practices 1
- TS326 Middle-management Practices 2

Six elective units

Six elective units from the Certificate of Business Studies subjects. This must include at least four of the specialist Operations Management units not already studied, e.g., Safety 1 and 2, Management — Team Techniques, Plant Layout and Network Analysis

Study sequence

It is not necessary to complete the compulsory specialist units before progressing to the other units. Students may choose to study units from all three groups concurrently or complete the specialist units for the Short Middle Level Certificate before the remainder of the course. However, where there is a sequence of units, students must study these in the order indicated by the subject titles (Safety 1, 2, 3, and 4).

Duration of course

On a study pattern of three to five nights per week, the full course could be completed in four to five years.

Membership of associations

Students completing the course can apply for membership of the Institute of Industrial Engineers.
The aim of the course is to provide graduates with the skills, knowledge and professional practices that will enable them to perform the duties of a personnel officer in public or private organisations. Graduates will operate as support staff in the personnel management field and be responsible for the day to day administration of policies relating to employment, wage and salary administration, training and development, industrial relations and occupational health, safety and welfare.

Prerequisites
Students are eligible for this course if they have satisfactorily completed an approved Year 11 course or equivalent qualification (this must include a pass in English), or are considered to be sufficiently mature and experienced enough to undertake the course.

Course structure
Twelve Compulsory units
TH133 Communication Skills 1
TH134 Communication Skills 2
TS140 Industrial Law
TS141 Staffing
TS142 Personnel Practices
TS143 Training and Development
TS144 Occupational Health and Safety
TS145 Wage and Salary Administration
TS146 Industrial Relations
TS147 Personnel Project
TS148 Communication Skills 3
TS149 Communication Skills 4

Duration of course
This course is offered on a part-time, evening basis only and would take approximately three years to complete.

Membership of associations
On completion those who are employed in personnel functions may be eligible for Associate or Senior Associate membership of the Institute of Personnel Management of Australia. Those employed in the training function may apply for membership of the Australian Institute of Training and Development.

Training Officers Course
This is presently being rewritten and is expected to run in 1991.

Duration of course
It is offered on a part-time, evening basis only and can be completed in one year.

Please contact the Head, Marketing and Administration on 819 6165.

3500DCB Associate Diploma of Business (Marketing)

Canter potential
This course is designed to qualify people for middle management positions in the areas of marketing and sales management. It will provide the academic base for career advancement for those working in the marketing and sales management areas.

Entry requirements
Students are eligible to enter this course of study if they have satisfactorily completed an approved course at Year 12 level or an equivalent course. Alternatively, mature background entry is granted if the student is considered to have sufficient maturity and experience to undertake the course successfully.

Compulsory units (22 units)
First year
TH133 Communication Skills 1
TH134 Communication Skills 2
TS115 Applied Business Statistics
TS247 Business Law 1
TS248 Business Law 2
TS107 Accounting for Managers
TS360 Selling
TS361 Buyer Behaviour
TS262 Managing the Sales Operation 1
TS263 Managing the Sales Operation 2
TS264 Promotions 1
TS266 Marketing

Second year
TS123 Keyboard Familiarisation
TS126 Introduction to Business Computer Concepts
TS122 Business Computer Applications
TS236 Economics 1
TS365 Promotions 2
TS367 Marketing Research
TS368 Innovation and Product Management
TS269 Logistics Management
TS370 Direct Response Marketing
TS371 Marketing Project

Plus two electives from the following units
TS372 International Marketing
TS373 Management and Marketing for the Small Business
TS374 Business to Business Marketing
TS375 Services Marketing
TS376 Retail Marketing

Related courses
The following courses are closely related to the Associate Diploma of Business (Marketing):
3300DCB Advanced Certificate in Marketing
3300DCC Advanced Certificate in Sales Management

These courses are sub-sets of the Associate Diploma and may be completed on their own or as an intermediate step towards the Associate Diploma.

Duration of course
The Associate Diploma of Business (Marketing) is offered on a full-time basis over two years or on a part-time basis taking 4-5 years to complete.

Membership of Associations
On completion of the Associate Diploma, students are eligible to apply for membership of the Australian Marketing Institute.

3000DFA Certificate of Business Studies — Production

3000DFC Certificate of Business Studies — Supply

3000DFF Certificate of Business Studies — Work Study

Students previously enrolled in any of the three certificate courses above may complete the certificate by taking equivalent units from the Certificate of Business Studies — Operations Management.
Swinburne College of TAFE

Victorian Certificate of Education (HSC) Evening Classes

The following VCE subjects are taught by the Business Studies Division:

**TS001** Accounting
**TS002** Economics
**TS003** Legal Studies

For a complete description of all VCE (HSC) subjects, see the end of the Social and Applied Sciences section.

**Business subject details**

**TH133 Communication Skills 1**
Communication Skills 1 concentrates on developing appropriate communication and inter-personal skills in speaking, writing, interviewing and gaging and receiving instructions.

**TH134 Communication Skills 2**
Specialist studies in four areas are undertaken. Options include: technical writing and report writing; in-basket case studies (letters, memos, etc); job briefs and specifications; structure of language (style, syntax, tone); organisational communications; advanced interview techniques; meetings; agenda and minutes; case study; publicity campaign and mounting an exhibition.

**TM112 Business Mathematics 1 (1 unit)**
Coping with situations involving the use of business mathematics, specifying all results applicable to subject areas, acquiring the ability to cope with statistical analysis.

**TM113 Business Mathematics 2 (1 unit)**
Statistical processes used in business operations, related business and statistical vocabulary, solving business problems using statistical processes, using formulas and interpreting results.

**TS006 Legal Studies Victorian Certificate of Education (TOP) subject**
Full year course for students with limited or no prior knowledge of legal studies. This course is designed to assist students in understanding the operations of law in our society. It should equip students with an understanding of how law affects our everyday lives, with particular regard to the rights and safeguards it bestows and the obligations and limitations it imposes. Topics covered include: the need for law, the structure and development of the Australian Legal System, the law-making bodies and legal processes, crime and criminal sanctions, the Law of Torts, consumer protection and the form of business organisations.

**TS008 Economics Victorian Certificate of Education (TOP) subject**
Full year course for students with limited or no prior knowledge of economics. Topics covered include: scarcity and the problems of limited means, resource allocation and the price mechanism, intermediate economic behaviour, the role of prices in determining the exchange of goods and services, trade and external policy, economic growth and welfare, income distribution and poverty.

**TS009 Accounting Victorian Certificate of Education (TOP) subject**
Full year accounting course for students with limited or no prior knowledge of bookkeeping or accounting.
Topics covered include: basic concepts and terminology; the accounting equation; recording methods; balance day adjustments; final reports; accounting procedures for control; accounting for multiple ownership and analysis and interpretation of final reports.

**TS107 Accounting for Managers**
This course is designed for students in other than financial courses to understand the purpose and operation of accounting systems, understand the principles of financial management, apply techniques of financial analysis to basic business problems, to participate with professional accountants in planning and decision-making related to their area of responsibility.
Topics studied include the nature of accounting, accounting systems for sole proprietors and partnership, bookkeeping for business, accounting procedures for companies, limitation of accounting reports; cash management, cost volume profit relationship and budgeting.

**TS121 Introduction to Business Computer Concepts**
This unit aims to develop students' computer awareness and literacy through developing skills and understanding in basic computer operations. Topics include: use of computers in the workplace; social issues arising from the use of new technologies; computer terminology; trends in hardware and software development. Keyboarding skills are also taught in this unit.

**TS122 Business Computer Applications**
This unit enhances students' computer awareness literacy through developing "hands on" skills in a range of popular user-oriented computer software packages. Packages studied include the areas of word processing, database management, spreadsheet and desktop publishing.

**TS123 Keyboard Familiarisation**
Developing keyboard skills. Prerequisites: nil.

**TS140 Industrial Law**
An overview of the Australian legal system and the common law and statutory laws applying to conditions of employment and industrial awards.

**TS141 Staffing**
The administration of employment policies, preparation of job analyses and job documentation, recruitment strategies, selection techniques, interviewing, job offers, induction, personnel history files and termination.

**TS142 Personnel Practices**
The history of the personnel profession, current issues and trends, the process, computers in personnel, personnel, recruitment and selection, interviewing, job offers, induction, personnel history files and termination.

**TS143 Training and Development**
The administration of training and development policies, the principles of performance appraisal and training design, delivering and evaluating training programs.

**TS144 Occupational Health and Safety**
The administration of occupational health and safety policies, strategies and techniques for implementing regulations and codes of practice, accident investigation, counselling appropriate referral of individuals and groups, maintenance of appropriate records and reports, rehabilitation programs, specialised agencies in the OHS field.

**TS145 Wage and Salary Administration**
A job analysis of wage and salary administration, compensation, award interpretation, job evaluation, incentive schemes, supplementary benefits, liaison with payroll staff.

**TS146 Industrial Relations**
The administration of industrial relations policies, an overview of the Australian industrial relations systems, making and varying collective bargaining, negotiations and conflict resolution, grievance settlement procedures.

**TS147 Personnel Project**
The presentation of an integrated project on a topic to be negotiated during the course.

**TS217 Communication Skills 3**
**TS218 Communication Skills 4**
Communication Skills 3 and 4 will each consist of four options selected to meet the needs of course participants. Options include: stress management, time management, motivation and job satisfaction, customer relations, assertiveness, managing conflict, leadership.
The main aim of the unit is to enable students to carry out the tasks of planning, forecasting, setting objectives, formulating policies and procedures, as well as preparing financial statements and budgets within a middle-management context. The topics include an overview of the functions of management and their integration. The planning process which includes setting organizational goals, long and short term planning, standing plans and single use plans. Forecasting principles, techniques and dimensions. Construction of objectives in terms of quantity, quality and time. Clear statements of objectives and their use as a basis for review and control. Policies as predetermined management decisions applied for recurring questions and situations of significance constituting a guide to action. Methods of policy formulation. Needs for consultation in short term planning. The economic problem, concept of scarcity, production possibility and control of overall performances and managerial quality. Designing a departmental organisation structure, factors affecting organisation, organisational charting and job documentation. Departmental organisational analysis, job analysis, defining departmental functions, writing operating objectives. Corporate organisation structure and relationships. This includes use of functional authority. Centralised and decentralised decision making authority and responsibility, chain of command and span of control resolution in conflict.


Four out of the following six topics to be studied. Economic role of government, economic measurement, economic systems, international trade, the finance market and the level of economic activity, the labour market.

History and development of Australian law and system of courts. The role of the law in the personal and interpersonal relationships. The application of the law, involving a detailed study of one or two areas such as negligence, workers compensation or defamation. Law of contracts.

Legal aspects of sole traders, partnerships and companies. The law relating to insurance, taxation, consumer protection, tenancy, property and negotiable instruments.

Bookkeeping. Forms of business ownership and types of business activities. Basic outline of accounting conventions. Requirements for business records and basic business documents to maintain records. Complete manual bookkeeping process for sole trader service and trading businesses (using physical inventory method only), including bank reconciliation statements, inventory petty cash system, subsidiary ledgers for debtors and creditors and financial statements.

Preparation of financial reports. Summary of entire bookkeeping process from source documents, including balance day adjustments, to final reports. Journal and ledger recording of balance day adjustments, closing entries and reversing entries. Classified revenue statement and balance sheet from trial balance with adjustments for a sole proprietor in both a service and trading organisation. Final accounting reports for a sole proprietor, using a single entry system of bookkeeping, in both a service and trading organisation. Revenue statements showing department contributions and final profit and loss. Preparation of funds statements for sole proprietors. Preparation of cash flow statements.

Essential features of equipment used to maintain systems using either manual, semi-automatic or electronic equipment. Essential features of control and recording for the following systems using either manual, semi-automatic or electronic equipment, e.g. stock, payroll, debtors, creditors, cash receipts and payments and fixed assets. In this unit, the preparation, forecasting, standing plans and single use plans, positions of control accounts and subsidiary ledgers for debtors and creditors and fixed assets, are considered in detail.

The unit also includes an introduction to budgeting, forecasting principles, techniques and dimensions. Construction of objectives in terms of quantity, quality and time. Clear statements of objectives and their use as a basis for review and control. Policies as predetermined management decisions applied for recurring questions and situations of significance constituting a guide to action. Methods of policy formulation. Needs for consultation in short term planning. The economic problem, concept of scarcity, production possibility and control of overall performances and managerial quality. Designing a departmental organisation structure, factors affecting organisation, organisational charting and job documentation. Departmental organisational analysis, job analysis, defining departmental functions, writing operating objectives. Corporate organisation structure and relationships. This includes use of functional authority. Centralised and decentralised decision making authority and responsibility, chain of command and span of control resolution in conflict.
TS326 Middle-management Practices 2
(Leadership and human resource utilisation)
The main aim of this unit is to enable the student to develop leadership skills and understand the various leadership styles and their application. Topics include the need for leadership, the effects of good and poor leadership and the functions of a leader. Motivations including the theories of Maslow and Herzberg, Principles of motivation, recognition, delegation, mutual interest, participation and communication. Job enrichment, behaviour of individuals and groups. Effective communications in business, why failures in communication occur. Relationship of communication to motivation. Aids and barriers to effective communication.

Styles of leadership, autocratic and democratic, paternalistic and laissez-faire. McGregor's theory X and Y. Attitudes of each style of leadership, reactions of subordinates and effects on productivity. Use of committees, conditions necessary for successful operation. Conference leadership, presenting topics, conducting discussions, summarising the discussion. Manpower planning, objective setting, personnel inventories and forecasting needs. Co-ordination of recruitment, selection, training and development, appraisal, retirement and retraining. Training and development, induction general training programs, job rotation, internal and external programs, training costs, evaluating training. Staff appraisal, principles, staff development programs, performance counselling, health. Effects of appraisal, promotions, transfers, demotions.

TS360 Selling

TS361 Buyer Behaviour
Basic psychology and sociology and their use in business studies. The buyer's decision making process as it applied to both consumer and industrial buying behaviour. Prerequisites: Marketing and/or Selling should be studied prior to or concurrently with this unit.

TS362/3 Managing the Sales Operation 1 and 2
Setting sales goals. How to plan, organise and manage the sales operation. Staffing and training the sales team. Motivation of sales staff. Analysis and evaluating sales and sales staff performances implementation and control of company policies, procedures and identity. Prequisites: Selling.

TS364 Promotions 1
The role of promotions in marketing strategies and mixes. How to plan, develop, implement and monitor a sales promotion campaign. Promotional techniques for varying industries. Telephone selling and promotional techniques. Basic principles and copywriting for direct mail and advertising. Prerequisites: Marketing and/or Selling.

TS365 Promotions 2
The role of advertising, publicity and PR in marketing. Advertising—copywriting, media characteristics, costing and expense analysis. Developing a media plan to reach a target market. Writing and placing media releases. Publicity strategies and techniques. Prerequisites: Promotions 1, Buyer Behaviour.

TS366 Marketing
What is a marketing orientation? The role of marketing research. The marketer's environment. Selection of target groups. Market segmentation. The development, implementation and monitoring of a marketing strategy plan. Marketing Control. Creativity and its role in marketing. Prerequisites: Nil.

TS367 Market Research
Where marketing research is used. Marketing research procedures. Sources of information. Questionnaire-construction and other survey methods. Interviewing techniques. Sampling techniques. The field workers responsibilities and techniques. Selection, training, supervising and monitoring field workers. Collection, collation, analysis, validation and presentation of data. Marketing research recommendation. Prerequisites: Business Mathematics (or concurrently), Marketing.

TS368 Innovation and Product Management

TS369 Logistics Management
Marketing channel and physical distribution strategy. Channel management and distribution decisions. Retail and wholesale strategy. Prerequisite: Marketing.

TS370 Direct Response Marketing
This subject aims to provide an appreciation of the process of Direct Response Management of linking marketers with end consumers. It examines the ways in which Direct Response marketing principles and techniques can assist in the total marketing strategy plan in either its own right or as part of a total marketing package. The emphasis is on techniques and skills in the Direct Response Marketing area. Prerequisites: Marketing, Buying Behaviour and Computer Business Applications should also be studied prior to or concurrently with Direct Response Marketing.

TS371 Marketing Project
The aim is to complete a group research project relating to a specific marketing problem, using the knowledge and skills gained from the entire course. Prerequisites: Marketing, Marketing Research, Promotions 2, Logistics Management.

TS372 International Marketing
The relationship between international trade and international marketing. The international environment—economics, culture, political and legal. The techniques of International Marketing—the right attitude, competitive factors, gathering overseas intelligence, product policy, distribution, promotions, pricing. Controls for international marketing. Prerequisites: Marketing, Marketing Research.

TS373 Management and Marketing for the Small Business

TS374 Business to Business Marketing
The basic characteristics of the industrial market. The structure, classification and size of the industrial company. The buyer-behaviour model. The application of the market concept to the industrial arena. Industrial Marketing—mix, techniques, target market selection. The role of selling. Selling and selling. Prerequisites: Marketing, Marketing Research, Buyer Behaviour.

TS375 Services Marketing
What is a Service Industry? Its role in the Australian economy. The types of services marketing—organisations, persons, place and ideas marketing. The marketing of services both onshore and offshore. Services marketing and its future. Prerequisites: Marketing, Marketing Research, Buyer Behaviour, Promotions 2.

TS433 Supervision 1
Aims to provide techniques to enable the effective direction and supervision of staff including induction and training.

TS501 Method Study (1 unit)
This unit is concerned with productivity and the application of method study techniques to improve it. The main topics are: definition and measurement of productivity: methods for improving productivity: non-management conflict over productivity issues. The benefits of productivity increases from cost and quality calculations. Assessment of human resource implications of changing work methods. The use of charting in method study. Selecting and drawing the most appropriate type of chart to record a particular job or process. Analysis of an existing method and the development of a new method. Preparation of submissions to management showing costs, sketches, phototypes and pilot runs.
TS502 Implementation of Changes (1 unit)

This unit is concerned with the factors affecting the application of methods improvement. The main topics are: analysing and comparing initial expenditure, operating costs and times needed to recover investment of alternative job methods. Preparation of written and verbal reports on method improvement proposals. Reasons for resistance for change and developing the acceptance of change. Techniques for selling ideas to people in the organisation. Trade unions and industrial relations. The function and social responsibility of unions and current trends in trade union activity. The types and causes of union management conflict. Conciliation and arbitration procedures and the concept of worker participation. The role of the work study officer with regard to industrial relations. Employee motivation. The contribution of behavioural science, job enrichment and worker participation in relation to motivation. The implementation of new methods. Identifying training needs and redundancy issues. Procedures for maintaining the improved performance level. The position of a work study department in the organisation, establish indirect and intangible costs, improvement programs which employ team techniques, loss analysis and productivity teams and co-ordinate their functions, techniques for avoiding and eliminating waste. The importance and use of standard written forms for maintaining a strict control on cost and uncontrolled operations. Calculation of allowances for restricted work. Carrying out a proof study or production study.

TS503 Time Study (1 unit)

The relationship of work measurement to method study. The uses and applications of methods time measurement. Different types of training methods and the steps involved in making a time study. The forms and equipment used in time study. Obtaining and recording all the necessary information about a job. Accurate recording of elemental times using the snap back timing method with a decimal minute stop watch. Determining the absolute error per set as the number of cycles required for a particular time study. Rating the performance of operators with different rating scales. Normalized time calculations. Calculation of approximate allowances for establishing standard time. Different types of allowances, including relaxation, contingency, policy and specific allowance standards. Over and under control for project costs. The operation of the job control and unrestricted operations. Calculation of allowances for restricted work. Carrying out a proof study or production study.

TS504 Predetermined Motion Time Standards (1 unit)

Advantages and disadvantages of predetermined motion time standards. Different levels and types of PMTS systems. The principles and applications of methods time measurement. Factors influencing the performance of simultaneous motions. The advantages and limitations of master standard data. The elements of MSD and their derivation from MTM elements. The concepts of low conscious and high conscious control. Identifying distances used in MSD. Using MSD to establish standard times for a job. The application of MODAPS for establishing standard times including the advantages and limitations of MODAPS. The identification of movement classes, terminal activities, simultaneous activities, indeterminate moves and other activities. The distinction between low and high conscious controls. Designing and developing a standard data system. The principles of coding data and the construction of an alpha-numeric coding system.

TS505 Estimating and Statistical Techniques (1 unit)

The objective of this unit is to enable the student to apply estimation techniques to any relevant task. The main topics are: statistical principles and techniques; accuracy calculations, control charts; statistical setting up production study group time technique which includes relationshhip to activity sampling, advantages and disadvantages, procedures for making a study, and statistical calculations of confidence limits. Machine inferences including following topics: man hour, job measurement, work load, cycle and random interference, the best and worst of a job, tables and formulae, application of allowances, the activity sampling approach to machine allowance and costs associated with allocating machines to operators. Estimating techniques including the analytical estimating method. Estimators' qualifications, uses of analytical estimating, based on engineering performance standards.

TS506 Financial Analysis and Labour Control (1 unit)

This unit covers the following topics: The major components of a financial information system, data collection methods and types of reports. The need for financial information and how it is used. Analysis and interpretation of balance sheets, profit and loss statements, cash flow statements and manufacturing statements. Use of financial ratios to evaluate solvency, efficiency and profitability. Comparison of ratios with industry averages and prior periods. Standard costing systems and break-even analysis. Financial decision-making on capital expenditure and make or buy problems. Preparing cost benefit analyses. Incentive wages plans including the main types, requirements, effects on output and industrial relations, limitations and wage calculations. Design of a complete incentive scheme including setting of standards, recording of output and the labour control system. Designing a profit incentive scheme. The measured day work system including a comparison with incentive plans, setting performance standards and appropriate labour control. Design of a labour cost analysis system.

TS507 Plant Layout and Network Analysis (1 unit)

The general purpose in this unit is to enable the student to develop plant layouts, to apply the factors affecting project planning and to apply network analysis techniques to planning tasks. The main topics are: development of plant layout concepts and its different approaches, techniques in layout planning, application of the Systematic Layout Planning Technique, design checklists for evaluating plant layouts, nature of material and handling systems as integral to plant layout, the historical basis of the CPM/PERT technique and comparison of network planning with bar charts in relationship between activities. The types and causes of union activity. The concept of worker participation. The role of the work study officer with regard to industrial relations. Employee motivation. The contribution of behavioural science, job enrichment and worker participation in relation to motivation. The implementation of new methods. Identifying training needs and redundancy issues. Procedures for maintaining the improved performance level. The position of a work study department in the organisation, establish indirect and intangible costs, improvement programs which employ team techniques, loss analysis and productivity teams and co-ordinate their functions, techniques for avoiding and eliminating waste. The importance and use of standard written forms for maintaining a strict control on cost and uncontrolled operations. Calculation of allowances for restricted work. Carrying out a proof study or production study.

