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1989

SWINBURNE HANDBOOK
1989 Calendar

January

1 New Year’s Day
3 Swinburne re-opens
9 VCE (HSC) results
30 Australia Day

February

1 SCT semester 1 begins
6 SIT enrolment period begins for Round 1 offers through VTAC
SIT later year teaching begins: Art and final year Engineering
SCT full-time classes, apprenticeship classes and part-time classes in Business Studies begin
13 SCT part-time classes begin (except Business Studies)
SIT first year Art begins
SIT later year teaching begins: Applied Science and Engineering (except final year degree)
16 SIT enrolment period begins for Round 2 offers through VTAC
20 SIT teaching begins: Arts and Business (all years)
SIT first year undergraduate teaching begins: Applied Science and Engineering

March

13 Labour Day
23 SIT and SCT classes end for Easter break
24 Good Friday
27 Easter Monday
28 Easter Tuesday

April

3 SIT and SCT last day for applications for refund of General Service Fee
SIT and SCT classes resume
10 SCT last day for subject variations to enrolment for Semester 1
SIT last day for withdrawal from a first semester subject, unit or course without penalty of failure
25 Anzac Day

May

3 SIT Graduation ceremony
30 SIT last day for application for awards for students completing courses in Semester 1 1989

June

9 SIT Business semester 1 examination period begins
12 Queen’s Birthday
13 SCT semester 1 examination period begins
14 SIT semester 1 examination period begins (except Business)
19 SCT certificate and award presentation ceremony
19 SIT inter-semester break begins: Art
23 SCT semester 1 examination period ends
26 SIT semester 2 begins: Art

July

3 SIT inter-semester break begins (except Art)
10 SCT semester 2 begins
SIT semester 2 begins: Applied Science, Arts and Engineering
12 SIT Business: re-enrolment for Semester 2
17 SIT semester 2 begins: Business

August

September

1 SCT last day for subject variations to enrolments for semester 2
SIT last day for amendments to enrolments without penalty of failure
15 SIT Arts: classes end for mid semester break
22 SIT Applied Science, Art, Business and Engineering classes end for mid-semester break
SCT classes end for mid-semester break
28 Show Day

October

2 SIT classes resume
SIT and SCT last day for application for awards for students completing their courses in December 1989
9 SCT classes resume
18 SIT graduation ceremony

November

3 SIT Business semester 2 examination period begins
6 SIT semester 2 examination period begins: Applied Science, Arts and Engineering
7 Melbourne Cup Day
20 SCT end of year examinations begin (internal and external)
17 SIT examination period ends

December

1 SCT examination period ends
4 SIT re-enrolments begin
23 SIT semester 2 ends
Swinburne closes for Christmas break

SIT: Swinburne Institute of Technology
SCT: Swinburne College of TAFE
Swinburne Handbook '89
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.
sections

general information

swinburne college of TAFE

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engineering (including building construction)

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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 were begun 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, agricultural, 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 1988 were 3,591 full-time and 2,881 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 1988 were 972 full-time and 3,777 part-time students.
Campus
The campus covers an area of approximately four hectares in the suburb of Hawthorn, approximately 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.

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 France came to the aid of Queen Margaret of Scotland. She rewarded him with a grant of land in what is now Northumberland, on the banks of the Swin Burn, a small river that flows into the North Tyne, where he built a castle. He became known as William Swinburn(e) and soon the county reverted to the crown of England.
The Swinburne family coat of arms in medieval times was silver with three boars’ heads in triangular formation. In the 17th century, during the wars between the Stuart Kings and the Parliament of England, the Swinburnes fought for the royalists. After the restoration of Charles II in 1660, the head of the 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 the link that persists between it and the founder and his family. The conferring of a modification of the family’s coat of arms preserves and strengthens that link.
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 Swinburne 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 15 June 1988

Appointees of the Governor-in-Council
J.J. Eastwood, BA(Hons), DipEd(Melb)
M.S. Fallon, BA(Flin), ALA, ALAA
J.P. Hall, BE(Elcb)(Melb), FAIM
J.F. Harvey, BJuris, LLB(Mon), GradDipAcc(PCAE), ACA,
Barristar and Solicitor (Vic) Supreme Court (Vice-President)
M.A. Puqisi, LLB(Melb), Barristar and Solicitor (Vic) Supreme
Court
L.R. Stephens, BEd(MCAE), GradDipPubRel(PIT)
Appointee of the Council of the City of Hawthorn
J.A. Wunderlich, MSc(Syd), Dr es Sc(Paris), ARACI
Nominee of the Minister for Education
M.M. Montague, PhD(Qld), BA(Hons)(Lon),
GradDipPubPol(Melb)