TS508 Management — Team Techniques (1 unit)

The objective of this unit is to enable the student to initiate and co-ordinate the application of techniques for establishing teams and identify and analyse cost centres requiring loss control. The topics include: different approaches to productivity improvement, the position of a work study department in the organisation, establish productivity teams and co-ordinate their functions, techniques employed by teams in problem solving, four established productivity improvement programs which employ team techniques, loss analysis involved in establishing indirect and intangible costs, importance of safety as a reduced intangible cost, explanation of how the service functions — production planning/ control, quality control and maintenance — are indirect cost centres, project materials management as an aid to efficient manufacture, inspection and quality control and different approaches to organising the maintenance functions.

TS509 Work Analysis — Clerical and Services (1 unit)

This unit enables the student to apply the industrial engineering approach to non-manufacturing environments. The topics include: systems analysis and the industrial approaches (5 project phases), systems analysis, design and control, clerical work study techniques, materials management and inventory control, warehousing and distribution and the application of industrial engineering in service organisations.

TS510 Minicomputer Applications (1 unit)

The objective of this unit is to enable the student to use a mini or microcomputer in applying work study techniques in industry. The main topics are: computer components, how to make a computer operational, essential commands and BASI/programming, load, run, explain and test a commercially available operations management program and to run any operations management software package.

TS521 Safety 1

The main objectives of this unit are: to evaluate the need for and the nature of accident prevention. To apply knowledge theoretically and through the interdisciplinary nature of the subject. Students will learn to identify injury hazards and select appropriate remedial measures. Categorise the accident analysis of the problem and measure the effectiveness of the remedial actions undertaken. Other topics include the appraisal of protective clothing and equipment, association with its use and acceptance, environmental hazards such as noise and temperature and toxic substances, situations affecting safety and accident compensation, and the development of a range of different emergencies.
TS522 Safety 2
This unit will enable students to apply the techniques of accident reporting, accident investigation, accident statistics systems and a safety measurement program. Other areas covered are the basic principles of ergonomics and its relevance in accident prevention, the development and implementation of an accident prevention program. The accident prevention program includes administrative framework, preventive techniques, motivation of management, supervisors, employees and unions, training and compliance, reporting incentives investigations, medical aspects, rehabilitation and compensation claims management. This unit also includes risk management and total loss control.

TS523 Safety 3
This unit will enable students to solve problems that may arise from the layout and design of workplaces and travelling ways, develop and implement occupational health and safety training programs for all levels of management and employees, identify and solve safety problems related to mechanical environment hazards, solve problems arising from the handling, storage and processing of harmful substances, to solve problems associated with general environmental factors in workplaces and travelling ways, and to solve problems arising from materials handling.

TS524 Safety 4
Topics include the basic types of job design and the rationale behind successful job redesigns. The use of anthropometric data and the principles of good posture. The selection of display control devices and the principles of optimum design. The basic determinants necessary for visual comfort. The dimensions of occupational stress and the effects of shiftwork. The factors affecting inspection tasks. Task design for the handicapped. The components of the men-machine environment system model and how they interact. The basis for health standards in the WMS/H Model. The following epidemiological designs, retrospective, prospective and cross-sectional. How personal behaviour traits may affect accident and health profiles. The system approach to occupational rehabilitation and the role of rehabilitation in minimising the consequences of accidents.

TS551 Planning Procedures 1
This unit includes topics on the following areas: the development of modern production management and the objectives of production management of various types of production processes, sales forecasting and its relationship to the master production schedule. Sources of planning data, such as engineering department and methods department. Terminology used in production control, the use of sales forecasts for production scheduling, inventory planning, machine loading, etc. The comparison of actual and scheduled performance for control purposes, and advantages and disadvantages of centralised and decentralised production control, production control techniques and their application. Control of problems such as design change during production and the introduction of new materials and components.

TS552 Planning Procedures 2
This unit includes the following topics: the function of the estimating department in large and small firms, the preparation of estimates and the factors affecting estimating, production control, block control, master schedules, general loading charts, line of balance, using machine loading charts and the sources of information for their preparation, types of ads available for machine loading charts, production capacity, shortages, consequences of adopting an unbalanced work program, and the functions of the quality control department and its relationships with other departments, benefits of adequate quality control organisation to the manufacturing firm and its customers.

TS553 Materials Management 1 (1 unit)
The purpose of this unit is to enable the student to apply the basic principles and practices associated with the supply and control of various classes of materials within a business situation and develop and apply specialised procedures for the control of a firm's materials requirements.

TS554 Materials Management 2 (1 unit)
The general purpose of this unit is to enable the student to recognise the need for a high standard of physical stock control and the economic advantages associated with efficient physical distribution of a firm's finished goods.

The topics include: necessity for adequate stock rotation and location control, major relevant methods of inventory valuation, available methods of determining the need for warehouse space for all classes of stock, suitable warehouse layouts, choice of materials handling equipment, suitable packaging specifications during the production design stage, selection of a suitable mode of transport for the company's material purchases and distribution of end products, estimate true consumer sales oftake, legislation and procedures that must be followed to ensure safe storage and transport of hazardous materials in compliance with regulations, appropriate management techniques used to effect and control the distribution of a firm's finished goods between their own distribution centres and to conduct a physical distribution audit.

TS571 Purchasing 1
This unit includes the following topics: the benefits that companies may derive from a professional approach to purchasing, ethics in the purchasing function, record keeping and audit requirements. Maintenance of purchasing department policies and procedures manual, staff requirements and organisation of a purchasing department, advantages and disadvantages of centralised and decentralised purchasing, terminology and documents used in the purchasing function, fundamentals of contract law, operation of the Sales Tax Act, evaluation and selection of supplier of goods and services, methods of communicating purchase orders, expediting as a standard component of the purchasing system, various types of insurance relevant to the practice of purchasing, materials standardisation and simplification.

TS572 Purchasing 2
This unit covers the following topics: how to conduct a value analysis program, overseas purchasing, including exchange rates, lead times, payment consideration and regulations, operation of the international banking system, customs and tariff procedures, the effect of Australia's main trade agreement on manufacturers, make or buy decisions for products, lease or buy decisions for capital equipment, ranking equipment, purchasing alternatives, speculative purchasing, departmental purchasing and negotiating skills for purchasing functions. A government procurement unit.

TS601 Introduction to Management
This unit will include the following topics: development of management theory, business purpose and mission, the consequences of mismanagement, government/service organisations, the management process, including setting objectives, planning, decision-making, organisation, controlling, information facilitisation; the role of people in the management process including communicating, motivation, leadership and group interaction; organisation structures interdependence within an organisation, ethics and the social responsibility of management, measuring success in management, skills and attributes that managers require for the future.

TS602 Information for Managers
This unit will include the following topics: analysing information to establish whether causes and effects exist, identification of the strengths and weaknesses of various methods of research, sources of bias, validity and reliability of surveys, sampling techniques, sources of information, statistical analysis, interpretation and forecasting, storage and retrieval of data, security of information, reporting and presentation of information.

TS604 Finance for Managers
This unit will include the following topics: overview of the nature and mechanics of an accounting system, types of financial reports, terminology found in financial reports and their interpretation, limitations of financial reports, common ratios used in the evaluation of reports, limitations of ratio analysis, budgetary control, elements of a master budget system and their relationships, credit control, control of overheads, cost, volume, profit relationships, sources of business finance including their features, advantages, disadvantages, appropriateness, sources of information external to the firm relevant to financial management.
This unit includes the following topics: lines of authority and responsibilities in an organisation, delegation of task, staff development, formal and informal organisation, skills required for leadership, conflict resolution, problem-solving resource allocation, entrepreneurship, detailed review of organisation structures, leadership styles and theories, motivation and team building, techniques and effectiveness of delegation, models for problem-solving and decision-making, evaluation and appraisal of employee performance, discipline within the organisation, induction, objective setting, action planning, time management, coping with stress, counselling techniques.

This unit covers the following topics: structure, areas of Government, detailed review of organisation structures, leadership styles and delegation, models for problem-solving and decision-making.

This unit covers the following topics: organisation, office environment, safety and inventory, control of purchased goods and materials, stores procedures.

This unit covers the following topics: marketing concepts and philosophy, sales and sales communication.

This unit covers the following topics: marketing concepts and philosophy, sales and sales communication.

This unit covers the following topics: introduction to Micro-computer Applications B, data control, protection and review, formulae.

This unit covers the following topics: Marketing sales and service, strategic accounts, product development, methods of research, preparation and presentation of a case to have change brought about or change prevented, international and community joint activities.

This unit covers the following topics: structure, areas of Government, detailed review of organisation structures, leadership styles and delegation, models for problem-solving and decision-making.

This unit covers the following topics: organisation, scheduling and loading.

This unit covers the following topics: marketing concepts and philosophy, sales and sales communication.

This unit covers the following topics: production planning, organisation, responsibilities, sales force (role and management).

This unit covers the following topics: introduction to Micro-computer Applications A, fundamentals of word processing, document creation, editing and storage, text and document formatting, document printing, fundamentals of spreadsheet, spreadsheet creation, editing and storage, spreadsheet revision and printing, special functions and formulae.

This unit covers the following topics: introduction to Micro-computer Applications B, data control, protection and review, formulae.

This unit covers the following topics: introduction to Micro-computer Applications A, fundamentals of word processing, document creation, editing and storage, text and document formatting, document printing, fundamentals of spreadsheet, spreadsheet creation, editing and storage, spreadsheet revision and printing, special functions and formulae.

This unit covers the following topics: integration, objective setting, action planning, time management, coping with stress, counselling techniques.

This unit covers the following topics: structure, areas of Government, detailed review of organisation structures, leadership styles and delegation, models for problem-solving and decision-making.

This unit covers the following topics: organisation, office environment, safety and inventory, control of purchased goods and materials, stores procedures.

This unit covers the following topics: introduction to Micro-computer Applications B, data control, protection and review, formulae.
**TS727** Computer Architecture

Computer hardware components and architecture. Introduction to digital system Design, Computer components, Machine processing cycles, Instruction decoding, Logic and operation of the main storage, Interrupts.

Software/hardware connection, Alternative architectures.

**TS728** Introduction to Peripheral Devices

Common peripheral devices, Binary codes and coding systems. CPU/peripheral unication. Data storage devices. Connecting peripherals. Prerequisites: Computer Architecture.

**TS729** Using a Microcomputer

System commands, batch files, editors, back-up and restoration of disks.

**TS730** Using a Minicomputer


**TS731** Operating Systems

Evolution of operating systems. Data flow operating system. Structure and function of an operating system: cb n language; queues; memory management; file. Devices, Using a Microcomputer, Using a Minicomputer.

**TS732** Introduction to Systems Analysis & Design


**TS733** Introduction to Data Communications & Networks

Definition of relevant terms: uses of data communication systems; transmission media and methods; hardware components; network topologies; modern. purpose and use of protocols. Prerequisite: Introduction to Peripheral Devices.

**TS734** Microcomputer Hardware & Software Selection


**TS735** Advanced Systems Analysis & Design

Comparison of alternative SDLC's; system implementation; system modelling tools; design specifications; documentation flexibility. Prerequisite: Introduction to Systems Analysis & Design.

**TS736** Applied Systems Analysis & Design


**TS737** Project Management Techniques

Project management. Project control, Project control. The role of management, tools and techniques. Team work. Case studies. Prerequisite: Introduction to Systems Analysis & Design.

**TS738** System & Software Development Tools

Definition of SSD tool terminology; survey of SSD tools; areas of application of SSD tools in relation to the traditional and alternative system development life cycles; evaluation of SSD tools. The role of microcomputers. 4GL's. End-user designed systems, Prototyping and modelling. CASE tools Prerequisites: Introduction to Systems Analysis & Design.

**TS739** Business Organisations


**TS740** Business Information Processing

Accounting, data processing techniques in business organisations. IF charts: system flowcharts, data flow diagrams, data dictionaries. Data Flow. and logical description of a data processing system. Prerequisite: Business Information Processing.

**TS741** Data Processing System Design, Documentation Techniques

Data processing techniques in business organisations. Logical and physical description of a data processing system. Prerequisite: Business Information Processing.

**TS742** Document Processing Software Packages


**TS743** Spreadsheet & Business Graphics

Spreadsheet packages, macro facilities. Customised spreadsheets, Graph plotting facilities. Slideshows. Software installation and configuration.

**TS744** Database Software Packages


**TS745** Accounting Software Packages


**TS746** Practical Placement

The purpose of this module is to give Advanced Certificate students practical on-the-job computer operations experience.

**TS747** Application Project A

Analysis and design a business computer system. Code, maintain and support the business system. Prerequisites: Advanced Systems Analysis & Design. Co-requisites: Advanced Cobol Programming A, B.

**TS748** Cobol Programming C

Advanced command files. Code, maintain and support the business system, modify existing or introduce new business systems, including modifications to existing systems. Prerequisite: Advanced Cobol Programming A, B.

**TS749/50** Advanced Cobol Programming A & B


**TS751** Database Design


**TS752** Database Programming A


**TS753** Data Communications

Basic components and applications of a data communications system. Propagation of the layer model of the OSI/ISO reference architecture. Physical characteristics of the transmission channel. Modern characteristics. Concept of multiplexing. Frequency and time division. Modulation characteristics, Message transmission, Connected to a network via Ethernet. Error sources and their correction, characteristics of telecommunications. Prerequisite: Introduction to Data Communications and Networks.
TS755/6 3GL Programming Option A & B

Language syntax, Programming exercises. Definition of "stack" and "queue". Description, implementation and analysis of algorithms for sequential search and binary search. Description, implementation and analysis of algorithms for selection sort, insertion sort, shell sort and quicksort. Definition of "linked list" and "binary tree". Prerequisite: Programming Techniques B.

TS757 4GL Programming Option


TS758 Local Area Networks


TS759 Production Control

Batch processing systems: job assembly and scheduling; off-line strategies; output verification; error correcting methods; job/program documentation. Prerequisite: Operating Systems.

TS760 Console Operations A


TS761 Console Operations B

Virtual memory; memory management strategies. User accounts. Batch job assembly and batch communication. Prerequisite: Console Operations A.

TS762 Operation of Peripheral Devices

Different types of printers: printer operation, desk storage and maintenance. Magnetic tape media and devices. Documentation of peripheral use and maintenance. Prerequisites: Introduction to Peripheral Devices, Using a Minicomputer.

TS763 Computer Room Layout & Procedures

Compute-operations, computer room equipment, computer room environment, computer room considerations, computer room supplies, computer room documentation. Physical security; emergency procedures contingency plan; site visits and site visit reviews.

TS764 Introduction to Expert Systems

Definition of "expert systems". Purposes and advantages of expert systems. The structure of expert systems. Comparison of knowledge engineering and conventional programming. Information expression, design and construction of a small rule-based system. Prerequisite: Cobol Programming C.

TS765 User Needs Analysis

Factors involved in specifying and evaluating the requirements for a system. Defining the requirements of the required system in a RFP. Defining the criteria for evaluating supplier response to a RFP.

TS766 Application Project C

Work within a framework administered by a managersupervisor. Meet all formal obligations to a manager/supervisor. Provide regular progress report to or attend regular meetings with a manager/supervisor. Consult with a manager/supervisor when project problems arise. Enter into and adhere to agreements with users/users, and communicate with users/users, in a manner befitting a professional analyst/microsystems consultant. Work effectively within a systems development team. Respect confidentiality, privacy, and individual and group sensibilities. Apply an appropriate System Design Methodology using specific techniques to develop a substantial microcomputer information system, in a team environment. Prerequisites: Introduction to Systems Analysis & Design, Database Programming B, Project Management. Technical Writing Skills Manual preparation. Prerequisite: User Training Techniques.

TS767 Drafting & Display Graphics


TS768 Micro-computer Development Tools

Types of software development tools. Evaluation criteria for measuring the benefits offered through the use of software development tools. Low, medium and high level development tools. Prerequisite: 3GL Programming Option A. Co-requisite: 4GL Programming Option.

TS769 Multiserver Micro-computer Systems

Features on multiserver micro-computer operating systems. Installation of multiserver micro-computer systems. Multiserver micro-computer system management. Prerequisites: 3GL Programming Option B.

TS770 Micro-computer Architecture & Assembly Programming

Address bus from CPU select memory or I/O which is accessed in word/byte operations. No. of address possible = 2^n for n address lines. Memory mapped I/O. Program resides in memory in the form of machine code. Useful number systems and conversions. Binary integer arithmetic. Assembly language programming. Assembler. Function of program counter, status register, stack pointers, memory pointers, general purpose data registers, accumulators. Editor, Debugger program. Prerequisite: Computer Architecture.

TS771 User Training Techniques


TS772 User Documentation


TS773 Micro-computer Systems Analysis & Design


TS791 Introduction to Computers

Topics include: the changing computer environment, computer personnel, hardware and software components of a computer system, data coding systems, file and processing concepts, care and security of hardware and storage media, effects of computers on society, microcomputer concepts and word processing programs for business.

TS792 Keyboarding

Topics include: Darts and functions of a keyboard and monitor, ergonomic evaluation, appropriate keyboarding techniques. Prerequisite: Technical Skills Training.

TS793 Using Systems Software

Topics include: using a word processor to create communications, networks, using the computer and documentation principles. Technical Writing Skills. Prerequisite: Systems Management.

TS796 Business Information Systems

Topics include: business systems and their environment, business information, business intelligence, transaction processing, computer and databases of data. Prerequisite: Distributed data processing. Selecting a microcomputer system.

TS797 Business Software Applications

Topics include: introduction to spreadsheet software, introduction to database software, use of data, search of files, software applications options (options include — accounting software, integrated package, desktop publishing, graphics, advanced use of a spreadsheet or data base).
TS800/Practical Placement

The Practical Placement unit comprises two weeks of supervised work experience in a business organisation to give students an understanding of the work environment and provide practical experience consistent with theoretical work. The placement of students in both first and second years is arranged by the Marketing and Administration Department.

TS863 Stenography 1

This unit provides students with the skill to transcribe mailable copy of integrated office work in written and dictated instructions.

TS864 Stenography 2

Advanced stenographic skills to a level demanded at executive level.

TS865 Administrative Procedures 1

These units are designed to give the potential office worker an insight into the various facets of the office and the systems by which the efficient flow of information is determined. Topics include: office environment, time management, telephone technique, telephone equipment and its operation, role of the receptionist, reprographics, filing storage systems, resource information management, organising meetings and conferences and travel, mail, financial and records management.

TS866 Administrative Procedures 2

These units further develop keyboarding skills to achieve a minimum speed of 45 words per minute with 98% accuracy on a 5 minute timing. Proofreading and editing skills using both a typewriter and word processor. Topics covered include keyboarding, word processing, typesetting, proofreading, editing, rough drafts, and desktop publishing. These units are designed to enable students to identify the need for information in the office and how a computer system inputs, processes, stores and outputs information. Topics include: file management techniques, security, print, copy, proof, equipment and file inventories, security, privacy and the use of computers in offices, and their uses, and computer packages.

TS867 Document Production 1

These units are designed to develop keyboarding skills to achieve a minimum speed of 45 words per minute with 98% accuracy on a 5 minute timing. Proofreading and editing skills using both a typewriter and word processor. Topics covered include keyboarding, word processing, typesetting, proofreading, editing, rough drafts, and desktop publishing. These units are designed to enable students to identify the need for information in the office and how a computer system inputs, processes, stores and outputs information. Topics include: file management techniques, security, print, copy, proof, equipment and file inventories, security, privacy and the use of computers in offices, and their uses, and computer packages.

TS868 Document Production 2

These units are designed to further develop keyboarding skills to achieve a minimum speed of 45 words per minute with 98% accuracy on a 5 minute timing. This unit further develops the skills from unit 3 so that students can, using a typewriter, word processor or desktop publishing package, efficiently produce commonly used business documents from handwritten, edited, rough drafts and audio dictation at a production rate of 30 words per minute.

TS869 Office Supervision 1

Office Administration 1

These units cover the areas of manual bookkeeping to trial balance including debitors and creditors ledgers, petty cash systems, bank reconciliations and the preparation of simplified final reports.

TS870 Typewriting Production 1

These units are designed to develop a standard of skills which enable students to touch type at 40 words per minute with 98% accuracy. Topics include proofreading and error correction techniques, production skills, dictation, shorthand, and stenographic maintenance.

TS871 Typewriting Production 2

These units are designed to further develop keyboarding skills to achieve a minimum speed of 45 words per minute with 98% accuracy on a 5 minute timing. This unit further develops the skills from unit 3 so that students can, using a typewriter, word processor or desktop publishing package, efficiently produce commonly used business documents from handwritten, edited rough drafts and audio dictation at a production rate of 30 words per minute.

TS872 Office Administration 2

These units cover the areas of manual bookkeeping to trial balance including debitors and creditors ledgers, petty cash systems, bank reconciliations and the preparation of simplified final reports.

TS873 Office Administration 3

These units further develop keyboarding skills to achieve a minimum speed of 45 words per minute with 98% accuracy on a 5 minute timing. This unit further develops the skills from unit 3 so that students can, using a typewriter, word processor or desktop publishing package, efficiently produce commonly used business documents from handwritten, edited rough drafts and audio dictation at a production rate of 30 words per minute.

TS874 Shorthand 1

To enable students to read shorthand notes and transcribe at a speed of 50 words per minute with an accuracy of 95%.

TS875 Shorthand 2

To enable students to produce mailable copy of transcript produced from dictation at 80 words per minute with 98% accuracy.

TS876 Accounting for the Office 1

Accounting for the Office 2

These units cover the areas of manual bookkeeping to trial balance including debitors and creditors ledgers, petty cash systems, bank reconciliations and the preparation of simplified final reports.

TS877 Accounting for the Office 2

These units cover the areas of manual bookkeeping to trial balance including debitors and creditors ledgers, petty cash systems, bank reconciliations and the preparation of simplified final reports.

TS878 Word Processing 1

These units include an introduction to word processing and its role in the office today. Students will learn word processing terminology, creation and editing of documents, search and replacement of text and text layout.

TS879 Word Processing 2

These units include an introduction to word processing and its role in the office today. Students will learn word processing terminology, creation and editing of documents, search and replacement of text and text layout.

TS880 Shorthand Theory

The study of this unit will enable students to develop a thorough knowledge of a shorthand system so that they can read and transcribe shorthand notes fluently and accurately from both speed and office-style dictation.

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Engineering Division

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M. Baum, TRIC
K. Deed, BEd, DipTT, TRIC, JIG&ToolTechCert
G. Dzioba, TRIC, DipTT
AO. Edgell, REng, MIPlanEng, LIProdEng, CEd
W. Houlston, DipTT, TRIC
N. Lawson, CertMechE, TTCIC
F.S. McLucas, B.A, DipGenStud, TRIC
K. O’Neill, BEd, DipTT, TRIC, COTMechEng
C. Powell, BSoc(Mech), DipEd
F. Sanstrom, DipTT, TRIC
S.D. Scott-Branagan, TRIC
R.S. Somerville, DipTT, TRIC
A.J. Stapley, PhD, DipEd
B. Stevens, DipMechEng, MIEAust
P. Tomal, BEd, Cert(Toolmaking), CertPressToolmaking, DipTT, TRIC
G. Zeuev

Centre for Engineering Technology: Authorised AutoCAD Training Centre

Manager
L.J. McLaughlan

Academic staff
G. Oliver (course co-ordinator)
H. Ramaekers
P. Stroud

Technical Officer
S. Fisher

Electrical and Electronics Technology courses

The following courses are offered by the Electrical and Electronics Technology Department:

Apprenticeship course
3212ECG Electrical Mechanics
The apprenticeship course of three years’ duration is designed to meet the requirements of the Industrial Training Commission of Victoria, the State Electricity Commission of Victoria and the Technical and Further Education (TAFE) Board of Victoria.

The course conducted as a combination of block release and day release, provides the necessary training to prepare an apprentice to pass electrical trade theory and practice at a level approved by the State Electricity Commission of Victoria for issue of the relevant ‘P’, ‘B’ and ‘A’ Grade Licence.

Note:
1. Prerequisite: student must be employed as an apprentice.
2. Only persons licensed by the State Electricity Commission of Victoria may carry out electrical wiring work.

Certificate courses
3222ECE Certificate in Basic Electronics
A basic vocational program incorporating the common core elements of Associate Diploma of Engineering - Electronics, and the Advanced Certificate in Electrical Technology.

The program is designed to develop in students the range of skills and knowledge commonly required by all personnel in the various occupational classifications existing throughout the electronics and associated industries.

3300ECB Advanced Certificate in Electrical Technology
The purpose of the technician course is to provide training in:
— the application of special skills and associated knowledge of complex machines or processes and techniques requiring a knowledge of advanced theory and practice; and
— the performance of highly skilled tasks on complex equipment in workshops, in a laboratory or in the field.

This course is currently under review and will be subject to change.

3500ECB Associate Diploma of Engineering (Electronics)
Associate Diploma courses are designed to train engineering associates who are the immediate support staff for professional engineers in industry.

The course consists of a number of compulsory core subjects and a number of elective subjects to suit a student’s needs or interests. Each subject is allocated a value in credit hours. The elective subjects cover specialist areas such as Digital Electronics, Microprocessors, and Communications.

To complete the Associate Diploma course successfully the candidate must complete a minimum of 1888 credit hours of study plus two years’ relevant industrial experience.

The students could be involved in any of the following areas in their employment: design development, installation, commissioning, operations or maintenance of plant or equipment associated with the electronics industry.

Membership of associations
Students completing the course are academically qualified for admission as graduate members of the Australian Institute of Engineering Associates.

Full-time study
This course requires two years’ full-time attendance over a period of three years.

Part-time study
The courses extend over a minimum of four years’ part-time day release or evening attendance.
Cooperative study
A feature of Swinburne engineering courses is their three year cooperative education format. In a cooperative course the student learns in both an academic and a work situation, where these two phases of learning are related in an overall plan.

The work experience is arranged by Swinburne and undertaken in one semester of six months' duration, during the second year of the course. While working, the student is supervised by the employer and a member of the Swinburne academic staff who acts as the student's industrial tutor. Satisfactory completion of each work experience period is a prerequisite for admission to the next academic stage of the course.

Entrance requirements
Students must have Year 12 or equivalent standard with passes in the following subjects:

English Mathematics A Science

Mature-age students without the above qualifications are invited to discuss this with the head of the department.

Exemptions
Should be referred to the head of the department with suitable written evidence to support the claim.

Enquiries
Mr. A.G. Hampton, 819 8493
or Mr. M. Cadilhac.

Apprenticeship course

3212ECA Apprenticeship: Electrical Mechanics

Course structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>320</td>
</tr>
<tr>
<td>TEG01</td>
<td>Unit 1 Electrical Wiring Theory</td>
</tr>
<tr>
<td>TEG02</td>
<td>Unit 2 Electrical Wiring Theory</td>
</tr>
<tr>
<td>TEG03</td>
<td>Unit 3 Electrical Wiring Theory</td>
</tr>
<tr>
<td>TEG04</td>
<td>Unit 4 Electrical Wiring Practice</td>
</tr>
<tr>
<td>2nd year</td>
<td>320</td>
</tr>
<tr>
<td>TEG05</td>
<td>Unit 5 Electrical Wiring Theory</td>
</tr>
<tr>
<td>TEG06</td>
<td>Unit 6 Electrical Wiring Theory</td>
</tr>
<tr>
<td>TEG07</td>
<td>Unit 7 Electrical Wiring Practice</td>
</tr>
<tr>
<td>3rd year</td>
<td>320</td>
</tr>
<tr>
<td>TEG08</td>
<td>Unit 8 Electrical Wiring Theory</td>
</tr>
<tr>
<td>TEG09</td>
<td>Unit 9 Electrical Wiring Theory</td>
</tr>
<tr>
<td>TEG10</td>
<td>Unit 10 Electrical Wiring Practice</td>
</tr>
</tbody>
</table>

External examinations
(State Training Board)

Licensing exam: theory and practical components

Name
Licensing Exam Theory (LET), Licensing Exam Practical (LEP)

These exams are not stand alone and together form the licensing exam.

Exemptions
NO exemptions are possible for either component of the licensing examination.

Marking and grades of licenses
The grade of licence issued to the candidate will depend on the mark obtained:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Grade</td>
<td>Between 75% and 90%</td>
</tr>
<tr>
<td>B Grade</td>
<td>Between 60% and 74%</td>
</tr>
<tr>
<td>A Grade</td>
<td>Less than 60%</td>
</tr>
</tbody>
</table>

Enquiries
Mr. B. Johnston, 819 8493

Certificate courses

3222ECE Certificate in Basic Electronics

Entry level
There are three types of entry:

(a) Satisfactory completion of a Year 11 course, including passes in English, Mathematics and Science, or an approved equivalent is the normal prerequisite.

(b) Completion of an electrical trade apprenticeship which provides exemption from TEG520 to TEG532 and TEG536.

(c) An applicant whose maturity and experience indicates an ability to successfully undertake the course will be considered.

Course structure

The Certificate in Basic Electronics consists of 15 learning units. A Certificate in Basic Electronics (CBE) will be awarded, upon application, to any student who successfully completes all the CBE learning units to the specified performance level and passes in the external examinations. This basic vocational program may be undertaken as:

(a) A terminal program in its own right, especially for persons working in equipment servicing who want to gain an understanding of electronics.

(b) Forms a part of the core studies of the Associate Diploma of Engineering (Electronics).

(c) The core of the Advanced Certificate in Electrical Technology.

(d) The core of the Industrial Electronics Certificate. The program is designed to provide students with the core skills and knowledge required at all levels in the electronics and associated industries.

Subjects

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEG520</td>
<td>Basic DC Circuits</td>
</tr>
<tr>
<td>TEG521</td>
<td>Inductance and Inductors</td>
</tr>
<tr>
<td>TEG522</td>
<td>Capacitance and Capacitors</td>
</tr>
<tr>
<td>TEG523</td>
<td>Basic AC Circuits</td>
</tr>
<tr>
<td>TEG524</td>
<td>Semiconductor Fundamentals</td>
</tr>
<tr>
<td>TEG525</td>
<td>Amplifier Principles</td>
</tr>
<tr>
<td>TEG526</td>
<td>Amplifier Applications</td>
</tr>
<tr>
<td>TEG527</td>
<td>Timing and Control Devices</td>
</tr>
<tr>
<td>TEG528</td>
<td>DC Power Supplies</td>
</tr>
<tr>
<td>TEG529</td>
<td>Digital Fundamentals</td>
</tr>
<tr>
<td>TEG530</td>
<td>Digital Applications</td>
</tr>
<tr>
<td>TEG531</td>
<td>Microprocessor Control Systems</td>
</tr>
<tr>
<td>TEG532</td>
<td>Industrial Practices</td>
</tr>
<tr>
<td>TEG533</td>
<td>Basic Test Equipment</td>
</tr>
<tr>
<td>TEG534</td>
<td>Transducers</td>
</tr>
<tr>
<td>TEG537</td>
<td>CBE Exam — Basic Electrical Principles</td>
</tr>
<tr>
<td>TEG538</td>
<td>CBE Exam — Basic Electronics Theory</td>
</tr>
<tr>
<td>TEG539</td>
<td>CBE Exam — Basic Digital Theory</td>
</tr>
</tbody>
</table>

Additional studies are required in addition to the CBE for entry into the Advanced Certificate or the Associate Diploma (Electronics) these are TEG145Mathematics IE, TEG333 Communication Skills, TEG141 Electronic Drafting Principles and TEG126 Electronic Circuits.

Study modes

Full-time study (year 11 entry). Students will undertake a Certificate in Basic Electronics in two semesters together with additional bridging subjects. (Mathematics IE and 2E, Communication Skills, Electronic Drafting and Electronic Circuits) to enable them, upon successful completion to enter stage 2 of the Associate Diploma of Engineering (Electronics).

Part-time study is offered on a full day, half day or evening basis covering the work commencing with TEG533 then TEG520 to TEG528, TEG534, TEG532, TEG529 to TEG531. A part-time evening program is available where TEG529 to TEG531 are taken on one evening TEG145Mathematics IE and the remainder of the CBE excluding TEG532 is taken over two additional evenings. By attending three evenings a CBE can be virtually completed in one year.

Enquiries
Mr. B. Johnston, 819 8493
### 3300ECB Advanced Certificate in Electrical Technology

**Entry level**  
This course is available to electrical tradespeople who have completed electrical trade studies or who are concurrently pursuing Stage 3 of such studies.

**Course structure**  
An Advanced Certificate in Electrical Technology will be issued to any student who successfully completes an approved program of not less than the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Mechanic Training</td>
<td>960</td>
</tr>
<tr>
<td>Certificate in Basic Electronics</td>
<td>242</td>
</tr>
<tr>
<td>Maths 1E</td>
<td>72</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>72</td>
</tr>
<tr>
<td>Technician subjects</td>
<td>288</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1888</td>
</tr>
</tbody>
</table>

The technician subjects are divided into two categories: foundation or introductory level and application or final level.

**Subjects**  
Electrical Mechanics Training (for subjects see listing under Apprenticeship course).

**Certificate in Basic Electronics** (for subjects see listing under Certificate in Basic Electronics course).

<table>
<thead>
<tr>
<th>Compulsory Subjects</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE145 Maths 1E</td>
<td>72</td>
</tr>
<tr>
<td>TH133 Communication Skills</td>
<td>72</td>
</tr>
<tr>
<td>Technician subjects introductory</td>
<td></td>
</tr>
<tr>
<td>TE160 Electrical Industrial Control</td>
<td>144</td>
</tr>
<tr>
<td>TE338 Microprocessor Fundamentals</td>
<td>72</td>
</tr>
<tr>
<td>TE663 Programmable Controllers 1</td>
<td>72</td>
</tr>
<tr>
<td>TE664 Programmable Controllers 2</td>
<td>72</td>
</tr>
<tr>
<td>Technician subjects final</td>
<td></td>
</tr>
<tr>
<td>TE438 Microprocessor Applications</td>
<td>96</td>
</tr>
<tr>
<td>TE651 Electro-pneumatic Control</td>
<td>72</td>
</tr>
<tr>
<td>TE652 Generating Plant Control</td>
<td>72</td>
</tr>
<tr>
<td>TE654 Electro-pneumatic Control</td>
<td>72</td>
</tr>
<tr>
<td>Note: <em>Syllabus not yet available. This course is currently under review and may be subject to change.</em>*</td>
<td></td>
</tr>
</tbody>
</table>

### 3500ECB Associate Diploma of Engineering (Electronics)

**Entry level**  
Satisfactory completion of year 12. However, students who may not have completed year 12 but have the required background through work and/or have satisfactorily completed suitable bridging subjects.

**Course structure**  
The course consists of a minimum of 1888 credit hours of study. The diploma is awarded after completion of the academic studies and provision of evidence of two years of relevant industrial experience.

A minimum period of 1 year of industrial experience must be completed prior to the student commencing final stage studies.

**Core subjects**  

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE907 Basic Electric Principles*</td>
<td>108</td>
</tr>
<tr>
<td>TE908 Basic Electronics Theory*</td>
<td>144</td>
</tr>
<tr>
<td>TE909 Basic Digital Theory</td>
<td>106</td>
</tr>
<tr>
<td>TH133 Communication Skills Core</td>
<td>72</td>
</tr>
<tr>
<td>TE332 Industrial Practices 1</td>
<td>54</td>
</tr>
<tr>
<td>* From Certificate in Basic Electronics</td>
<td></td>
</tr>
<tr>
<td>TE245 Mathematics 2E</td>
<td>90</td>
</tr>
<tr>
<td>TE561 Circuit Theory 2</td>
<td>126</td>
</tr>
<tr>
<td>TE571 Electronics 2</td>
<td>126</td>
</tr>
<tr>
<td>TE338 Microprocessor Fundamentals</td>
<td>106</td>
</tr>
<tr>
<td>TE470 Digital Electronics 2B</td>
<td>54</td>
</tr>
<tr>
<td>TE580 Analogue Communications 1</td>
<td>126</td>
</tr>
<tr>
<td>TE323 Electronics 3H</td>
<td>126</td>
</tr>
</tbody>
</table>

**Electives**  

<table>
<thead>
<tr>
<th>Group A</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE141 Electronic Drafting Principles</td>
<td>54</td>
</tr>
<tr>
<td>TE235 Computer Studies 1H</td>
<td>54</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group B</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE437 Data Communications 1</td>
<td>108</td>
</tr>
<tr>
<td>TE398 Circuit Theory 3H</td>
<td>126</td>
</tr>
<tr>
<td>TE345 Mathematics 3E</td>
<td>90</td>
</tr>
<tr>
<td>TE438 Microprocessor Applications</td>
<td>144</td>
</tr>
<tr>
<td>TE439 Testing techniques and Instruments</td>
<td>126</td>
</tr>
<tr>
<td>TE440 Electronic Personal Computer applications</td>
<td>126</td>
</tr>
<tr>
<td>TH136 Basic Supervision</td>
<td>72</td>
</tr>
</tbody>
</table>

**Enrichment Subjects**  

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE145 Mathematics 1E</td>
<td>72</td>
</tr>
</tbody>
</table>

Other subjects may become available during 1990-1991.

**Typical Programs**  

Full-time students must complete a minimum program consisting of the following studies:

- **All core subjects**  
  - 1242 hours

- **1 Group A electives**  
  - 54 hours

- **5 Group B electives**  
  - 592 hours av. 1888 hours

This gives a four semester program with an average student contact of approximately 26 hours per week.

Part-time students must complete a minimum program consisting of the following studies:

- **All core subjects**  
  - 5 Group B electives

Following accepted part-time study practices, this gives a ten semester part-time study program of approximately 1500 hours with an average of eight hours per week.
This section contains a brief description of subjects offered by the Department of Electrical and Electronics Technology. The subjects are listed in alphabetical order of subject codes.

**E21ECW** Certificate of Technology — Electronics

**E21ECB** Cooperative Certificate of Technology — Electronics

These courses are available only to students wishing to complete their studies towards a Certificate of Technology — Electronics.

**Subject details**

This section contains a brief description of subjects offered by the Department of Electrical and Electronics Technology. The subjects are listed in alphabetical order of subject codes.

**TEU01** Unit 1

Ferrous and non ferrous metals, base units, derived units, multiples and sub-multiples, safety, acts and regulations, responsibilities, plans and drawings, maths, marking out tools, telephone answering.

**TEU02** Unit 2

Structure of matter, materials, mechanical units, electrical units, sources of EMF, resistance, safety, SAA Wiring Rules, acts and standards and regulations, cables, basic estimating and planning, circuit and plan fundamentals, electrical accessories, hand tools, power tools. Measurement of resistance, \( V \) & \( R \) relationships, series and parallel circuits, lightning control, earthing and earthing systems, metering, threads and thread cutting, fixing methods.

**TEU03** Unit 3

Electrical power and energy, magnetism, electro magnetism, solid state devices, circuit and plan reading and interpretation, sheetmetal fabrication, building materials and structures, cable jointing and termination, installation testing, testing and fault finding, Electromagnetic induction, sinusoidal waveforms, generation of polyphase EMF, AC generators, power supply and distribution, wiring systems, welding and brazing.

**TEU04** Prac 1

Assessment of practical components in Units 1-3.

**TEU05** Unit 5

Inductors and inductance, capacitors and capacitance, trigonometry and phasors cables, cable jointing and termination, wiring systems. Resistance in AC circuits, inductance in AC circuits, capacitance in AC circuits, heating effects, circuit protection principles and devices, testing and fault finding of equipment and appliances, testing of installations, wiring systems.

**TEU06** Unit 6

Power in single phase circuits, \( R, L \) and \( C \) in series AC circuits, star delta connections, single phase transformers, three phase transformers, auto transformers, wiring systems.

**TEU07** Prac 2

Assessment of practical components in Units 5-6.

**TEU08** Unit 8

Circuit and plan reading, synchronous motors, polyphase motors and starters, testing and fault finding of equipment and appliances, test instruments and electrical measurements, power in three phase circuits, motor control methods.

**TEU09** Unit 9

DC, control and devices, SLG, control, D.C machines, solid state control, rectification.

**TEU10** Unit 10

Assessment of prac components in units 8 and 9.

**TE126** Electronic Circuits

This is a block diagram approach to electronic systems.
TE408 Licensing Exam Theory
LET will examine regulations, calculation of M.D., cable sizes, fuse and switch sizes, switchboard designs, testing, safety and Supply Authority Requirements.

TE409 Licensing Exam Practical
LEP will examine testing, direct identification, knowledge of Wiring Regulations and other Supply Authority requirements.

TE437 Data Communications
This subject is based on a local area network. Topics include network topologies, synchronous and asynchronous data transmission, modems, multiplexing and computer interfaces.

TE438 Microprocessor Applications
This subject develops a good understanding in the application of microprocessors interfacing. The course consists of:
(a) The design and implementation of an interfacing problem; and
(b) a project related to the interest of the student, or some area of the student's work.

TE439 Testing Techniques and Instruments
Practical meters, bridges, application of bridges, signal generators, cathode ray tube, cathode ray oscilloscope, time main reflectometer, digital equipment audio testing, group delay and system testing.

TE470 Digital Electronics 2B
Combination circuitry, clocked sequential circuits, circuit design with multiplexers and de multiplexers, oscillators, timers, subsystems and interfaces.

TE520-535 Certificate in Basic Electronics
Topics include basic DC circuits, conductors, insulators, voltage divider, constant current/voltage sources, inductance and inductors — magnetic, flux, electrostatics, reluctance, inductance, kVA, leakage, radiation, AC circuits, coherence, and capacitance, semiconductors, or full transistor amplifier principles and application, timing and control devices, digital fundamentals/applications, microprocessor control systems, industrial practices, transducers, basic PC board manufacturing methods, rectifiers. More details available on request.

TE561 Circuit Theory 2
A course of DC and AC network analysis including a study of resonance.

TE571 Electronics 2
A course in power supply and oscillator amplifier, including operational amplifier circuits. Bipolar and field effect devices are covered.

TE580 Analogue Communications
This subject contains modulation and demodulation principles, wave communication circuits, transmission lines and antennae.

TE650 Electronic Control Components
Relays, diodes, transistors, thyristors, transistors, thyristors, triacs, static contactors.

TE651 Electro-pneumatics
Principles, cylinders, valves, solenoids, timers, winch control reading and design, safety.

TE652 Generating Plant Control
Alternators, excitation, metering, circuits, protection, paralleling, uninterruptible power supply systems.

TE653 Motor Speed Control
DC control, three-phase rotor control, pole changing, static frequency converter.

TE656 Crane and Conveyor Control
Crane principles, motor types, directional control, speed control, braking, conveyor types, eddy current coupling, cascading conveyor stopping devices, speed control, legal requirements, safety.

TE663 Programmable Controllers 1
Types of control, programmable controller block diagram scanning, programming including timers, counters, NC contracts, data manipulation, input device scheduling, report generation, safety. A more detailed syllabus available on request.

TE664 Programmable Controllers 2
Design and editing of programs, control systems analysis, peripherals, analogue inputs and outputs, communications modes. A more detailed syllabus is available on request.

TH133 Communication Skills
Written and oral, oral presentation, report writing, oral presentation, report writing, media analysis. Core studies plus specialised options.

TH136 Basic Supervision
The supervisor's role: problem-solving, leadership, delegation, team building techniques, disciplinary action, selecting staff, staff appraisal.

Mechanical and Manufacturing Technology courses
The following courses are offered by the Department of Mechanical and Manufacturing Technology:

Apprenticeship courses

Part-time day apprenticeship courses in:

3212 EFG Fitting and Machining
3212 EJD Boilermaking and Structural Steel Fabrication

Each course is structured according to the requirements of the Industrial Training Commission of Victoria.

Technician courses

M34 EEF Mechanical
Mechanical courses are divided into 3 streams: Fluid Power, Mechanical Drafting and Plant Maintenance.

M34 EFA Production
This course has set of core subjects and a selection of specialist elective subjects.

These courses provide training in the mechanical and production fields. Several courses are available within each field, and they provide valuable training for apprentices and tradespersons who wish to further their studies.

Apprentices, who are taking a technician course concurrently with their trade training, will be required to attend evening classes in addition to daytime trade training. Tradespersons who undertake a technician course will be required, as a general rule, to attend classes on two evenings per week. Some subjects are available in the day-time for students who can arrange release from work.

The usual duration of a technician course is four years.

Post-apprenticeship courses

4200 EFE Post-Apprenticeship Course in Toolmaking

Press-toolmaking is a post-apprenticeship (Fitting and Turning) course designed to provide advanced training in the area of die manufacture and design for tradespersons.

Classes are available during the day and evening.

This course involves 2 years of study, the first year being common to all Toolmaking streams and can be studied in the 3rd year of the Fitting and Turning course. The following two years include practical training in Press-tool manufacture and design. A certificate is awarded on completion of the course.
Welding courses

**M42EPA TAFE Basic Welding Certificate Course**
This course will qualify people for the welding industry where a basic welding skill only is required.
The course also provides basic instruction for progression to the TAFE Intermediate Welding Certificate Course.

**M42EJB Electric Welding — Post-trade**
The welding courses cover the syllabus prescribed by the TAFE Board to give instruction in all branches of electric arc welding.

With a pass mark of sixty-five per cent in both theory and practical examination, a basic welding skill only is required.

A satisfactory evidence of suitable industrial experience.

Courses incorporate:
- Welding of ferrous and non-ferrous metals, flame cutting and gouging, all-positional welding of pipe-plate, rolled and hollow steel section, use of all types of electrodes, weld testing.
- For arc welding, courses are available for instruction in pressure vessel steel and stainless steel to AS1796.

Courses include:
- Oxy-acetylene cutting, welding of cast iron, all-positional welding, flame gouging, hand and machine, template work, marking and cutting of pipe and pipe templates, welding of non-ferrous metals, safety precautions, general information as required by a welder.

Hobby Welding: (Technical Services Branch) for the welding of all phases for the purpose of weld testing.

Training (Technical Services Branch) for the welding of phases for the purpose of weld testing.

This practical course of 42 hours includes basic instruction in the use of AUTOCAD, one of the major CAD programs in use in Australian architectural offices and drawing offices.

No prior knowledge of computing is necessary, but some knowledge of an architectural or drafting discipline is preferred.

The course is designed to meet the requirements of the Industrial Training Commission of Victoria and industry.

Entrance requirements:

- Students must meet the requirements as specified by the Industrial Training Commission of Victoria. Currently there is no set entrance standard.

Course structure:

(a) The course consists of the following levels:
   - Level 1 and 2: Common core
   - Level 3: Electives

(b) To gain a Certificate of Proficiency, the apprentice must achieve the minimum stated standard at each level. Progression to the elective level requires successful completion of the common core levels.

(c) The common core consists of twenty-two units and seven integrated support units.

(d) The elective level consists of six subject areas of which apprentices are required to successfully complete one.

Unit details:

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Core units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFC01F</td>
<td>1/1 Introduction</td>
</tr>
<tr>
<td>TFC02F</td>
<td>1/2 Engineering Material Cut Off Machines</td>
</tr>
<tr>
<td>TFC03F</td>
<td>1/3 Lathe</td>
</tr>
<tr>
<td>TFC04F</td>
<td>1/4 Drill</td>
</tr>
<tr>
<td>TFC05F</td>
<td>1/5 Mill</td>
</tr>
<tr>
<td>TFC06F</td>
<td>1/6 Portable Power Tools</td>
</tr>
<tr>
<td>TFC07F</td>
<td>1/7 Basic Metals</td>
</tr>
<tr>
<td>TFC08F</td>
<td>1/8 Bandsaw</td>
</tr>
<tr>
<td>TFC09F</td>
<td>2/1 Lathe</td>
</tr>
<tr>
<td>TFC10F</td>
<td>2/2 Drill</td>
</tr>
<tr>
<td>TFC11F</td>
<td>2/3 Mill</td>
</tr>
<tr>
<td>TFC12F</td>
<td>2/4 Basic Metals</td>
</tr>
<tr>
<td>TFC13F</td>
<td>2/5 Cylindrical Grinder</td>
</tr>
<tr>
<td>TFC14F</td>
<td>2/6 Heat Jointing Processes</td>
</tr>
<tr>
<td>TFC15F</td>
<td>2/7 Assembly Fitting</td>
</tr>
<tr>
<td>TFC16F</td>
<td>2/8 Tool and Cutter Grinder</td>
</tr>
<tr>
<td>TFC17F</td>
<td>2/9 Introduction to Numerical Control</td>
</tr>
<tr>
<td>TFC18F</td>
<td>2/10 Surface Grinder</td>
</tr>
<tr>
<td>TFC19F</td>
<td>2/11 Consolidation</td>
</tr>
</tbody>
</table>

Level 2 | Core units |
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>TFC20F</td>
<td>3/1 Lathe</td>
</tr>
<tr>
<td>TFC21F</td>
<td>3/2 Drill</td>
</tr>
<tr>
<td>TFC22F</td>
<td>3/3 Mill</td>
</tr>
<tr>
<td>TFC23F</td>
<td>3/4 Basic Metals</td>
</tr>
<tr>
<td>TFC24F</td>
<td>3/5 Cylindrical Grinder</td>
</tr>
<tr>
<td>TFC25F</td>
<td>3/6 Heat Jointing Processes</td>
</tr>
<tr>
<td>TFC26F</td>
<td>3/7 Assembly Fitting</td>
</tr>
<tr>
<td>TFC27F</td>
<td>3/8 Tool and Cutter Grinder</td>
</tr>
<tr>
<td>TFC28F</td>
<td>3/9 Introduction to Numerical Control</td>
</tr>
<tr>
<td>TFC29F</td>
<td>3/10 Surface Grinder</td>
</tr>
<tr>
<td>TFC30F</td>
<td>3/11 Consolidation</td>
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</tbody>
</table>

Level 3 | Electives |
|---------|------------|

<table>
<thead>
<tr>
<th>Code</th>
<th>Stream A</th>
<th>Advanced Machining</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPA01F</td>
<td>A1</td>
<td>Machining Technology</td>
</tr>
<tr>
<td>TPA02F</td>
<td>A2</td>
<td>Precision Measurement</td>
</tr>
<tr>
<td>TPA03F</td>
<td>A3</td>
<td>Tool and Cutter Grinding</td>
</tr>
<tr>
<td>TPA04F</td>
<td>A4</td>
<td>Advanced Milling</td>
</tr>
<tr>
<td>TPA05F</td>
<td>A5</td>
<td>Advanced Cylindrical Grinding</td>
</tr>
<tr>
<td>TPA06F</td>
<td>A6</td>
<td>Advanced Surface Grinding</td>
</tr>
<tr>
<td>TPA07F</td>
<td>A7</td>
<td>Advanced Lathe Operations</td>
</tr>
<tr>
<td>TPA08F</td>
<td>A8</td>
<td>Heavy Machining Operations</td>
</tr>
<tr>
<td>TPA09F</td>
<td>A9</td>
<td>Introduction to Turret and Capstan Lathes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Stream N</th>
<th>Numerical Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFN01F</td>
<td>N1</td>
<td>Project Preparation</td>
</tr>
<tr>
<td>TFN02F</td>
<td>N2L</td>
<td>CNC Lathe Programme</td>
</tr>
<tr>
<td>TFN03F</td>
<td>N3L</td>
<td>Produce Machine Data</td>
</tr>
<tr>
<td>TFN04F</td>
<td>N4L</td>
<td>CNC Lathe Component Manufacture</td>
</tr>
<tr>
<td>TFN05F</td>
<td>N5M</td>
<td>Machining Centre Programme</td>
</tr>
<tr>
<td>TFN06F</td>
<td>N6M</td>
<td>Produce Machine Data</td>
</tr>
<tr>
<td>TFN07F</td>
<td>N7M</td>
<td>CNC Machining Centre Component Manufacture</td>
</tr>
<tr>
<td>TFN08F</td>
<td>N8</td>
<td>Introduction to Conversational and Computer Assisted Programming</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Stream T</th>
<th>Toolmaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTF01F</td>
<td>T1</td>
<td>Engineering Drawing</td>
</tr>
<tr>
<td>TTF02F</td>
<td>T2</td>
<td>Metals and Heavy Treatment</td>
</tr>
<tr>
<td>TTF03F</td>
<td>T3</td>
<td>Mechanical Indicators</td>
</tr>
<tr>
<td>TTF04F</td>
<td>T4</td>
<td>Tool and Gauge Making Maths</td>
</tr>
<tr>
<td>TTF05F</td>
<td>T5</td>
<td>Vertical Milling Machines</td>
</tr>
<tr>
<td>TTF06F</td>
<td>T6</td>
<td>Pantograph Milling</td>
</tr>
<tr>
<td>TTF07F</td>
<td>T7</td>
<td>Linear Measurement Gauges</td>
</tr>
<tr>
<td>TTF08F</td>
<td>T8</td>
<td>Tests of Straightness &amp; Squareness</td>
</tr>
<tr>
<td>TTF09F</td>
<td>T9</td>
<td>Optical Projections</td>
</tr>
<tr>
<td>TTF10F</td>
<td>T10</td>
<td>Surface Grinding Machines</td>
</tr>
<tr>
<td>TTF11F</td>
<td>T11</td>
<td>Linear Measuring Instruments</td>
</tr>
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<td>TTF12F</td>
<td>T12</td>
<td>External Cylindrical Grinding Machines</td>
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<td>TTF13F</td>
<td>T13</td>
<td>Internal Cylindrical Grinding Machines</td>
</tr>
<tr>
<td>TTF14F</td>
<td>T14</td>
<td>Introduction to Electro Discharge Machining</td>
</tr>
<tr>
<td>TTF15F</td>
<td>T15</td>
<td>NC and CNC Machining</td>
</tr>
</tbody>
</table>

**Hobby courses**

Engineering Workshop Practice

**Short Course in CAD Skills**

This course is designed to meet the requirements of the Industrial Training Commission of Victoria and industry.

**Apprenticeship Courses**

**3212EFG Apprenticeship, Fitting and Machining**

Career potential:
A part-time day apprenticeship course of three years’ duration, designed to meet the requirements of the Industrial Training Commission of Victoria and industry.

Entrance requirements:
Students must meet the requirements as specified by the Industrial Training Commission of Victoria. Currently there is no set entrance standard.
Code Stream J Composite F.M.A
TF601F J1 Fundamentals of Fluid Power
TF602F J2 Assembly of Pneumatic Systems
TF603F J3 Assembly of Hydraulic Systems
TF604F J4 General Maintenance Fitting
TF605F J5 Power Transmission
TF606F J6 Maintenance Machining
TF607F J7 Precision Measurement

3212EJD Boilermaking and Structural Steel Fabrication

General
This course is designed to train apprentices in the many practical skills required to carry out their trade.

Course structure
The complete course consists of 3 years of schooling. The course is studied on a modular basis, each module dealing with a particular skill together with the necessary Theory and Developmental Drawing.

Course detail Hours
TF601 Module 1 - Theory and Practice
TF602 Module 2 - Theory and Practice
TF603 Module 3 - Theory and Practice
TF604 Module 4 - Theory and Practice
TF605 Module 5 - Theory and Practice
TF606 Module 6 - Theory and Practice
TF607 Module 7 - Related Instruction
TF608 Module 8 - Related Instruction
TF609 Module 9 - Theory and Practice
TF610 Module 10 - Theory and Practice
TF611 Module 11 - Related Instruction
TF612 Module 12 - Theory and Practice
TF613 Module 13 - Theory and Practice
TF614 Module 14 - Theory and Practice
TF615 Module 15 - Related Instruction
TF616 Module 16 - Related Instruction
TF617 Module 17 - Related Instruction
TF618 Module 18 - Related Instruction
TF619 Module 19 - Theory and Practice
TF620 Module 20 - Theory and Practice
TF621 Module 21C - General Fabrication
TF622 Module 22C - General Fabrication
TF623 Module 23C - General Fabrication
TF624 Module 24C - General Fabrication
TF625 Module 21A - Structural
TF626 Module 22A - Structural
TF627 Module 23A - Structural
TF628 Module 21B - Pressure Vessel
TF629 Module 22B - Pressure Vessel
TF630 Module 23B - Pressure Vessel
TF631 Module 24B - Pressure Vessel

M22EFA Certificate of Quality Technology

Career potential
In a highly technological and scientific world almost everything we come in contact with in everyday life is manufactured to a specific level of acceptance, whether it is on a 'one-off' batch or an assembly line basis.

The work of the quality control technologist is to ascertain to what extent the goods produced conform to suitable levels of accuracy and other criteria; thus maintaining the levels of interchangeability, quality, safety and economic feasibility so vital to our manufacturing industries.

The far-reaching effect of tasks performed by quality control technologists include:

a) protecting the consumer against the purchase of faulty manufactured goods,
b) maintenance and promotion of the company's image and reputation.

The field of application of quality control covers most industries including clothing, metal trades, electrical and food industries. Career opportunities are equally varied.

3300EEN Advanced Certificate in Manufacturing Engineering: Quality Technology

Entry standards
The following are the prerequisite qualifications for entry into the courses:

a) Satisfactory completion of Year 11 or equivalent course comprising two semesters' units of mathematics and one semester's units of English.

or

b) Experience and maturity deemed by the TAFE institution necessary to succeed in the course, such as satisfactory progress in, or completion of, the Fitting and Machining 32EFG trade course.

NOTE: For students who do not have the prerequisite academic qualifications, a bridging program comprising engineering computations, technical skills introduction to computer and engineering principles is to be initially undertaken.

Course structure
The core subjects are the same as the Advanced Certificate (Mechanical Engineering) and may be studied on a full time or part time basis 18

Compulsory specialist stream subjects (part time study)
TM127 Statistics
TF197A Statistical Quality Control A
TF197B Statistical Quality Control B
TF195 Organisation and Management for Quality A
TF196 Organisation and Management for Quality B

Broadening subjects
One broadening subject must be selected

Total 24

3500EEB Associate Diploma in Manufacturing Engineering: Quality Technology

Entry standards
The following are the prerequisite qualifications for entry into the courses:

a) Satisfactory completion of Year 12 or equivalent course comprising two semesters' units of mathematics and two semesters' units of English.

or

b) Experience and maturity deemed by the TAFE institution necessary to succeed in the course, such as satisfactory progress in, or completion of, the Fitting and Machining 32EFG trade course.

NOTE: For students who do not have the prerequisite academic qualifications, a bridging program comprising engineering computations, communications skills, introduction to computers and engineering principles is to be initially undertaken.

Course structure
Students having completed the Advanced Certificate in Manufacturing Engineering: Quality Technology, may undertake the Associate Diploma in Manufacturing Engineering: Quality Technology on a part time basis 18
Swinburne College of TAFE

Elective specialist stream subjects
Four electives must be selected from the following specialist stream subjects.

- **TF297** Statistical Quality Control 11 1
- **TF340** Principles of Measurement 1
- **TF317** Dimensional Metrology 1
- **TF253** Computer Appreciation and Applications to Quality Control 1
- **TF462** Reliability and Prototype Testing 1
- **TF464** Product Liability and Product Recall Management 1
- **TF465** Quality Control Systems and their Assessment 1
- **TF467** Human Factors 1

Broadening units
Up to seven broadening units to be selected for study. It is recommended that these subjects should include Metrology 1AB and 2AB if the units completed up to this stage do not include Dimensional Metrology 1 unit.

Total 30

**Swinburne Certificate of Quality Control**

Students who have successfully completed the five specialist stream units of the Advanced Certificate and three electives from the Associate Diploma in Quality Technology will be eligible for a Certificate in Quality Control awarded by Swinburne College. These subjects are as follows:

**Compulsory subjects**
- **TM127** Statistics 1 unit
- **TM197A** Statistical Quality Control A 1 unit
- **TM197B** Statistical Quality Control B 1 unit
- **TF195** Organisation and Management for Quality A 1 unit
- **TF196** Organisation and Management for Quality A 1 unit

**Electives**
Three electives are to be selected from the following:
- **TF297** Statistical Quality Control 11 1 unit
- **TF340** Principles of Measurement 1 unit
- **TF317** Dimensional Metrology 1 unit
- **TF253** Computer Appreciation and Applications for Quality Control 1 unit
- **TF462** Reliability and Prototype Testing 1 unit
- **TF464** Product Liability and Recall Management 1 unit
- **TF465** Quality Control Systems and their Agreement 1 unit
- **TF467** Human Factors 1 unit

**Advanced Certificate and Associate Diploma Courses**

Entrance requirements
- Advanced Certificate
- Satisfactory completion of a VCE or equivalent course comprising 4 semesters' units of mathematics and 2 semesters' units of English and Physics at Year 12;
- Experience and maturity deemed by Swinburne College of TAFE necessary to succeed in the course, such as satisfactory progress in, or completion of, the 3212EFG Fitting and Machining trade course.

Note: For those students that do not have the prerequisite academic qualifications, a bridging program is to be initially undertaken.

**Awarding**
The certificate is awarded after completion of the academic studies and provision of evidence of two years of relevant industrial experience.

**Swinburne College of TAFE**

Associate Diploma
Same as Advanced Certificate or completion of an advanced certificate in Engineering.

**Awarding**
The diploma is awarded after completion of the academic studies and provision of evidence of two years of relevant industrial experience.

**Career potential**
The Advanced Certificate has been designed to enable a graduate to be employed in such positions as technical assistants, supervisors, trainee detail draftspersons, junior technical officers in such industries as appropriate to the engineering discipline chosen.

The Associate Diploma may enable the graduate to gain more senior positions in engineering industries. These positions may include project engineers, design draftspersons, technical officers, works engineers, and methods engineers.

These courses have been designed to meet the requirements of industry, but also allow a student to expand his/her particular engineering interests by the selection of "broadening" subjects.

**3300EEM Advanced Certificate in Mechanical Engineering**

Course Structure
Graduates who have completed the Advanced Certificate (Mechanical Engineering) will be able to undertake the Associate Diploma (Mechanical Design Drafting), or Associate Diploma (Mechanical Engineering). The Advanced Certificate may be studied on a full-time or part-time basis.

**Core subjects**

<table>
<thead>
<tr>
<th>Units</th>
<th>Sub Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD001 Engineering Practice 1A</td>
<td>1</td>
</tr>
<tr>
<td>TD002 Engineering Practice 1B</td>
<td>1</td>
</tr>
<tr>
<td>TD003 Engineering Practice 2A</td>
<td>1</td>
</tr>
<tr>
<td>TD004 Engineering Practice 2B</td>
<td>1</td>
</tr>
<tr>
<td>TD005 Engineering Practice 3A</td>
<td>1</td>
</tr>
<tr>
<td>TD006 Engineering Practice 3B</td>
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</tr>
<tr>
<td>TD007 Engineering Processes 1</td>
<td>1</td>
</tr>
<tr>
<td>TD014 Engineering Materials 1A</td>
<td>1</td>
</tr>
<tr>
<td>TD015 Engineering Materials 1B</td>
<td>1</td>
</tr>
<tr>
<td>TD016 Engineering Drafting 1A</td>
<td>1</td>
</tr>
<tr>
<td>TD017 Engineering Drafting 1B</td>
<td>1</td>
</tr>
<tr>
<td>TD021 Engineering Principles 1B</td>
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**Compulsory Subjects**

<table>
<thead>
<tr>
<th>Units</th>
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<tbody>
<tr>
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<tr>
<td>TD025 Applied Mechanics 1B</td>
<td>1</td>
</tr>
<tr>
<td>TD026 Applied Mechanics 2A</td>
<td>1</td>
</tr>
<tr>
<td>TD027 Applied Mechanics 2B</td>
<td>1</td>
</tr>
<tr>
<td>TD023 Statics</td>
<td>1</td>
</tr>
<tr>
<td>Sub Total</td>
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</tbody>
</table>

**Broadening Subjects**

One broadening unit must be selected.

Broadening subjects are essentially those that are available in existing Certificate of Technology course.

For those students not having the necessary prerequisite academic qualifications, a bridging program is to be initially undertaken.

**Bridging subjects**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD010 Engineering Computations 1A</td>
</tr>
<tr>
<td>TD011 Engineering Computations 1B</td>
</tr>
<tr>
<td>TD012 Computer Studies</td>
</tr>
<tr>
<td>TD018 Communication Skills 1A</td>
</tr>
<tr>
<td>TD019 Communication Skills 1B</td>
</tr>
<tr>
<td>TD020 Engineering Principles 1A</td>
</tr>
</tbody>
</table>
Course structure

May be studied on a full-time or part-time basis.

In addition to the subjects studied in the Advanced Certificate (Mechanical Engineering), the following are to be undertaken:

<table>
<thead>
<tr>
<th>Compulsory Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD031 Mechanical Design and Drafting 1A</td>
<td>1</td>
</tr>
<tr>
<td>TD032 Mechanical Design and Drafting 1B</td>
<td>1</td>
</tr>
<tr>
<td>TD034 Mechanical Design 2A</td>
<td>1</td>
</tr>
<tr>
<td>TD035 Mechanical Design 2B</td>
<td>1</td>
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<tr>
<td>TD036 Mechanical Design 3A</td>
<td>1</td>
</tr>
<tr>
<td>TD037 Mechanical Design 3B</td>
<td>2</td>
</tr>
</tbody>
</table>

Sub Total: 7

Broadening Subjects

Five broadening subjects must be selected.

Total: 5

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**3500EEB Associate Diploma of Engineering (Manufacturing)**

Course Structure

Graduates having completed the Advanced Certificate (Manufacturing Engineering) will be able to undertake the Associate Diploma (Manufacturing Engineering) on a full-time or part-time basis.

Core Subjects

They are the same as the Advanced Certificate (Mechanical Engineering).

<table>
<thead>
<tr>
<th>Compulsory Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD039 CAD/CAM Basic</td>
<td>1</td>
</tr>
<tr>
<td>TD041 Robotics</td>
<td>1</td>
</tr>
<tr>
<td>TD040 CAD/CAM Advanced</td>
<td>1</td>
</tr>
<tr>
<td>TD042 Production Planning and Control 1A</td>
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<tr>
<td>TD043 Production Planning and Control 1B</td>
<td>1</td>
</tr>
<tr>
<td>TD044 Production Planning and Control 2A</td>
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</tr>
<tr>
<td>TD045 Production Planning and Control 2B</td>
<td>1</td>
</tr>
</tbody>
</table>

Sub Total: 8

Elective Subjects

Elective subjects must be selected to a value of two units from the following:

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>TD046 Numerical Control 1</td>
<td>1</td>
</tr>
<tr>
<td>TD047 Materials Handling 1</td>
<td>1</td>
</tr>
<tr>
<td>TD048 Jig and Tool Drafting 1</td>
<td>1</td>
</tr>
<tr>
<td>TD049 Fluid Power 1</td>
<td>1</td>
</tr>
<tr>
<td>TD050 Fluid Power 2</td>
<td>1</td>
</tr>
<tr>
<td>TD051 Fluid Power 2</td>
<td>1</td>
</tr>
</tbody>
</table>

Sub Total: 4

Broadening Subjects

Six broadening subjects must be selected.

Total: 6

---

**3300EEN Advanced Certificate in Manufacturing Engineering**

Course Structure

The core subjects are the same as the Advanced Certificate (Mechanical Engineering) and may be studied on a full-time or part-time basis.

<table>
<thead>
<tr>
<th>Compulsory Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD039 CAD/CAM Basic</td>
<td>1</td>
</tr>
<tr>
<td>TD041 Robotics</td>
<td>1</td>
</tr>
<tr>
<td>TD043 CAD/CAM Advanced</td>
<td>2</td>
</tr>
</tbody>
</table>

Sub Total: 4

Elective Subjects

Elective subjects must be selected to the value of two units from the following:

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD046 Numerical Control 1</td>
<td>2</td>
</tr>
<tr>
<td>TD047 Materials Handling 1</td>
<td>2</td>
</tr>
<tr>
<td>TD048 Jig and Tool Drafting 1</td>
<td>1</td>
</tr>
<tr>
<td>TD049 Fluid Power 1</td>
<td>1</td>
</tr>
<tr>
<td>TD050 Fluid Power 2</td>
<td>1</td>
</tr>
</tbody>
</table>

Sub Total: 2

Total: 24

---

**4200EFE Post-apprentice Course in Toolmaking**

Career potential

Students who have already completed an apprenticeship course will develop a higher level of ability in the theoretical and practical side of die making and developmental work which will enable them to enter more highly skilled and lucrative positions such as foreman/forewoman and leading hands in a very wide variety of manufacturing industries.

Prerequisites

Satisfactory completion of a Fitting and Turning apprenticeship course.

Course structure

The course is of three years duration and available both day and evening, i.e. one half-day or two evenings per week.

1st stage

Fitting and Turning course.

2nd stage

Press-toolmaking Theory 1

3rd stage

Press-toolmaking Pract. 1
### 4200EPA Proficiency Welding Course (Endorsement to Certificate in Basic Welding)

**Objectives**
- (a) To qualify personnel for the welding industry where a high degree of welding skill is required, but where Statutory Certification is not necessary.
- (b) To provide instruction for progression to Statutory Certification for suitably qualified personnel.

**Course content**
- The course is stated as training objectives based on the Systems Approach to Training.
- The course consists of six modules. Modules 13 to 16 are practice and modules 17 and 18 are theory.
- The nominal duration of the course is 1 x 120 hour semester.

**Entry level**
- (a) The successful completion of the TAFE Intermediate Welding course;
- (b) An equivalent qualification as determined by each TAFE provider.

**Course structure**

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 13</td>
<td>Horizontal fillet multi pass hydrogen controlled electrodes</td>
</tr>
<tr>
<td>Module 14</td>
<td>Vertical fillet multi pass hydrogen controlled electrodes</td>
</tr>
<tr>
<td>Module 15</td>
<td>Vertical fillet multi pass hydrogen controlled electrodes</td>
</tr>
<tr>
<td>Module 16</td>
<td>Pipe butt axis vertical</td>
</tr>
<tr>
<td>Module 17</td>
<td>Horizontal butt aluminium</td>
</tr>
<tr>
<td>Module 18</td>
<td>Additional Theory</td>
</tr>
<tr>
<td>Module 19</td>
<td>Welding economics and costing — Cast iron types — weldability</td>
</tr>
<tr>
<td>Module 20</td>
<td>Heat Treatment</td>
</tr>
<tr>
<td>Module 21</td>
<td>Mechanical properties of materials.</td>
</tr>
</tbody>
</table>

### 4200EPA Intermediate Welding Course (Endorsement to Certificate in Basic Welding)

**Objectives**
- (a) To qualify personnel for the welding industry where an intermediate welding skill only is required.
- (b) To provide instruction for progression to the TAFE Proficiency Welding Course.

**Course content**
- The course is stated in training objectives based on the Systems Approach to training.
- The course consists of six modules. Modules 7 to 10 are practice and modules 11 and 12 are theory.
- The nominal duration of the course is 2 x 120 hour semesters.

**Entry level**
- (a) The successful completion of the TAFE Basic Welding Certificate Course; or
- (b) An equivalent qualification as determined by each TAFE provider.

**Course structure**

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>Manual Metal Arc Welding</td>
</tr>
<tr>
<td>Module 2</td>
<td>Gas metal Arc Welding</td>
</tr>
<tr>
<td>Module 3</td>
<td>Flame Cutting and Gouging</td>
</tr>
<tr>
<td>Module 4</td>
<td>Flame Gas Welding</td>
</tr>
<tr>
<td>Module 5</td>
<td>Practice Associated Theory</td>
</tr>
<tr>
<td>Module 6</td>
<td>Additional Theory</td>
</tr>
<tr>
<td>Module 7</td>
<td>Basic Welding Exam</td>
</tr>
</tbody>
</table>

### Welding courses

**3222EPA Certificate in Basic Welding**

**Objectives**
- (a) To qualify people for the welding industry where a basic welding skill only is required.
- (b) To provide basic instruction for progression to the TAFE Intermediate Welding Certificate Course.

**Course content**
- The course consists of six modules. Modules 1 to 4 are practice and modules 5 and 6 are theory.
- The nominal duration of the course is 2 x 120 hour semesters.

**Entry level**
- To obtain entry to this course the student must not be less than fifteen years of age on the first day of the course.
- The student must also have basic written and oral English.

**Course structure**

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
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<tr>
<td>Module 6</td>
<td>Additional Theory</td>
</tr>
</tbody>
</table>

### Hobby courses

**Engineering Workshop Practice**
- This is an evening hobby course in basic machine shop practice for the enthusiast. It provides the opportunity to acquire sufficient skill to undertake simple design and manufacture of projects.

**Hobby Welding**
- An elementary welding course designed to meet the needs of hobby welding enthusiasts. It provides the opportunity to acquire sufficient skill to proceed from simple household repairs to the design and manufacture of projects.

Further information: 819 8504
Fitting and Turning (Apprentices)

Level 1 Core Units

TFC01F Unit 1/1

TFC02F Unit 1/2

TFC03F Unit 1/3
Lathe work. Face, centre drill, parallel turn. Operating the lathe. Storing equipment.

TFC04F Unit 1/4

TFC05F Unit 1/5

TFC06F Unit 1/6
Portable power tools.

TFC07F Unit 1/7
Basic metals used in engineering. Properties and uses. Manufacturing processes.

TFC08F Unit 1/8
Vertical bandsaw operations. Routine maintenance of equipment. Safety when operating bandsaw.

Level 2 Core Units

TFC09F Unit 2/3

TFC10F Unit 2/4
Tapping. Drilling and reaming using jigs.

TFC11F Unit 2/5

TFC12F Unit 2/7
Alloying elements in steel. Metal testing and testing machine. Application of metals.

TFC13F Unit 2/9
Parallel grinding. Stepped shaft. Inspection.

TFC14F Unit 2/10

TFC15F Unit 2/11

TFC16F Unit 2/12
Tool and cutter grinding. Grinding a square threading tool (external).

TFC17F Unit 2/13
Introduction to numerical control. Absolute incuemental programming.

TFC18F Unit 2/14

TFC19F Unit 2/15
Consolidation test. External theory and practical examination.

Level 3 Electives

Stream A — Advance Machining

TFA01F Unit A1

TFA02F Unit A2
Precision measurement. Define system of measurement and standards of accuracy. Define the relationship between tolerance, surface finish and machining process. Define sources of error and workshop measurement. State difference between direct, comparative and gauge measurement.

TFA03F Unit A3

TFA04F Unit A4

TFA05F Unit A5

TFA06F Unit A6

TFA07F Unit A7

TFA08F Unit A8

TFA09F Unit A9

Level 3 Electives

Stream B — Composite FMA

TFJ01F Unit 1 Fundamentals of Fluid Power Systems

Cont 1 diagrams, comparison of mediums, applications, definitions, safety precautions, power packs, air 

TFJ02F Unit 2 Pneumatic Systems

Compressor types and application. Air receivers. Air service units, air dryers, air supply, working elements, valves, circuit diagrams, pressure gauges, construction of pneumatic circuits, basic electrical control.

TFJ03F Unit 3 Hydraulic Systems

Basic principles, reservoirs, filters, pumps, hydraulic fluids, cylinders, valves, speed control, motors, accumulators, construction of hydraulic circuits — theory and practical, graphic symbols.

TFJ04F Unit 4 General and Maintenance Fitting

Machine guards, fasteners, glues, crack detection, fault finding, reconditioning equipment, feather keyway, stud removal.

TFJ05F Unit 5 Power Transmission

Belt drives, chain drives, gear drives, shaft couplings, clutches, brakes, mechanical appreciation, lubrication.

TFJ06F Unit 6 Maintenance Machining

Limits and fits, pump shaft, vee pulley, cylindrical grinding, surface grinding.

TFJ07F Unit 7 Precision Measurement

Measurement systems, tolerances — surface finish, sources of error, direct and comparative measurement.
Level 3 Electives
Stream N — Numerical Control

TFT01F Unit T1

TFT02F Unit T2

TFT03F Unit T3
- Mechanical indicators and electronic length measuring systems.

TFT04F Unit T4

TFT05F Unit T5

TFT06F Unit T6

TFT07F Unit T7

TFT08F Unit T8
- Test for straightness and squareness. Master squares and engineer's squares. Types and uses for straight edges. How to test for squareness and straightness.

TFT09F Unit T9
- Optical projectors. Principles of operation.

TFT10F Unit T10

TFT11F Unit T11

TFT12F Unit T12

TFT13F Unit T13

TFT14F Unit T14

TFT15F Unit T15

TFT01F M1 General & Maintenance Fitting
TFT02F M2 Power Transmissions
TFT03F M3 Maintenance Welding
TFT04F M4 Maintenance Machining
TFT05F M5 Maintenance, Measuring, Testing, Report
TFT06F M6 Machine Installation
TFT07F M7 Maintenance Machining Extension
TFT08F Fluid Power Fitting
TFT09F Press Toolmaking Theory 1
TFT10F Press Toolmaking Practice 1

TFT01F/12F Theory/Practice
- Press tool operations; description of blanking, piercing, bending, forming and coining.
- Principles of blanking and/or piercing.
- Press setting for tool trials.
- Elementary single operation piece and blanking dies; basic construction.
- Progressive piercing and blanking dies.
- Punch types and punch holding methods.
- Die types; one piece; section.
- Methods of assembling punch and die for alignment.
- Interpretation of tolerance symbols and surface texture requirements.
- Use of templates and solder.
- Form milling methods and use of rotary dividing equipment.
- Punch shaper “Shearing in” methods.
- Bandsaw and fillet machine.
- Form grinding.
- Calculations associated with the above topics.
- Copy milling and pantographing for 2 and 3 dimensional work.
- Press tool materials.
TF195  Organisation and Management for Quality A
TF196  Organisation and Management for Quality B

Introduction to the concept of quality control as a system. Quality control systems Standards AS1057, AS1821-3, AS2000; quality manuals, policy and planning, standardisation, specification, quality of design, conformance and performance, laboratory management, quality review and audit.

TF197  Statistical Quality Control 1

Application of principles of basic to simple quality control, production control of 20 1301 article systems, sampling inspection, operating characteristic curves, inspection levels and severity.

TF253  Computer Appreciation and Applications to Quality Control

This subject provides an appreciation of the range of uses and concepts of computer, BASIC, FORTRAN and COBOL programming, microprocessors, computer graphics, use of computer packages in quality control.

TF297  Quality Control Systems

The economic aspects of production quality and quality control relating to timing in application of reliability methods and the reporting of results.

TF317  Dimensional Metrology

Precision measurement, length, diameter, thickness, surface texture, flatness, straightness, parallelism, perpendicularity, roundness, squaring, and co-ordinate measurement.

TF383  Material Cutting Technology

A theoretical approach to aspects of cutting economics, chip control, turning — tool wear, cutting efficiency and economics, chatter, milling — lead angles, cutter diameter and number of teeth, power requirements, vibration and surface finish, drilling — performance comparison, laser drills.

TF385  Training Techniques

Introduction to training aids, methods and presentation examining questioning techniques, training situations and the evaluation of training.

TF462  Reliability and Prototype Testing

Introduces the concepts and techniques of reliability and looks at the application of basic reliability analysis techniques to technical, administrative and managerial areas of quality control. Also covers aspects relating to timing in application of reliability methods and the reporting of results.

TF463  Quality Costs and Budgeting

The economic aspects of production quality and quality control systems. Collection and analysis of quality cost data, quality cost indices, quality improvement and cost reduction, budgeting processes, planning and operating the budget.

TF464  Product Liability and Product Recall Management

Provides a general appreciation of the legal responsibilities associated with quality control and methods adopted to meet these responsibilities, current legislation, protection procedures, Australian design rules and standards recall process, documentation systems.

TF465  Quality Control Systems and their Assessment

The concepts and techniques of quality system audit, calibration system, software quality control, quality control, customer satisfaction, customer relationship, customer feedback, quality control audit, AS2000, quality control system and product audits.

TF467  Human Factors

A study of the relationship between human factors and quality control. Ergonomics, motivation programs, job design and job, quality, planning for people.

TF485  Hydraulics and Pneumatics

There are three main areas covered in these units: (i) terminology and graphic symbols, (ii) transmission mediums, and (iii) operating principles.
TD026  Applied Mechanics 2A
The application of principles of mechanics to multi-element systems; analysis of positive and non-positive drive systems.

TD027  Applied Mechanics 2B
Revision and extension of the principles of mechanics and the application of appropriate codes to the selection and design of machine elements; in particular those allied to power transmission.

TD028  Applied Mechanics 3A
The study of machine frames, mechanisms, balancing reciprocating masses, rotational speed variation and control, pressure vessels, strain gauges.

TD029  Applied Mechanics 3B
The study of machine frames, mechanisms, balancing reciprocating masses, rotational speed variation and control, pressure vessels, strain gauges.

TD030  Applied Mechanics — Final Project
This project is aimed at ensuring that all students have achieved the skills, knowledge and levels of understanding required to function as a TQ or Eng. Assistant.

TD031  Mechanical Design and Drafting 1A
Drafting practices extend use of bearings, their lubrication and application, belt and chain drives, gears and clutches, function design of mechanical components in assemblies.

TD032  Mechanical Design and Drafting 1B
Layout of steelwork drawings; connection methods; functional design of supports, guards, frames for mechanical equipment, platforms, ladders; corrosion protection.

TD033  Mechanical Design and Drafting 1C
Development of the drafting skills and knowledge of equipment required for the process plant and piping industry.

TD034  Mechanical Design 2A
The application of the fundamentals of engineering principles and applied mechanics to the analysis of design problems and machine elements.

TD035  Mechanical Design 2B
The application of the fundamentals of engineering principles and applied mechanics in the design of steel structures in accordance with the relevant Australian standards.

TD036  Mechanical Design 3A
Revision and extension of the principles of mechanics and the application of appropriate codes to the selection and design of machine elements.

TD037  Mechanical Design 3B
Further analytical design and selection of multi-element systems, manufacturing methods and design costing.

TD039  CAD/CAM Basic
Topics include: introduction to automation, the computer, the role of the computer in manufacturing, numerical control.

TD040  CAD/CAM Advanced
Extension of the topics in CAD/CAM basic in more depth and detail.

TD041  Robotics
Includes the following components related to industrial robotics: description, definitions, safety of operation, work layouts, tooling and end effectors, installation/costs, understanding of the robots’ actuators and various types of programming.

TD042  Production Planning and Control 1A
The terminology, nature and purpose of production control. The organisation of production control and the functions within the production and inventory control.

TD043  Production Planning and Control 1B
Production control procedures, work estimating, manufacturing authority and master scheduling preparation together with material control.

TD044  Production Planning and Control 2A
The production function and its relationship with organisational policies. Budgeting and control, capacity analysis, planning techniques and inventory control.

TD045  Production Planning and Control 2B
Production layouts, materials handling systems for factory situations, Computer applications in production, Group technology.

TD046  Materials Handling 1A

TD047  Materials Handling 1B
Legal handling and storage requirement. Storage technology and costs. Mobile road handling, load measuring and power drives in handling.

TD048  Metrology 1A
Introduction to fine measuring instruments and gauges. The identification of errors in fine measurement.

TD049  Metrology 1B
The fine measurement of lengths and angles. The testing of straightness, flatness, squareness and surface texture. The use of optical projection.

TD050  Fluid Power and Applications
The principles of pneumatics. Components, symbols, control methods and application. The design of circuits and an introduction to electrostatic control methods.

TD051  Fluid Power and Applications
The principles of hydraulics. Components, symbols, control materials and applications. The design of circuits using calculations for component sizing and selection.

TD052  Jig and Tool Drafting 1A
Planning techniques. The principles of jig and fixture design. The design of a drill jig and drawing to Australian Standards.

TD053  Jig and Tool Drafting 1B
The elements of milling and turning fixtures. The design of a milling fixture and turning fixture and drawing to Australian Standards.

TD055  Numerical Control 1
Introduction to numerical control. The planning procedure, preparation and writing of manual part programs for a CNC lathe and machining centre.

TD056  Numerical Control 2
Introduction to computer assisted programming. Geometry and motion statements, post processor statements and operation system manipulation.

TD058  Thermodynamics A
Theory and applications related to generation and use of steam, heat transfer, selection of air compressors and internal combustion engines, combustion of fuels.

TD059  Thermodynamics B
Study of basic thermodynamic properties, the relationship of perfect gases, thermodynamic cycles and steam plant.

Boiler Making

TF601  Module 1
Introduction to the trade, lifting and lowering by hand, stacking of materials correctly, identification and use of electrical switches, selection and method of slinging, crane hand signals.

TF602  Module 2
Calculation of circumferences and diameters of circles, marking out constructions, identification and use of fire extinguishers, oxygen/ethylene welding and cutting. Safety precautions for confined spaces, hazardous locations and containers.

TF603  Module 3
Identification of rolled steel sections, proper use of hand tools. Hand straightening and levelling, press straightening, shearing, cropping and punching. Use of power hacksaw, drilling, sharpening hand tools and drills.

TF604  Module 4
Flame-cutting, bevelling and piercing by hand, flame-cutting various sections and welding preparations. Straight line flame-cutting machine, profile flame-cutting machine, flame-cutting processes, machines and applications.
**TW005 Module 5 (Practice Associated Theory)**

**TW006 Module 6 (Additional Theory)**

**Intermediate Welding Modules**

**TW007 Module 7 (Manual Metal Arc Welding)**
Pad, fillet and butt welding in various positions with various types of electrodes.

**TW008 Module 8 (Gas Metal Arc Welding/Flux Cored Arc Welding)**
Vertical fillet (FCAW) pipe butt-horizontal fillet (GMAW) stainless steel flat butt (GMAW).

**TW009 Module 9 (Gas Tungsten Arc Welding)**
Various butt welds in steel. Fillet butt weld in Aluminum.

**TW010 Module 10 (Cutting Processes)**
Plasma cutting. Flame pipe beveling by machine. Mechanical beveling.

**TW011 Module 11 (Prac Associated Theory)**

**TW012 Module 12 (Additional Theory)**
Alloying. Pure iron and steel. Pre-heating, weldability and characteristics of Stainless Steel. Aluminum. Copper and Copper alloys.

**TW026 Module 26 (Intermediate Welding Exam)**
This test is to be taken after the successful completion of Modules 7 to 12 inclusive.

- **Theory** 90 minutes
- **Practice** 4 hours

**Proficiency Welding Course**

**TW013 Module 13 (Manual Metal Arc Welding)**
Fillet and butt welds with Hydrogen controlled electrodes. Vertical fillet - Chrome, Nickel, Steel.

**TW014 Module 14 (Submerged Arc Welding)**
Flat fillet. Flat butt.

**TW015 Module 15 (Gas Metal Arc Welding/Flux Cored Arc Welding)**
Vertical fillet Aluminum (GMAW). Horizontal butt (FCAW). Rolled section to plate (GMAW).

**TW016 Module 16 (Gas Tungsten Arc Welding)**
Horizontal fillet Aluminum. Pipe butt. Ax vertical.

**TW017 Module 17 (Practice Associated Theory)**

**TW018 Module 18 (Additional Theory)**
Welding economics and costing. Cast iron - types, characteristics, weldability. Heat treatment - applications, temperature measuring devices. Mechanical properties.

**TW025 Module 25 (Basic Welding Exam)**
This test is to be taken after successful completion of Modules 1 to 6 inclusive.

- **Theory** 100 minutes
- **Practice** 4 hours

**Centre for Engineering Technology:**
Authorised AutoCAD Training Centre

**Manager**
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**Academic Staff**
G. Oliver (Course Co-ordinator)
H. Ramaekers
P. Stroud

**Technical Officer**
S. Fisher

The Centre for Engineering Technology was established in 1986. Its aim is to integrate the specialist disciplines within the Engineering Division and to use these cumulative skills to assess and service the high technology needs of industry.

This service to industry involves:
- **Training**
- **Consultative interaction**
- **Research and development projects**
- **Prototype development**

Current offerings in short courses are:
- **CAD Skills**
- **Introductory course. No experience necessary.**
- **Advanced CAD**
- **Digitising, attributes, isometrics and 3D drafting.**
- **CAD Programming**
- **Shapes, hatch patterns, tablet menus, autoLISP.**
- **Manufacturing with AutoCAD**
- A CAD and CAM course using AutoCAD and CAMPAC for transferring drawings to NC machine tools.
- **Electronic Design**
- **Prototype development**
- **Numerical Control**
- **Use of NC machines.**
- **Robotics**
- **The use and safety of robots.**
- **Technical Publishing**
- Using AutoCAD and Pagemaker for personnel who must produce technical pamphlets, brochures, etc.
- **Animation**
- This new program is used to produce moving displays on the computer screen for high quality presentation work for sales, meeting, etc.

The Centre is also in the process of developing short courses in the area of CAE and CIM.

**CAMPAC**
CAMPAC is a proven CAD/CAM software package used in Australian manufacturing industries for producing components from AutoCAD drawings.

It is a CAM package which combines cutter path generation, program editing and communications all accessed from inside AutoCAD. The package was designed at the Centre to allow the operator to follow a sequence of simple, logical steps, to quickly produce the CNC machine driving instructions.

CAMPAC is a commercially available package.

For further information contact the Secretary on 819 8079.
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National Scientific Instrumentation Training Centre

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Swinburne ELICOS Centre

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Secretary
H. Heathcock, 819 8567
Courses offered

Access Education Department

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<th>Code</th>
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<tr>
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<td>Volunteer Tutor Training</td>
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<tr>
<td>4290LVP</td>
<td>Vocational Preparation Program</td>
</tr>
<tr>
<td>2100LDO</td>
<td>Basic Studies Program</td>
</tr>
<tr>
<td>2100LZE</td>
<td>Vocationally-Oriented Evening Classes</td>
</tr>
<tr>
<td>2100LZI</td>
<td>Transition Program</td>
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</tbody>
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Industrial Sciences Department

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<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>3500ABB</td>
<td>Associate Diploma of Applied Science (Laboratory Technology)</td>
</tr>
<tr>
<td>3500AHB</td>
<td>Associate Diploma of Applied Science (Fire Technology)</td>
</tr>
<tr>
<td>3500AVD</td>
<td>Associate Diploma of Applied Science (Computer &amp; Applied Physics)</td>
</tr>
<tr>
<td>3300ABB</td>
<td>Advanced Certificate of Laboratory Technology</td>
</tr>
<tr>
<td>2200AZY</td>
<td>Advanced Certificate of Fire Technology (pending approval)</td>
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General and Community Studies Department

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<tr>
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<tbody>
<tr>
<td>2200LZA</td>
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<td>VCE(HSC)</td>
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<td>2200NB2F</td>
<td>Arts Preparatory Program</td>
</tr>
<tr>
<td>2100LZD</td>
<td>Migrant English Access</td>
</tr>
<tr>
<td>3100MCB</td>
<td>Home Caregivers Training Course</td>
</tr>
<tr>
<td>3222KFA</td>
<td>Child Care Assistant Certificate</td>
</tr>
<tr>
<td>3500MDA</td>
<td>Associate Diploma of Social Science (Community Care) (pending approval)</td>
</tr>
</tbody>
</table>

National Scientific Instrumentation Training Centre

For details see page 30.

Course details

Access Education Department

4290LDJ Volunteer Tutor Training

Two courses of training are offered. One prepares volunteers to work on a one-to-one basis with adult students who need individual tuition in the basics of reading, writing and spelling. The second prepares volunteers to tutor mildly intellectually disabled adults in life-coping skills.

TR100 Basic Literacy
TR106 Life Skills

4290LVP Vocational Preparation Program

This short course is for mature age students who wish to sit an examination to enter their chosen field in nursing, fire brigade, or the police force.

2100LDO Basic Studies Program

TR101 English Workshop
TR102 Mathematics Workshop
TR103 Spelling Workshop
TR107 Volunteer Tutor Program (Adult Literacy)
TR145 English Written Communication Skills
TR150 Basic Mathematics for Women

2100LZE Vocationally-Oriented Evening Classes

The course provides practical subjects for mildly intellectually disabled adults in the evening.

Subjects offered are:
TR120F Carpentry
TR121F Literacy/Numeracy

2100LZT Transition Program

Students attend for five days per week. The program encourages mildly intellectually disabled adults to develop their practical skills and to improve their levels of literacy, communication and independence, as well as offering practical work experience.

Subjects offered are:
TR110 Building
TR112 Electrical
TR113 Fitting and Machining
TR114 Home Economics
TR115 Literacy/Numeracy
TR117 Introduction to Computer
TR118 Work Education
TR119 Horticulture

Industrial Sciences Department

3500ABB Associate Diploma of Applied Science — Laboratory Technology

Career potential

The Associate Diploma of Applied Science in Laboratory Technology provides specialised education and training for scientific laboratory technical support staff. It is an award that qualifies a person to work in a scientific laboratory at a senior level. The course includes a wide range of skills, techniques and processes, to ensure that graduates develop a flexible approach, are adaptable and are capable of meeting the technological and administrative demands made of them in a changing workforce.

Graduates of this course are eligible for entry into degree courses in Applied Science and, in some cases, may be granted exemptions.

Entry requirements

Normal entry is satisfactory completion of Year 12 (VCE) or its equivalent. Students without science subjects at Year 12 level, will be required to undertake bridging subjects.

Mature-age students without relevant laboratory experience will only be considered for the Advanced Certificate in Laboratory Technology. Students who have completed the Advanced Certificate in Laboratory Technology are eligible to transfer to the Associate Diploma with full credits.

Modes of study

Students will be able to complete the Associate Diploma in the following ways:

Part-time: Generally four years of part-time study, comprising one afternoon and two evenings, per week for eight semesters.

Full-time: Generally one year of full-time study followed by two years of part-time study. The Associate Diploma cannot be completed by full-time study alone.

A further requirement is that all students must complete a minimum of two years’ full-time relevant industrial/work experience, of which the majority must be concurrent with enrolment, prior to the award of the Associate Diploma.
Course structure

Stage 1
- TH133 Communication Skills 1
- TH134 Communication Skills 2
- TL001 Biology Laboratory Techniques
- TL002 Chemistry Laboratory Techniques
- TL003 Physics Laboratory Techniques
- TL144 Quality Control Statistics
- TL312 Laboratory Management
- TL327 Laboratory Computing
- TL347 Occupational Hygiene
- TL470 Work Project
- TL180 Practical Placement

Stage 2
Following Stage 1, all students must complete eight Stage 2 units in order to be eligible to be awarded the Associate Diploma of Applied Science in Laboratory Technology.

Stream 1
Appropriate for industry, analytical chemistry and instrumentation laboratories.
- TL201 Chemistry Practices 3
- TL202 Chemistry Practices 4
PLUS at least 2 by two-unit sequences from:
- TL309 Electron Microscopy 1
- TL310 Electron Microscopy 2
- TL390 Chromatographic Analysis 1
- TL391 Chromatographic Analysis 2
- TL455 Electrochemical Analysis 1
- TL466 Electrochemical Analysis 2
- TL490 Spectrophotometric Analysis 1
- TL491 Spectrophotometric Analysis 2
PLUS two elective units.

Stream 2
Appropriate for educational institutions and museum laboratories.
- TL201 Chemistry Practices 3
- TL202 Chemistry Practices 4
PLUS at least one by two-unit sequence from:
- TL210 Laboratory Workshop Practices 1
- TL211 Laboratory Workshop Practices 2
- TL203 Physics Practices 3
- TL411 Computer Programming
PLUS at least one by two-unit sequence from those listed under stream 1 or 3 requirements.
PLUS two elective units.

Stream 3
Appropriate for biological laboratories.
At least one by two-unit sequence from:
- TL256 Mammalian Anatomy and Physiology 1
- TL257 Mammalian Anatomy and Physiology 2
- TL301 Biochemistry 1
- TL302 Biochemistry 2
- TL320 Invertebrate Zoology
- TL448 Vertebrate Zoology
- TL460 Microbiology 1
- TL461 Microbiology 2
PLUS at least one by four-unit sequence from:
- TL256 Mammalian Anatomy and Physiology 1
- TL257 Mammalian Anatomy and Physiology 2
- TL301 Biochemistry 1
- TL302 Biochemistry 2
- TL401 DNA Technology
- TL402 Immunological Techniques
- TL460 Microbiology 1
- TL461 Microbiology 2
- TL462 Microbiology 3
- TL463 Microbiology 4
PLUS two elective units.

(The four-unit sequence may not include subjects from the two-unit sequence);
PLUS two elective units.

Electives
Electives may be chosen in the following ways:
(i) Units from the other specialist streams in the Associate Diploma of Applied Science in Laboratory Technology;
(ii) Units from the other Associate Diplomas.

3500AHB Associate Diploma of Applied Science — Fire Technology

Career potential
This course has been designed to enable the development (or enhancement for those already in the industry) of knowledge and skills appropriate to paraprofessionals in the Fire Industry. The general areas covered include risk management, design, building protection, rural fire protection, communication systems, environmental safety and management.

The course would appeal to those currently employed, or intending to seek employment, in any of the following fields: fire fighting, fire safety, detection and suppression systems design, occupational health and safety, insurance or building surveying.

Entry requirements
Normal entry is satisfactory completion of Year 12 (VCE), or its equivalent, with passes in Chemistry and Mathematics.

However, mature-age students having relevant industrial experience will be favourably considered for selection. Such students without the Year 12 requirements will be expected to undertake bridging subjects.

Modes of study
Units may be available in one or more of the three modes outlined below:
1. Classes scheduled weekly — either 2 or 3 hours per week (depending upon the unit);
2. Block-mode — classes held one day per weekend over 5 weeks;
3. Flexi-mode — off-campus study with occasional seminars on weekends.

Please note: The subject details assume Mode 1 only. Enquiries concerning units available in Modes 2 & 3 should be made to the course co-ordinator on telephone 819 8378.

Course structure
Students are required to complete a total of 26 semester units, consisting of 14 core (compulsory) units, and 12 elective units selected from the 28 specialist units available. The specialist units have been grouped into packages of 4 units (refer below) and students are required to select 2 packages of 4 units and 4 other units from the remaining units available.

Core units
- TH133 Communication Skills 1
- TT100 Fire Mechanics 1
- TT101 Fire Mechanics 2
- TT110 Building Structures 1
- TT120 Fire Chemistry
- TT140 Information Technology
- TT160 Personnel Emergency Treatment
- TT210 Building Structures 2
- TT211 Detection Systems
- TT212 Suppression Systems
- TT213 Fire Safety Management 1
- TT220 Principles of Fire Behaviour
- TT221 Fire Fighting Equipment & its Application
- TS226 Middlemanagement Practices 1
- TL180 Practical Placement

Modes of study
Units may be available in one or more of the three modes outlined below:
1. Classes scheduled weekly — either 2 or 3 hours per week (depending upon the unit);
2. Block-mode — classes held one day per weekend over 5 weeks;
3. Flexi-mode — off-campus study with occasional seminars on weekends.

Please note: The subject details assume Mode 1 only. Enquiries concerning units available in Modes 2 & 3 should be made to the course co-ordinator on telephone 819 8378.

Course structure
Students are required to complete a total of 26 semester units, consisting of 14 core (compulsory) units, and 12 elective units selected from the 28 specialist units available. The specialist units have been grouped into packages of 4 units (refer below) and students are required to select 2 packages of 4 units and 4 other units from the remaining units available.

Core units
- TH133 Communication Skills 1
- TT100 Fire Mechanics 1
- TT101 Fire Mechanics 2
- TT110 Building Structures 1
- TT120 Fire Chemistry
- TT140 Information Technology
- TT160 Personnel Emergency Treatment
- TT210 Building Structures 2
- TT211 Detection Systems
- TT212 Suppression Systems
- TT213 Fire Safety Management 1
- TT220 Principles of Fire Behaviour
- TT221 Fire Fighting Equipment & its Application
- TS226 Middlemanagement Practices 1
- TL180 Practical Placement

The four-unit sequence may not include subjects from the two-unit sequence);
PLUS two elective units.

Electives
Electives may be chosen in the following ways:
(i) Units from the other specialist streams in the Associate Diploma of Applied Science in Laboratory Technology;
(ii) Units from the other Associate Diplomas.
Specialist units

Design
- TT301 Detection Systems Design
- TT302 Suppression Systems Design 1
- TT402 Suppression Systems Design 2
- TT403 Suppression Systems Design 3

Communication systems
- TT310 Introduction to Communications Technology
- TT311 Radio Systems
- TT412 Communication Centres

Risk management
- TT320 Fire Investigation
- TT321 Fire Safety Management 2
- TT322 Hazard Management
- TT323 Material Science 1

Buildings
- TT330 Building Structures 3
- TT331 Material Science 2
- TT332 Building Services 1
- TT333 Building Services 2

Management
- TH134 Communication Skills (Management)
- TS326 Middle-management Practices 2
- TT351 Fire Law 1
- TT451 Fire Law 2

Rural
- TT360 Rural Fire Behaviour
- TT361 Agricultural & Forestry Practices in Fire Management
- TT460 Rural Fire Prevention
- TT461 Rural Fire Suppression

Environmental Safety
- TT370 Environmental Safety 1
- TT371 Special Hazards
- TT372 Occupational Hygiene Measurement
- TT470 Environmental Safety 2

The course may be completed in the following ways:
- 2 years full-time;
- 4 years part-time — approximately 6 hours per week;
- a combination of full-time and part-time study.

Admission requirements
Applicants need to have attempted Year 12 with mathematics and physics subjects. Mature-age applicants without Year 12 will also be considered.

Course duration and mode of study
The course is currently offered only on a full-time basis over 2 years.

Further study
On completion, students are eligible to apply for entry into the second year of some related degree courses.

Course structure

Semester 1
- TC101F Physics 1
- TC111F Mathematics 1
- TT140 Information Technology
- TC121F Electronics
- TH133 Communication Skills 1
- TC141 Laboratory Techniques 1
- TL210 Laboratory Workshop Practices 1

Semester 2
- TC201F Physics 2
- TC111F Mathematics 1
- TC211F Structured Programming 1
- TC121F Electronics
- TH134 Communication Skills 2
- TS725 Introduction to Sales and Marketing
- TS726 Consumer Sales and Marketing

Semester 3
- TC202F Physics 2
- TC212F Mathematics 2
- TC222 Structured Programming 2
- TC271 Computer Technology 1
- TC240 Digital Imaging and Photography
- TC242 Laboratory Techniques 2
- TC291 Language and Culture
- TT160 Personnel Emergency Treatment

Semester 4
- TC203F Physics 2
- TC211F Mathematics 2
- TC223 Structured Programming 3
- TC272 Computer Technology 2
- TC292 Language and Logic
- TS107 Accounting for Managers
- TC230 Project

3500AYD Associate Diploma of Applied Science — Computing and Applied Physics

Career potential
Graduates of the Associate Diploma of Applied Science in Computing and Applied Physics will be well suited to work as technical officers in scientific instrumentation and computing. Employment opportunities can be found in the installation and servicing of technical equipment, sales and service, and in-house training programs.

Course emphasis
The course covers:

a) Fundamental principles in:
   - computer science;
   - physics;
   - mathematics;
   - electronics;
   - communication skills;
   - language and logic;
   - business management.

b) High technology applications in:
   - scientific instrumentation;
   - sensory instrumentation;
   - control systems.

3300ABB Advanced Certificate of Laboratory Technology

Career potential
The Advanced Certificate in Laboratory Technology provides appropriate education and training for scientific laboratory technical support staff. It is an award that qualifies a person to work in a scientific laboratory at a junior level.

Entry requirements
Normal entry is satisfactory completion of Year 11, preferably with passes in Mathematics and Science subjects. Mature-age students without Year 11, but who have relevant work experience, will be favourably considered for selection.

Modes of study
Students will be able to complete the Advanced Certificate in the following ways:

Part-time: Generally four years of part-time study comprising either one afternoon and one evening, or two afternoons or two evenings per week for eight semesters.

Full-time: Generally one year of full-time study followed by two years of part-time study. It is not possible to complete the Advanced Certificate entirely by full-time study.
A further requirement is that all students must complete a minimum of six months equivalent full-time relevant industrial work experience, concurrently with their enrolment, prior to the award of the Advanced Certificate.

**Course structure**

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<td>TH133</td>
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<td>TL102</td>
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<td>TL130</td>
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<td>TL143</td>
<td>Laboratory Computations</td>
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**Stage 2**

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<tbody>
<tr>
<td>TH134</td>
<td>Communication Skills 2</td>
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<td>TL347</td>
</tr>
<tr>
<td>TL470</td>
<td>Work Project</td>
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</tbody>
</table>

**Electives**

In order to provide the most flexible and vocationally specific programs, the Advanced Certificate in Laboratory Technology includes a number of elective units. These should be chosen to ensure greatest relevance to the intended vocation of the student.

Electives may be chosen in the following ways:

(i) Units from the list of Electives set out below;
(ii) Units from other Advanced Certificates or Associate Diplomas;
(iii) Units from the specialist streams in the Associate Diploma of Applied Science in Laboratory Technology.

**Elective units**

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<td>TL225</td>
<td>Specimen Preservation 1</td>
<td>TL226</td>
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<td>TL227</td>
<td>Modelling of Biological Specimens</td>
<td>TL228</td>
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<td>TL234</td>
<td>Tissue Culture</td>
<td>TL331</td>
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<tr>
<td>TL333</td>
<td>Polymer Science 1</td>
<td>TL334</td>
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<tr>
<td>TL413</td>
<td>Ecology 1</td>
<td>TL414</td>
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<tr>
<td>TL418</td>
<td>Entomology</td>
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<td>TL452</td>
<td>Glassworking</td>
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<tr>
<td>TL480</td>
<td>Scientific Photography</td>
<td>TL483</td>
</tr>
</tbody>
</table>

**2200AZY Bridging Technology**

These single semester units are designed for mature-age students who wish to pursue studies in mathematics, science and technology areas at VCE, TAFE or tertiary levels, but who lack prerequisite subjects.

The Bridging Technology full-year course consists of units selected from:

**Semester 1:** Mathematics
- Physical Science
- Microcomputers
- Laboratory Project
- English Language Skills (or ESL)
- Work in Society

**Semester 2:** Mathematics
- Chemistry
- Physics
- Communication Skills

The semester 1 course provides access to some TAFE courses, otherwise students continue to semester 2. Mid-year entry to this course is available to students with the necessary mathematical background.

Single semester units in mathematics, chemistry and physics are also offered in the evening in both semesters.

The Women's Mathematics/Science Bridging Program is a part-time, single-semester course consisting of 3 x 3-hour classes each week held during school hours, Tuesday to Thursday.

The program offers women with little or no mathematics/chemistry background, an opportunity to begin studies in mathematics and science in a supportive atmosphere which builds self-confidence. It is an appropriate starting point for women who wish to enter tertiary courses in Nursing and other paramedical disciplines, or the Biological and Environmental Sciences. Evening classes are also available.

**General and Community Studies Department**

**2200LZA Victorian Certificate of Education (Tertiary Orientation Program)**

The VCE (Tertiary Orientation Program) at Swinburne is designed to meet the needs of students who intend to proceed to tertiary education, in particular, to the diploma and degree courses offered by the faculties of arts, applied science, business and engineering of Swinburne Institute of Technology.

The program is studied in a tertiary environment. First class educational facilities are available; these include library, audio-visual, computer, student amenities and counselling.

For entry into full-time VCE(TOP) preference is given to applicants who are over 18 years of age and have been away from study for at least 12 months.

**Course structure**

Twenty subjects are offered. Students usually take five subjects and are required to pass a minimum of four including English, to meet tertiary entrance requirements. A wide range of subjects is available for part-time day and evening students.

The business VCE(TOP) course comprises English, Accounting, Economics, General Mathematics and Legal Studies.

The humanities VCE(TOP) covers a range of subjects offered, in different combinations.

The science VCE(TOP) offers courses in:
- Engineering Science
- Biological Science
- Computer Science
- General Science

Before choosing subjects, students, especially part-time, are advised to check the entrance requirements for tertiary courses in which they may be interested.

Various assessment procedures are used. Assessment is regarded as a continuous function and is not based solely on performance in formal examination.
Subjects
VCE English
VCE Mathematics
TH001 Themes in Australian History
TH003 Art in Society
TH011 English Literature
TH020 Introduction to Politics
TH032 Media Studies
TH055 Society, Technology and Change
TH060 English as a Second Language
TH065 Women in Society
TH075 Psychology
TM005 Chemistry
TM028 Computer Studies
TM040 Physics
TS006 Economics
TS005 Legal Studies
TS006 Economics
TS009 Accounting

2200LZB Victorian Certificate of Education (Higher School Certificate)

In 1991 Group 1 VCE(HSC) subjects will be offered from those listed below.

Classes will be held in the evenings and on three mornings, Monday to Thursday, and will generally be of three or four hours duration per week, starting at 6:00p.m. This arrangement is suitable for adult students.

For entry into VCE(HSC) courses, preference is given to applicants who are over 16 years of age and have been away from study for at least 12 months.

Subjects
VCE English
TH1010 Australian History
TH1012 English Literature
TH1013 Human Development and Society
TM0254 Biology
TS002 Accounting
TS002 Economics
TS2003 Legal Studies

Three subjects are offered during the day. Students who are 21 or over can pass three subjects and be eligible for tertiary study. The subjects run mornings only, to allow students time for part-time work or family commitments.

Prerequisites and entrance requirements
The standard qualification for entry is a pass (non-terminal) at Year 11. Applications from early school-leavers and others without the formal qualifications will be considered.

2200BZF Arts Preparatory Program

The Arts Preparatory Program is a 'bridging' program which aims to attract mature-age students from a variety of backgrounds and to prepare students enrolled for subsequent entry into a bachelor of arts degree program at either a university, institute or college of advanced education. In particular, the course is intended for mature-age students who have failed to gain entry into an arts faculty at a tertiary institution, or who are not qualified for entry into a tertiary institution in the area of arts, or who do not have a year twelve qualification or its equivalent.

The course as structured in 1990 places emphasis on Australian studies to provide the content focus for a program which is geared to cater for students enrolling in a range of arts subjects. At present the program consists of four units with the following titles:

TH303 Images of Australia through Film and Television
TH306 Research Skills
TH307 Argument & Analysis
TH308 Australian Writing

Swinburne College of TAFE

The program offers support and training in preparing a range of assessment tasks and helps provide the skills required to undertake tertiary programs for those students who are returning to study.

The program is available in semester one and semester two: full-time enrolment requires one semester study (approximately fifteen weeks), and part-time enrolment can be taken over two semesters.

2100LZD Migrant English

There are programs to prepare students of a non-English speaking background for tertiary study. Day VCE/ESL English classes are offered and there is a summer school in January 1991.

In-course support is offered by some departments. Extra time and specialist ESL teaching is offered when possible, to students enrolled in certificate and associate diploma courses who need help to successfully complete their Communication Skills units.

The Migrant Education Co-ordinator is happy to assist potential students with ESL language and course enquiries.

3100MCB Home Carers Training Course

This course provides basic training for council home help workers. The program is run in conjunction with Hawthorn, Kew, Prahran, Fitzroy and Caulfield City Councils.

3222KFA Child Care Assistant Course

The Child Care Assistant Course is an introductory vocational course designed to help caregivers increase their skills in looking after children 0-6 years. Students will attend once a week for approximately 7 hours for one year. Studies will cover infant and child development, caregiving skills, children’s experiences and communication and life skills.

Intending students should be in paid employment in the child care field for at least fourteen hours or two days a week as supervised assessment is an important component of the course.

The following subjects are studied:

TH311 Infant and Child Development
TH311 Caregiving Skills
TH312 Children’s Experiences
TH313 Communication and Life Skills

Community Information Workers Certificate

This course is offered in conjunction with the Camberwell Community Centre. It is designed to provide training for workers who provide advice, counselling and practical assistance to individuals seeking information relating to community resources.

Subject details
TC101F Physics 1
Kinematics and dynamics, electrostatics and D.C. circuits, motion characteristics of servo motors, fluids, heat and thermodynamics, wave motion and sound, sensors and transducers.

TC111F Mathematics 1
Relations, functions, graphs, differentiation, integration, matrices, complex numbers, probability and statistical methods.

TC121F Electronics
Number systems, logic circuits, Boolean algebra, digital integrated circuits, digital-analog conversion, solid state memories, microprocessors, power switching, diodes, voltage regulators, operational amplifiers and op-amp electronics.

TC141 Laboratory Techniques 1
Electrical wiring, connectors, laboratory instruments, wiring and assembly methods.
Introduction to Pascal, problem solving, algorithms, writing programs, testing, documentation and programming techniques.

Wave optics, electromagnetism, stepper motor principles, atomic physics and A.C. circuits.

Computer architecture, scientific instrumentation software, computer interfacing and control systems.

Computer architecture, scientific instrumentation software, computer interfacing and control systems.

Readings in computer science, theory of algorithms, operating systems, Fortran 77 and ADA.

Shaping of language by its cultural context.

Syntax, semantics, relations, analysis of arguments, deduction and quantification theory.

The course is designed to allow students to make a study of certain aspects of Australian politics and international relations. The emphasis is on political forces, procedures and machinery. The nature, elements and interaction of politics are questioned. Comparisons are made with the United States system.

Media studies involves a study of film, radio, television and journalism. The course particularly involves a critical, historical and appreciative appraisal of film in the first semester. There is also a component of practical video, radio and still photography work in the second semester.

A course which is designed to cater for the specific language needs of students whose first language is not English. The syllabus aims to promote language skills to a standard which will enable tertiary study and other relevant literature, and to develop an understanding of Australia's cultural heritage.

This subject offers an interdisciplinary approach to the study of women in society. Topics in the core include the emancipation of women, historical perspective, biological and behavioural sex differences, gender roles and socialisation, images of men and women in the arts, gender and language, the family, parenthood, marriage, divorce and work. Electives offered include:

- Women and Art
- Women and Communication
- Women and Education
- Women and Health
- Women and History
- Women and Literature
- Women and Media
- Migrant Women's Experiences
- Women and Politics

Psychology is the scientific study of human behaviour and the mind. Students will gain awareness of some of the factors that influence human behaviour and development. They will be introduced to such fundamental concepts as learning, emotion and perception with the emphasis being on a better understanding of themselves and others.

Communication Skills

Giving and receiving instructions, collecting and processing information, writing for specific purposes, analysing argument and construction of point of view, participating in a discussion, leading a meeting, use of telephone and answering service, preparing and interpreting graphical aids and speaking to a group.
TH310 Infant and Child Development
Deals with the physical, intellectual, social and emotional development of children from 0-6 years old. It will deal with such issues as language, characteristic of early childhood with the day care setting. Practical assignments are part of this subject.

TH311 Caregiving Skills
This unit is concerned with the care of the child — daily routines, nutrition, hygiene and safety. Some of the topics covered are food hygiene, cleanliness and personal hygiene, toileting and nappy changing and will give students the opportunity to practise basic skills.

TH312 Children's Experiences
This unit will introduce the caregiver to skills and knowledge needed to provide an enjoyable environment for children in order to further their learning and development. Students will have the opportunity to practise with a variety of media that can be used in the care setting. These media include construction activities, art/craft activities, dramatic play among others.

TH313 Communication and Life Skills
This unit aims to provide students with effective written and spoken communication skills: increase their self-confidence; increase their reading proficiency and provide topics for discussion; reading and writing related to family and day care issues.

TH912 English Literature
Aims of course
To provide students with the opportunity:
1. to extend, deepen and enrich their experiences through reading, writing about and (c) points of view about the texts they read.
2. to reach, clarify and defend considered and (c) points of view about the texts they read.
3. to pay close attention to the details of their own and others' language in offering points of view about these texts.

Reporting method
Letter grades A-F based on standardised scores.

Core

Content
The core study consists of three sections:
- Poetry: A study of fourteen or more poems chosen from a wide chronological range, from ballads to contemporary poetry.
- Shakespeare: A study of one play chosen from a group of three.
- Other literature: A study of at least one text from a range of literature including drama other than Shakespeare. The selection may from time to time include longer poems and short stories.
- Novels: A study of at least one novel from a group of at least six.

Assessment
- 3-hour written examination
- School-based assessment

Length of core
Approximately four hours per week for 20 weeks.

Optional units
Any one of the following optional units may be studied.
- A. Consumer resource management
- B. Housing
- C. Family health
- D. Cognitive development in children
- E. Conserving food resources
- F. Food management
- G. Advanced nutrition
- H. Social aspects of food

Assessment - based on theory and practical work.
- Independent investigation
- School-based assessment

Length of optional unit
Approximately four hours per week for 20 weeks.

TH913 Home Economics — Human Development and Society
Aims of course
To assist students to develop attitudes, appreciations, understandings and abilities contributing to the achievement of satisfying personal, family and community life.

Reporting method
Letter grades A-F based on standardised scores.

Core

Content
The core is comprised of three modules of approximately equal length.
- Module 1: Families and their management of resources
- Module 2: Nutrition, growth and development — A life span approach
- Module 3: Physical growth and development throughout the life span

Practical
Practical exercises are a compulsory component of the core. They are either a small scale study initiated and carried out by the student or a practical problem solving exercise relevant to the individual student. These exercises are required to cover all core modules and both formats.

Prescribed texts
No prescribed texts. See course description booklet.

Assessment
- Practical exercise
- 2½ hour written examination
- Subject total

Length of core
- Approximately four hours per week for 20 weeks.

Optional units
Any one of the following optional units may be studied.
- A. Family health
- B. Consumer resource management
- C. Housing
- D. Social aspects of food

Assessment - based on theory and practical work.
- Independent investigation
- School-based assessment
- Subject total

Length of optional unit
Approximately 10 weeks.

TWO1 Biology Laboratory Techniques
Prerequisite: Year 12 biology.
Assessment — based on theory and practical work.
- Laboratory safety, atomic structure, bonding and properties, volumetric analysis and acids and bases.

TL002 Chemistry Laboratory Techniques
Prerequisite: Year 12 chemistry.
Assessment — assignments, written tests, practical work.
- General safety in the laboratory, measurement and heat, hydromechanics, optics and radiation.

TL003 Physics Laboratory Techniques
Prerequisite: Year 12 physics.
Assessment — assignments, written tests, practical work.
- General safety in the laboratory, measurement and heat, hydromechanics, optics and radiation.

TL101 Chemistry Practices 1
Prerequisites: none.
Assessment — based on theory and practical work.
- Laboratory safety, atomic structure, bonding and properties, stoichiometry, laboratory skills.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Assessment</th>
</tr>
</thead>
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<tr>
<td>TL102</td>
<td>Chemistry Practices 2</td>
<td>chemistry practices 1.</td>
<td>based on theory and practical work.</td>
</tr>
<tr>
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<td></td>
<td>Volumetric analysis introduction, acids and bases, electrochemistry, organic chemistry.</td>
</tr>
<tr>
<td>TL111</td>
<td>Physics Practices 1</td>
<td>none.</td>
<td>assignments, written tests, practical work. General safety in the laboratory, units, errors and graphs, heat and temperature, hydromechanics, electricity.</td>
</tr>
<tr>
<td>TL122</td>
<td>Physics Practices 2</td>
<td>physics practices 1.</td>
<td>written tests, practical work. Kinematics and mechanics, optics and radiation, work, power and energy.</td>
</tr>
<tr>
<td>TL130</td>
<td>Biology Practices 1</td>
<td>none.</td>
<td>based on theory and practical work.</td>
</tr>
<tr>
<td>TL131</td>
<td>Biology Practices 2</td>
<td>none.</td>
<td>based on theory and practical work. Collection, maintenance and preservation, classification, reproduction, development and inheritance, evolution and speciation, ecology.</td>
</tr>
<tr>
<td>TL143</td>
<td>Laboratory Computations</td>
<td>none.</td>
<td>mastery tests on an ongoing basis, final examination. Arithmetic, measurement, ratio, proportion and variation, equations and formulae, equation solving, graphs, introduction to statistics.</td>
</tr>
<tr>
<td>TL144</td>
<td>Quality Control Statistics</td>
<td>laboratory computations, concurrent work experience.</td>
<td>written tests and assignments. Concept of variation, basic tools for describing variation, sampling, theoretical distributions, test of samples for statistical control, relationship between variables, process control, non-conformity.</td>
</tr>
<tr>
<td>TL201</td>
<td>Chemistry Practices 3</td>
<td>chemistry practices 2, laboratory computations.</td>
<td>based on theory and practical work. Organic chemistry, analytical chemistry.</td>
</tr>
<tr>
<td>TL202</td>
<td>Chemistry Practices 4</td>
<td>chemistry practices 3.</td>
<td>based on theory and practical work. Sampling and spot-testing, solubilities and gravimetric analysis, electrochemistry, introduction to instrumental techniques.</td>
</tr>
<tr>
<td>TL210</td>
<td>Laboratory Workshop Practices 1</td>
<td>laboratory computations.</td>
<td>practical work. Introduction to workshop and safety, materials and properties, use of tools and machines.</td>
</tr>
<tr>
<td>TL211</td>
<td>Laboratory Workshop Practices 2</td>
<td>physics practices 2.</td>
<td>written tests, practical work. Basic electricity, basic electronic, electrics, maintenance, first aid, extension work.</td>
</tr>
<tr>
<td>TL225</td>
<td>Methods of Specimen Preservation 1</td>
<td>biology practices 2.</td>
<td>written tests, practical assessment. The purpose of museum collections, collection and preservation procedures — general, dried mounts, skins, skeletons, working drawings, freeze-drying, spirit specimens, regulations.</td>
</tr>
<tr>
<td>TL226</td>
<td>Methods of Specimen Preservation 2</td>
<td>specimen preservation 1.</td>
<td>methods of specimen preservation 1.</td>
</tr>
<tr>
<td>TL227</td>
<td>Modelling of Biological Specimens</td>
<td>chemistry practices 2, laboratory computations.</td>
<td>practical work. Modelling, building a model (scale down), building a model (scale up), finishing.</td>
</tr>
<tr>
<td>TL228</td>
<td>Moulding &amp; Casting of Biological Specimens</td>
<td>chemistry practices 2, laboratory computations.</td>
<td>practical work and written tests. Rigid piece moulding and casting, applications of flexible mediums, combination, flexible and rigid medium.</td>
</tr>
<tr>
<td>TL256</td>
<td>Mammalian Anatomy and Physiology 1</td>
<td>biology practices 1, laboratory computations.</td>
<td>practical work and written tests. Introduction to anatomy and physiology, skeletal system (bones, cartilage, joints), muscle, integument, circulatory system.</td>
</tr>
<tr>
<td>TL257</td>
<td>Mammalian Anatomy and Physiology 2</td>
<td>biology practices 1, laboratory computations.</td>
<td>practical and written tests, class participation. Respiratory system, digestive system, urinary system, nervous system, endocrine system, reproductive system.</td>
</tr>
<tr>
<td>TL301</td>
<td>Biochemistry 1</td>
<td>biology practices 1, chemistry practices 2, laboratory computations.</td>
<td>based on theory and practical work. Enzymes, thermodynamics, introduction to metabolism, glycolysis, citric acid cycle, respiration, fatty acid metabolism, amino acid and nucleotide metabolism, biochemistry of exercise.</td>
</tr>
<tr>
<td>TL302</td>
<td>Biochemistry 2</td>
<td>biochemistry 1.</td>
<td>based on theory and practical work.</td>
</tr>
</tbody>
</table>
ACCESS EDUCATION PROGRAMS

C45LDB Volunteer Tutor Training
Two courses of training are offered. One prepares volunteers to work on a one-to-one basis with adult students who need individual tuition in the basics of reading, writing and spelling. The second prepares volunteers to tutor mildly intellectually disabled adults in life-coping skills.

TR100 Basic Literacy
6 sessions, 2 hour session

TR106 Life Skills
7 sessions, 2 hour session

C45LVP Vocational Preparation Program
Courses will be offered for people who need to sit an examination to enter their chosen career in fields such as nursing, the fire brigade and the police force.

C51LDB Basic Studies Program

TR101 English Workshop
The subject gives students the opportunity to upgrade their oral and written skills to enable entry into more formal courses. Participants are expected to be able to speak and write basic English before taking this subject.

TR102 Individual Learning Workshop (Numeracy)
This is a flexible program which gives people who wish to improve their basic mathematics knowledge an opportunity to work individually in an informal learning situation.

TR103 Spelling Workshop
A short course offered both during the day and evening for adults who are keen to improve their spelling.

TR107 Volunteer Tutor Program (Adult Literacy)
Adult students are matched with an individual tutor for tuition in basic reading, writing and spelling. Students are required to be able to speak fluent English.

TR145 English Written Communication Skills (for the deaf)
This course provides tuition in basic English for deaf adults as a preparation for entry into mainstream TAFE programs. Provision of an interpreter is an integral feature of the course.

TR150 Basic Mathematics for Women
This program facilitates an introduction to useful mathematics including basic skills, the metric system and use of calculators in a small informal group.

H51LDI Migrant English Access
The department runs programs to prepare students of a non-English speaking background for tertiary study. Day VCE/ESL English classes are offered and there may be a summer school in January 1991.

In-course support is offered by some departments. Extra time and specialist ESL teaching is offered, when possible, to students enrolled in Certificate and associate diploma courses who need help to successfully complete their Communication Skills units.

The Migrant Education Co-ordinator is happy to assist potential students with ESL language and course inquiries.

TL309 Electron Microscopy 1
Prerequisite: scientific photography.
Assessment — written tests, folio, practical assessment.
Introduction to electron microscopes, histological equipment for electron microscopy, histological techniques for electron microscopy, preparation of biological material for scanning electron microscopy.

TL310 Electron Microscopy 2
Prerequisite: electron microscopy 1.
Assessment — folio work, written tests, practical work.
Cell infrastructure, operation and photographic techniques using the electron microscope, specialist labelling techniques, construction, servicing and calibration of TEM, SEM and ancillary vacuum equipment, special preparation techniques.

TL312 Laboratory Management
Prerequisites: chemistry practices 1, laboratory computing, laboratory computations, communication skills 1, biology practices 1 and concurrent work experience.
Assessment — assignments and written reports related to students own workplace.

TL320 Invertebrate Zoology
Prerequisite: biology practices 2.
Assessment — written tests, assignments, practical work.
Protozoa, porifera, cnidaria, ctenophora, molluscs, arthropods, echinoderms, helminthes, onychophora, chordates.

TL327 Laboratory Computing
Prerequisites: none.
Assessment — written tests, practical work.
Using a personal computer: computer equipment and jargon, software.

TL329 Tissue Culture
Prerequisites: biology practices 1, laboratory computations.

TL331 Organic Chemistry
Prerequisite: chemistry practices 4.
Assessment — written tests, assignments, practical work.
Chemical bonding, IUPAC Nomenclature, hydrocarbons-aliphatic, hydrocarbon-aromatic, alcohols, phenols and ethers, alkyl and aryl halides, carbonic acids and their derivatives, aldehydes and ketones, amines and their derivatives, thymol, p-phenylenediamine, mono- and bidentate chelating agents, flame reactions, reactions of alicyclic, benzonic and carboxylic acids, esters, ketones, aldehydes, lactones, amides and their derivatives, thymol, p-phenylenediamine.

TL332 Polymer Science 1
Prerequisite: chemistry practices 3.
Assessment — written tests, assignments, practical work.
Petroleum and petroleum products, petroleum refining, properties of plastics, classification of polymers, molecular weight, crystallinity in polymers, glass transition temperature, fracture and deformation modes in polymers, environmental stress cracking, polymerization processes, thermosetting polymers-polyesters, polyamides and alkyd resins, epoxy resins, polyolefinic, styrenic polymers, other commercial polymers.

TL334 Polymer Science 2
Prerequisite: polymer science 1.
Assessment — written tests, practical work.
Designing with polymers, processing techniques, identification of plastics, polydiene elastomers, polyamides, adhesives.

TL347 Occupational Hygiene
Prerequisites: biology practices 1 or chemistry practices 1 or physics practices 1.
Assessment — written assignments and tests.
Industrial toxicology, classification of chemical substances, local and systemic effects, threshold limit values, industrial cancer and carcinogens, epidemiology, safety data sheet, radiation effects, occupational stresses.

TL390 Chromatographic Analysis 1
Prerequisite: chemistry practices 4.
Assessment — based on theory and practical work.
Ion-exchange, solvent extraction, paper and thin-layer chromatography, electrophoresis.

TL391 Chromatographic Analysis 2
Prerequisite: chemistry practices 4.
Assessment — based on theory and practical work.
Gas chromatography, high performance liquid chromatography.
TL401 DNA Technology
Prerequisite: biochemistry 2.
Assessment — theory and practical work.
Protein synthesis, biochemistry of genetics, molecular biology, inborn errors of metabolism.

TL402 Immunological Techniques
Prerequisite: biochemistry 2.
Assessment — theory and practical assessment.
Electrophoresis, centrifugation, immunology, Radio Isotopes.

TL411 Computer Programming
Prerequisite: laboratory computations.
Assessment — written and practical problems.
Programming in another language, project.

TL413 Ecology 1
Prerequisite: biology practices 1, laboratory computations.
Assessment — written tests, assignments, class participation and practical work.
Introduction to ecology, introduction to ecosystems, the significant Australian ecosystem, energy flow, nutrient cycles, excursion/seminar.

TL414 Ecology 2
Prerequisite: biology practices 1, laboratory computations.
Assessment — written tests, assignments, class participation and practical work.
Basic life processes, the influence of physical limiting factors on organisms, interactions, organization of populations, organization of a community, development of an ecosystem, excursion/seminar.

TL418 Entomology
Prerequisite: biology practices 2
Assessment — written tests and practical assessment.
Fish, amphibians, reptiles, birds, mammals.

TL445 Pharmacological Methods
Prerequisite: biology practices 2, physiology practices 2.
Assessment — written tests and practical assessment.
Drugs, effects of drugs, drug action, apparatus, animals, statistics.

TL448 Vertebrate Zoology
Prerequisite: biology practices 2.
Assessment — written tests and practical assessment.
Fish, amphibians, reptiles, birds, mammals.

TL453 Glassworking
Prerequisite: chemistry practices 1 or biology practices 1.
Assessment — practical work.
Splitting, glasscutting, annealing, tube sealing, tee sealing, bulb blowing, rod working, straight joining, tube bending, burrette repair, internal sealing, glass to metal seals, pipette joints, capillary glass working.

TL456 Radioactive Methods
Prerequisite: chemistry practices 1 or 2.
Assessment — assignments and practical work.
Legal and safety aspects in use of radioactive isotopes, applications of isotopes in industry and research and chemical procedures, experimental techniques and applications.

TL460 Microbiology 1
Prerequisite: biology practices 1, laboratory computations.
Assessment — assignments, tests and practical tests.
History of microbiology, microscopy, prokaryotic and eukaryotic cells, basic microbial metabolism, physical and chemical growth requirements, culture media, microbial growth, measurement of microbial populations, control of microbial growth.

TL461 Microbiology 2
Prerequisite: microbiology 1.
Assessment — assignments, tests, practical tests.
The origin of micro-organisms, classification of micro-organisms, cyanobacteria, typical gram negative cell-walled bacteria, typical gram positive cell-walled bacteria, wall-less bacteria, bacteria with unusual cell walls, the fungi, the algae, the protozoa, the multicellular parasites, viruses.

TL462 Microbiology 3
Prerequisite: microbiology 2.
Assessment — assignments, tests, practical tests.
Determinants of health and disease, diagnosis of infectious disease, epidemiology of infectious disease, the immune response, disorders associated with the immune system, antimicrobial drugs and chemotherapy, diseases of the skin, diseases of the respiratory tract, diseases of the digestive tract, diseases of the urogenital system, diseases of the nervous system, diseases of the cardiovascular and lymphatic system.

TL463 Microbiology 4
Prerequisite: microbiology 3.
Assessment — assignments, tests, practical tests.
Advanced metabolism, metabolic regulation, advanced virology, mutation and gene-function at the molecular level, the expression of mutation in viruses and cells, the replication of viruses and the industrial exploitation of microbes, the utilization of microorganisms in the food industry.

TL465 Electrochemical Analysis 1
Prerequisites: chemistry practices 4, laboratory computations.
Assessment — written tests assignments and practical work.
Conductivity (theory and experimental), potentialometry (theory and experimental).

TL466 Electrochemical Analysis 2
Prerequisite: electrochemical analysis 1.
Assessment — written tests assignments and practical work.
Electrodeposition, polarography, coulometry.

TL470 Work Project
Assessment — submission of written project.

TL480 Scientific Photography
Prerequisites: chemistry practices 2, laboratory computations.
Assessment — written and practical assignments.
Camera theory and operation, film, processing black and white film, printing negatives, sensITometry, line and continuous tone copying, presentation methods, light sources, electronic flash, lenses, laboratory lighting techniques.

TL483 Applied Imaging Techniques
Prerequisite: scientific photography.
Assessment — assignment and practical work.
Specific techniques and apparatus, specimen illumination techniques, photographic techniques, electron microscope techniques, photography by video and television.

TL490 Spectrophotometric Analysis 1
Prerequisite: chemistry practices 4.
Assessment — written tests and assignments and practical work.
Spectrophotometry (theory and experimental).

TL491 Spectrophotometric Analysis 2
Prerequisite: chemistry practices 4.
Assessment — written tests and practical work.

H52APP Arts Preparatory Program
The Arts Preparatory Program is a ‘bridging’ program which aims to attract mature-age students from a variety of backgrounds and to prepare students enrolled for subsequent entry into a Bachelor of Arts degree program at either a University, Institute or College of Advanced Education. In particular, the course is intended for mature-age students who have failed to gain entry into an Arts Faculty at a tertiary institution, or who are not qualified for entry into a tertiary institution in the area of Arts, or who do not have a year twelve qualification or its equivalent.
The course as structured in 1989 places emphasis on Australian studies to provide the content focus for a program which is geared to cater for students enrolling in a range of Arts subjects. At present the program consists of four units with the following titles:

TH301 Australian Literature
TH303 Images of Australia through Film and Television
TH305 Theories of Human Nature
TH306 Research Skills

The program offers support and training in preparing a range of assessment tasks and helps provide the skills required to undertake tertiary programs for those students who are returning to study.

The program is available in semester one and semester two. Full-time enrolment requires one semester study (approximately fifteen weeks duration), and part-time enrolment can be taken over two semesters.

TJ004 English for Academic Purposes
For men and women who are preparing to enter, or are already enrolled in, post Year 11 courses of study at Swinburne or other post-secondary institutions.
Assessment of reading, writing and speaking skills at interview. Course includes a range of study skills tuition.

TJ005 Further Listening & Speaking Practice (Migrant English)
This course aims at developing the listening and speaking skills of the men and women enrolled, and also their self-confidence and assertiveness in their place of work or study. Not for beginners but for adults who need these skills for career or study purposes.

TJ006 Further Reading & Writing
For men and women who need to use and improve these skills in their work situation. Not for beginners but for adults who need these skills for career or study purposes.
Applicants must be able to speak English. Assessment at interview.
Summer School – English for Further Study
A four-week, full-time language and study skills program may be offered over January 1991.
Applications made in October.

H51LDN Returning to Study

TJ002 Efficient Reading

Programs for Students With Disabilities

Mildly Intellectually Disabled Students

C52LDB Basic Studies Program (Special)

TR108 Volunteer Tutor Program (Life Skills)
Students are matched with a tutor for tuition in literacy and numeracy related to life-coping skills. It is a program for mildly intellectually disabled adults.

C52LZE Vocational-oriented

Evening Classes

The course provides practical subjects for mildly intellectually disabled adults in the evening.
Subjects offered are:

TR120 Carpentry
TR121 Literacy/Numeracy

C52LZT Transition Program
Students attend for three or four days per week. The program encourages mildly intellectually disabled adults to develop their practical skills and to improve their levels of literacy, communication and independence, as well as offering practical work experience.
Subjects offered are:

TR110 Building
TR111 Clothing Trade Skills
TR112 Electrical
TR113 Fitting and Machining
TR114 Home Economics
TR115 Literacy/Numeracy
TR117 Keyboard Skills
TR119 Horticulture

Hearing Impaired Students

C51LDB Basic Studies Program

TR145 English Written Communication Skills (for the deaf)
This course provides tuition in basic English for deaf adults as a preparation for entry into mainstream TAFE programs. Provision of an interpreter is an integral feature of the course.

TM004 Biology

The intention in this course is to provide a practical way, what takes place in the individual organism and in the species in which the characteristics of the organism are determined and passed on from one generation to the next. A previous study of biology is recommended but not compulsory.

Course structure

Unit 1
(a) Scientific method and (b) Cellular activities
(b) Scientific observations
(a) Characteristics of life
(b) Experimental methods

Unit 2
Animal structure and function
(a) Bone structure and function
(b) Transport of materials — blood
(c) Exchange of gases
(d) Removal of wastes
(e) Integration and control

Unit 3
(a) Diversity and classification
(b) Plant structure and function
(a) Comparison of plant and animal types and needs
(b) Photosynthesis and autotrophic design
(c) Transport systems — phloem and xylem
(d) Structure and function relationships

Unit 4
(a) Genetics and (b) Natural selection
(a) Genetics
(b) Evolution
(a) Cell division (mitosis and meiosis)
(b) Changing gene frequencies

Evidence for natural selection
Darwin’s discoveries
New species from old: isolation and evolution; other mechanisms
Homo sapiens: human characteristics; human origins

Duration: Five hours per week (all in the Biology Laboratory)
Assessment:
<table>
<thead>
<tr>
<th>Topic tests</th>
<th>4 x 10%</th>
<th>40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (2) special assignments</td>
<td>2 x 10%</td>
<td>20%</td>
</tr>
<tr>
<td>Practical reports</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Swinburne College of TAFE
Prerequisite, Year 11 applied science standard chemistry

a two-hour practical session in the laboratory.

This subject concluded five hours per week, three hours of theory and

Unit 4

Chemical bonding

Unit 3

Equilibria

Unit 4

Organic chemistry

Duration: Three hours of theory and two hours of laboratory work per week.

Assessment: Each topic is concluded with a two-hour theory exam, which carries 80% of the marks for that unit. Assessment of practical work constitutes the remaining 20% of the unit assessment. A pass must be gained in the practical work to pass the unit.

Students are expected to wear sensible clothing in the laboratory including covered-in shoes. A laboratory coat and safety spectacles must also be worn at all times during the practical session.

TM028 Computer Studies

The aim of this course is:
(a) to give students an insight into the method of working of computer hardware and software components,
(b) to improve the students' understanding of logical processes and their ability to solve problems,
(c) to develop the ability to recognise problems which can be solved by readily available software and the skills needed to use such software,
(d) to teach the elements of appropriate programming languages,
(e) to develop the skills to devise algorithms to solve specific problems and the translation of those algorithms into a programming language,
(f) to familiarise the student with the concepts of data manipulation and file handling,
(g) to teach the elements of database management,
(h) to give students an insight into the range of applications and the social implications of the use of computers,
(i) to give students an appreciation of the history of computing and future trends in computing.

No previous computing studies are required.

TM040 Physics

Prerequisite, Year 11 Physics

Physics is recommended for students wishing to undertake courses in engineering and applied science at tertiary institutions.

The course has been designed to enable students to:
(i) master the basic principles and practices of physics;
(ii) develop problem solving skills;
(iii) appreciate and use the scientific method

Course structure

Unit 1 (7 weeks)

Geometrical optics
Motion
Vectors
Units
Errors
Dimension

Unit 2 (8 weeks)
The "triumph" of dynamics
Friction
Mechanical equilibrium
Particle dynamics
Gravitation
S.H.M.

Unit 3 (8 weeks)

Electrostatics
Electric current
Electromagnetism
Electronics

Unit 4 (7 weeks)

Introduction to wave optics; models of atom

Duration: Five hours per week (practical session every week).

Assessment: Examinations at the end of each unit.

A pass in practical work is necessary for a pass in the subject as a whole.

A scientific calculator is essential.

TM924 Biology

Aims of course

This course aims to provide students with some knowledge and understanding of the principles of biology as a science, and the capacity to apply these principles in appropriate biological settings.

Reporting method

Letter grades A-F based on standardised scores.

Core Content

Theory
1. The scientific process
2. The organism
3. Function and structure in plants
4. Function and structure in animals
5. Integration and regulation
6. Cellular processes
7. Heredity
8. Continuity and change
9. The human species

Practical

Every student to complete suitable laboratory exercises relevant to each section of the theory part of the course. A minimum of one-third of the total class time should be devoted to such practical work.

Prescribed texts

No prescribed texts. See course description for recommended texts.

Assessment

3-hour written examination 60%
School-based assessment 10%

Total for core 70%

Length of course

Subject total

60%

70%

Core/course rule

- Approximately four hours per week for 20 weeks. Not less than one-third of this time should be devoted to practical work.
- Candidates must gain a satisfactory assessment in their practical work to gain a Grade D or above overall. A candidate who does not gain a satisfactory assessment in the practical work, and whose standardised mark is greater than 49, will have that work reduced to 49E.

Optional units

Topics
1. Research investigation
2. Plants
3. Animal structure and function
4. Behaviour
5. Chemical coordination
6. Cell activity
7. Genetics
8. Evolution
9. Science and society
10. Issues in biology

If an optional unit of the Group 1 Biology course is composed entirely of a combination of these topics, the following criteria apply to that combination.

1. A student must study two topics.
2. Any combination of pairs of topics may be chosen with the exception that no student may choose both of Topics 9 and 10.
TR101 English Workshop
The subject gives students the opportunity to upgrade their oral and written skills to enable entry into more formal courses. Participants are expected to be able to speak and write basic English before taking this subject.

TR102 Mathematics Workshop
This is a flexible program which gives people who wish to improve their basic mathematics knowledge an opportunity to work individually in an informal learning situation.

TR103 Spelling Workshop
A short course offered both during the day and evening for adults who are keen to improve their spelling.

TR107 Volunteer Tutor Program (Adult Literacy)
Adult students are matched with an individual tutor to learn basic reading, writing and spelling. Students are required to be able to speak fluent English.

TR108 Volunteer Tutor Program (Life Skills)
Students are matched with a tutor for tuition in literacy and numeracy related to life-coping skills. It is a program for mildly intellectually disabled adults.

TR145 English Written Communication Skills (for the deaf)
This course provides tuition in basic English for deaf adults as a preparation for entry into mainstream TAFE programs. Provision of an interpreter is an integral feature of the course.

TR150 Basic Mathematics for Women
This program facilitates an introduction to useful mathematics including basic skills, the metric system and use of calculators, in a small informal group.

TS006 Legal Studies
Full-year course for students with limited or no prior knowledge of legal studies. This course is designed to assist students in understanding the operations of law in our society. It should equip students with an understanding of how law affects our everyday lives, with particular regard to the rights and safeguards it bestows and the obligations and limitations it imposes. Topics covered include the need for law, the structure and development of the Australian Legal System, the law-making bodies and legal process, crime and criminal sanctions, the Law of Torts, consumer protection and the law of business organisations.

TS008 Economics
The aim of this course is to introduce students to the economic aspects of human behaviour with emphasis upon the application of theories and principles to economic problems and social issues within the framework of the Australian economy. The underlying theme for this introductory course in economics is the impact of economic activity upon human welfare. The course may be attempted by students who have not studied economics previously.

TS009 Accounting
Full-year accounting course for students with limited or no prior knowledge of bookkeeping or accounting. Topics covered include: basic concepts and terminology; the accounting equation; recording methods; balance day adjustments; final reports; accounting procedures for control; accounting for multiple ownership; analysis and interpretation of final reports and fund statements.

TS107 Accounting for Managers
Accounting systems, principles of financial management, cash management, accounting reports, cost volume profit relationship and budgeting.

TS226 Middle Management Practices 1
Planning, forecasting, establishing objectives, policies and procedures, programs and schedules, budgeting, decision making and problem solving, control, departmental/corporate organisation.

TS326 Middle Management Practices 2
Prerequisites: Communication Skills, Information Technology, Middle Management Practices 1, Motivation, communications, styles of leadership, use of committees, conference/leadership, personnel planning, training and development, staff appraisal.

TS725 Introduction to Sales and Marketing
Definition of selling and marketing, duties of a salesperson, factors involved in successful selling, marketing principles and practice, motivation, salesmanship, competition, ethics, customer service, and sales of services.

TS726 Computer Sales and Marketing
Jobs in computer marketing and sales. Training in computer sales views, purchase option contracts, and computer marketing principles and practice.

Social and Community Services Courses
H52CCA Child Care Assistant Course
The Child Care Assistant Course is an introductory vocational course designed to help caregivers increase their skills in looking after children 0-6 years. Students will attend once a week for approximately 7 hours for one year. Studies will cover infant and child development, caregiving skills, children's experiences and communication and life skills.

The following subjects are studied:

TH310 Infant and Child Development
Deals with the physical, intellectual, social and emotional development of children from 0-6 years old. It will deal with such issues as language, behaviour, the importance of play and coping with a variety of situations characteristic of early childhood with the day care setting. Practical assignments are part of this subject.

TH311 Caregiving Skills
This unit is concerned with the care of the child - daily routines, nutrition, hygiene and safety. Some of the topics covered are food hygiene, cleanliness and personal hygiene, toileting and nappy changing and will give students the opportunity to practice basic skills.

TH312 Children's Experiences
This unit will introduce the caregiver to skills and knowledge needed to provide an enjoyable environment for children in order to further their learning and development. Students will have the opportunity to practice with a variety of media that can be used in the care setting. These include construction activities, art/craft activities, dramatic play among others.

TH313 Communication and Life Skills
This unit aims to provide students with effective written and spoken communication skills: increase their self-confidence; increase their reading proficiency and provide topics for discussion; reading and writing related to family and day care issues.

Domiciliary Care
H52HTP Home Carers Training Course
This course provides basic training for council home help workers. The program is run in conjunction with Hawthorn, Kew, Fitzroy and Caulfield City Councils.
Community Information Workers Certificate
This course is offered in conjunction with the Camberwell Community Centre. It is designed to provide training for workers who provide advice, counselling and practical assistance to individuals seeking information relating to community resources.

Victorian Certificate of Education
(Higher School Certificate) subject details

TH910  Australian History
Aims of course
1. To provide students with the chance to study the history of the society of which they are a part.
2. The general aims of history are also central to a study of this subject.

Reporting method
Letter grades A-F based on standardised scores.

Core Content
There are no prerequisites for this course.
Students must select a minimum of THREE topics.

It is strongly recommended that there should be some logical relationship between the topics selected. For example, study could focus on related chronological periods or on underlying themes.

Core topics
1. Aboriginal society before European settlement
2. European settlement and the effects on Aboriginal society
3. Colonial society in the early years in NSW and VDL
4. Immigrants and society
5. Political power in Australian society to the 1850s
6. The land hunger
7. Melbourne: the growth of a metropolis
8. Working men and women and social reform 1860-1910
9. The wealth beneath the soil – mining
10. National identity and consciousness 1880-1900
11. Federation and the early Commonwealth
12. Australians in wartime – Great War and Second World War
13. The 1920s
14. The Great Depression
15. The growth of the new federal power 1941-1972

Prescribed texts
No prescribed texts. See course description for lists of ‘essential’ and additional references for each core topic and optional unit.

Assessment
• 2½-hour written examination Subject total 50%
• School-based assessment Total for core
20%
60%

Length of core
Approximately four hours per week for 20 weeks.

Optional units
A. Women in Australian history
B. Post-war immigration – multiculturalism in Australia
C. The Aborigines in the twentieth century
D. Aspects of schooling in nineteenth century Victoria
E. The dismissal of the Labor government
F. Local history
G. The debates on the discovery and foundation of Australia
H. Health
I. Violence in Australian history

Assessment
• School-based assessment Subject total 30%

TS901 Accounting
Aims of course
1. To introduce and examine the function and role of accounting as an aid to management of a business.
2. To introduce, in simple terms, the basis and processes of accounting measurement and to consider the limitations of methods used.
3. To assist students in preparing their future role in the community by providing skills, concepts, relationships, and understanding appropriate to living and working in a business environment.

Reporting method
Letter grades A-F based on standardised scores.

Core Content

Reporting, processing, using and reporting of the effects of financial transactions on a business. Analysing and evaluating alternative accounting methods, concepts, procedures and reports.

Prescribed texts
No prescribed texts. See course description for suggested references.

Assessment

Length of core
Approximately four hours per week for 20 weeks.

Optional units

Topics
1. Funds statements
2. Accounting for partnership
3. Accounting for partnerships (including partnership fund statements)

Prerequisite: Topic 1 — Funds statements

4. Company accounting — recording and reporting
5. Company accounting — recording and reporting (including company funds statements)

Prerequisite: Topic 1 — Funds statements

6. Company accounting — profitability and financial stability
7. Farm accounting
8. Accounting for clubs
9. Non-systematised records
10. Introduction to practical business EDP
11. Assessment by external parties of sole proprietor businesses
12. Modern business data processing systems

If an optional unit of the Group 1 Accounting course is to apply to that combination, a student must study a minimum of TWO topics.

topics 1 and 2. The total time allocation must be a minimum of 40 hours.

Topi 1 is a prerequisite for Topics 3 and 5. Topics 2 and 3 are alternatives; Topics 4 and 5 are alternatives.

Assessment

Subject total 50%

School-based assessment 20%

Total for core 70%
Aims of course
To develop in students sufficient understanding of economic concepts, skills and knowledge to enable them to participate more fully in the decision-making processes of a modern industrial state.

Reporting method
Letter grades A-F based on standardised scores.

Core
Content
A. The Australian Ecosystem including:
- economic systems
- the level of economic activity
B. Economic objectives and performance criteria:
- price stability
- full employment
- external stability
- economic growth
- distribution of income
C. Economic performance:
- internal and external stability
- economic growth
- income distribution
- compatibility and conflict

Prescribed texts
See course description for detailed list.

Assessment
- 3-hour written examination
  Subject total 70%
- School-based assessment 2 x 15%
  Subject total 30%

Length of core/course
- Approximately four hours per week for 20 weeks.

Optional units
- Any combination of pairs of topics may be chosen.
The optional units are composed of the following allowed combinations of topics.

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Assessment For total optional unit
- School-based assessment 2 x 15%
  Subject total 30%
- Length of optional unit
  Approximately four hours per week for 5 weeks.

In previous years, the Department has run short courses in school-based assessment, vocational, social and community services areas. Many of these courses will run again in 1991.

TT100 Fire Mechanics 1
Kinematics, dynamics, rotation and statics.

TT101 Fire Mechanics 2
Fluid mechanics, thermodynamics, electricity and magnetism.

TT110 Building Structures 1
A study of structural elements, materials and systems, structural loads and load transfer, techniques.

TT120 Fire Chemistry
Laboratory skills, oxidation, reduction and electrochemistry, organic chemistry, rates of reaction and thermochemistry.

TT140 Information Technology
Using a personal computer, computer equipment and jargon, word processing, spreadsheets, database management.

TT160 Personnel Emergency Treatment
Structure and function of the body, asphyxia, burns, lifting and moving casualties, and a number of medical accident conditions and procedures.

TT210 Building Structures 2
Prerequisite: Building Structures 1. Victorian building regulations, building classifications and construction, floor area limitations, protection of openings and penetrations, building separation and siting, building fire safety.

TT211 Detection Systems
Prerequisite: Building Structures 1. Detector operation, performance and applications: control and indicating equipment, certification and approval, system commissioning, maintenance, equipment testing and installation, plans and drawings.

TT212 Suppression Systems
Prerequisite: Building Structures 1. Sprinkler types and operation, plans and symbols, pipes, water supply system types — water spray, foam, gas flooding, dry chemical, explosion suppression, commissioning and maintenance.
TT213 Fire Safety Management 1  
Prerequisite: Building Structures 1.  
Role of fire safety managers and fire and rescue organisations, building regulations, means of escape, controlling spread of fire and smoke in buildings, fire prevention, surveys, equipment maintenance and records, fire safety audit and security.

TT220 Principles of Fire Behaviour  
Prerequisite: Fire Chemistry, Fire Mechanics 2.  
Process of combustion, mechanics of heat transfer, fire point, burning of materials, fireproofing, flammability of dust, explosives, fire in enclosures, fire retardant and extinguishment.

TT221 Fire Fighting Equipment and Its Application  
Prerequisite: Fire Mechanics 1.  
Search and rescue, ladders, pumps, ventilation and salvage, hose, breathing apparatus, specialist appliances, portable fire extinguishers, foam, hydrants and practical fire fighting.

TT301 Detection Systems Design  
Prerequisites: Information Technology, Detection Systems, Suppression Systems.  
Detectors, standards for detection systems, estimating, valve monitoring systems, fire indicator panels, manual fire alarm systems.

TT302 Suppression Systems Design 1  
Prerequisites: Information Technology, Detection Systems, Suppression Systems.  
Existing water supplies, documenting water supplies, specifying water supplies.

TT310 Introduction to Communications Technology  
Prerequisites: Fire Mechanics, Telecommunications emergency warning systems, computer systems.

TT320 Fire Investigation  
Prerequisites: Fire Safety Management 1, Fire Fighting Equipment & Its Application, Principles of Fire Behaviour.  
Fire scene preservation, interview techniques, electrical causes, gas appliances, insurance industry, fire facilities, arson investigation, forensic analysis, fire photography, on scene investigation.

TT321 Fire Safety Management 2  
Prerequisites: Fire Safety Management 1, Fire Fighting Equipment & Its Application, Principles of Fire Behaviour.  
Arson, human behaviour — concept of panic, training staff, fire drills and exercises, communications in building emergencies, emergency procedures, building evacuations, bomb threat management, major installations specification, fire safety policy, management of hazardous work practices, technical specifications, fire investigation.

TT322 Hazard Management  
Prerequisites: Fire Safety Management 1, Fire Fighting Equipment & Its Application, Principles of Fire Behaviour.  
Structure and layout of oil refineries and petroleum depots, hazards from product release, computer installations, fire fighting and near electrical installations, fire fighting on board ships, aircraft fires, airfield firefighting.

TT323 Material Science 1  
Prerequisites: Fire Safety Management 1, Firefighting Equipment & Its Application, Principles of Fire Behaviour.  
Fundamental properties of materials, tests for fire properties, fire properties of structural elements, structural fire resistance tests, arbitrary vs fundamental properties, lining material selection, physical/chemical properties of materials, fire retardants and smoke suppressants, intumescent.

Buildings

TT330 Building Structures 3  
Prerequisites: Principles of Fire Behaviour, Building Structures 2.  
Building fire safety, building safety during construction and demolition, building developments and trends versus fire safety, fire safety problems in high rise buildings, tunnels, bridges and buildings over highways, damage limiting construction.

TT331 Material Science 2  
Prerequisites: Fire Chemistry, Fire Mechanics 2.  
Basic approaches to structural design, purposes of structural fire protection, cause of structural collapse, fire resistance and severity, time-temperature curves structural engineering terms, structural performance of building elements, structural damage and reinstatement.

TT332 Building Services 1  
Prerequisites: Principles of Fire Behaviour, Building Structures 2, Electrical services.

TT351 Fire Law 1  
Prerequisites: Communication Skills 1, Information Technology, Middle Management Practices 1.  
Limitations of law, successful laws, history of common law, Victorian law, development of the Australian legal system, parliament, adversary system, legal profession, court system, the jury, civil and criminal law, civil procedure, criminal procedure, doctrine of precedent.

TT360 Rural Fire Behaviour  
History of rural fires in Australia, principles of fire behaviour, elements of rural fires, fire development, the rural and forest/urban interface.

TT361 Agricultural & Forestry Practices in Fire Management  
Prerequisite: Principles of Fire Behaviour.  
Fire Fighting equipment and its application, objectives of fire management, fire buffer zones, linear fire breaks, foam and forestry management and operations.

TT370 Environmental Safety 1  
Prerequisites: Fire Chemistry, Personnel Emergency Treatment.  
Industrial toxicity, classification of chemicals, substances, local and systemic effects of toxins, threshold limit values, industrial cancer and carcinogens, epidemiology, safety data sheets.

TT371 Special Hazards  
Prerequisite: Fire Chemistry.  
Nature and classes of hazardous materials, labelling and placarding requirements, the United Nations numbering system, information systems, hazardous materials incidents, toxic and infectious materials, radioactive materials, decontamination.

TT372 Occupational Hygiene Measurement  
Prerequisite: Environmental Safety 1.  
Potential risks to health in the workplace, environmental hazard sampling, gas detector tubes, sampling equipment, biological monitoring, audiometric and spirometric testing, heat stress.

TT402 Suppression Systems Design 2  
Prerequisite: Suppression Systems Design 1.  
Choosing a suppression system, sprinkler system design, variations on standard sprinklers.

TT403 Suppression Systems Design 3  
Prerequisite: Suppression Systems Design 1.  
Halon systems, carbon dioxide systems, high expansion foam systems, dry powder systems, hand extinguishers, saponification systems.

TT410 Radio Systems  
Prerequisite: Fire Mechanics 2, Telecommunications emergency warning systems.  
Microwave, optical communication systems, valve monitoring systems.

TT411 Fire Alarm Systems  
Prerequisites: Introduction to Communication Technology.  
Fire station control, security systems, fire alarm systems and attached equipment, sprinkler systems & valve monitoring devices, fire station alerting equipment, unmanned detectors.
TT412 Communication Centres
Prerequisites: Fire Mechanics 1, Information Technology.
Introduction to communication technology: communication centre design, staffing, equipment and procedures.

TT432 Building Services 2
Prerequisite: Building Services 1.
Building transport services, heating, ventilation, air conditioning.

TT451 Fire Law 2
Prerequisite: Fire Law 1.
Statutory law, statutory interpretations, delegated legislation, controlling delegated legislation, standards, history of negligence, modern negligence, rescue cases, origins of fire related law: MFB Act, CFA Act, statutory limitations to negligence, evidence.

TT460 Rural Fire Prevention
Prerequisites: Rural Fire Behaviour, Agricultural and Forestry Practices in Fire Management.
Principles and practice of fire prevention, fire prevention legislation, fire prevention planning and management, communication, community fire prevention, fire hazard mapping, environmental considerations.

TT461 Rural Fire Suppression
Prerequisites: Rural Fire Behaviour, Agricultural and Forestry Practices in Fire Management.
Fire ground-organization, fire control, suppression equipment, techniques of fire suppression, personnel safety and survival, post fire administration.

TT470 Environmental Safety 2
Prerequisites: Environmental Safety 1.
Stress types, lighting, industrial noise, heat stress, radiation effects, bioactive and infectious hazards.
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