Members elected by the Council of Swinburne
A.M. Blonski, BA(Mon)
W.R.S. Briggs, PhD, BSc(Hons)(NSW), DipChemEng(STC),
ASTC, ARACI (President)
T.P. Coman, DipAppChem(STC), ARACI
J.M. Day, BE(Mech and Elec)(Syd), FIEAust, SME
R.I. Mair, PhD, MEngSc, BE(Civil)(Melb), FIAust, APAIM
D.M. Reilly, MA(Mon), ALAA (Vice-President)

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)

Member elected by Board of Studies
R.G. Chamberlain, DipMechEng, CertEng(Aero), TTTC
Member elected by academic staff, SIT
G.C.J. Morison, BA(Mon), DipSocStud(Melb),
GradDipEd(Haw)

Member elected by academic staff, SCT
J. Learmont, BA(Hons), MEd(Mon), MACE

Members elected by general staff
N.H. Nilsen
L. Scheuch-Evans, BS in Foreign Service (G’town)

Member elected by students, SIT
A.W. McDonald

Member elected by students, SIT
L.J. King

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 Directors
F.G. Bannon, BCom(Melb), FASA, ACIS, LCA
B.J. Macdonald, BEc(Mon), DipEd(Rusd)

Office of the Director

Assistant Director (Academic)
I.A. McCormick, BCom(Melb), MAdmin(Mon), FASA, CPA
Project Officers
A.R. Grigg, BA(Hons), PhD(Otago)
L. Irvine, BSc(Hons)(Glas), PhD(Melb), DipEd(Melb),
GradDipAdmin(CCAE), MACE, ARACI
E.A. O’Keefe, BCom(Melb)
Swinburne Institute of Technology

Director
J.G. Wallace, MA(Glas), MEd(Glas), PhD(Brist), FASSA

Faculty of Applied Science
Dean
J.G. McLean, PhD(Melb), BVSc(Syd), HDA(Hons)
Head, Department of Applied Chemistry
I.K. Jones, PhD, BAgSc, DipEd(Melb)
Head, Department of Computer Science
(To be appointed)
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
B.G. Robinson, F DipArt(RMIT), TTTC
Director, Computer Image Program
P.G. Brown, BA(Hons), HDFA(Lond)
Head, Department of Film & Television
J. Sabine, BA(ANU)
Head, Department of Graphic Design
D.G. Murray, BA(Graphic Design)(SIT) TTTC (Acting)

Faculty of Arts
Dean
L.A. Kilmartin, BA(Q'ld), MA(ANU), PhD(LaT), MAPsS
Chair, Department of Humanities
P. Excoff, MA(Man)
Head, Department of Liberal Studies
M. Harney, MA, DipEd(Melb), PhD(ANU), GradDipArt(App&TV)(SIT)
Head, Department of Psychology
K. Huskin, PhD(Queens)
Chair, Department of Social & Political Studies
F.X. Walsh, BA(Melb), BEd(Mon)

Faculty of Business
Dean
M.C. Frazer, BSc(Hons)(Mon), GradDipEdTert(DDIAE), MBA(Mon), PhD(Camb)
Head, Department of Accounting
B.C. McDonald, BCom, DipEd(Melb), FASA, CPA
Head, Department of Data Processing and Quantitative Methods
D.G. Adams, BCom(Melb), MAdmin(Mon), TSTC
Head, Department of Economics
J.B. Wielgosz, BCom(Hons), MA, DipEd(Melb)
Head, Department of Law
B.R. Clarke, LLB, BEc, 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
L.M. Gillen, PhD(Cantab), MEd, MEng, BMetE(Melb), ASME(Bull)), FIEAust, AIM, MIE Aust, MAIIP, MAIMM, MAIAA
Head, Civil Eng
R.B. Sandie, MEngSc, BSc(Melb), FIEAust, MASCE, AE
Head, Department of Electrical and Electronic Engineering
N. Zorbas, MEngSc, MEd(Melb), BE(Hons)(WAust), MIIEEE, FIEAust
Head, Department of Manufacturing Engineering
J.K. Russell, MEngSc, BE(Ind)(Melb), CEng, FIProdE, MI MechE, FIE Aust
Head, Department of Mechanical Engineering
J.H. Perry, PhD(S'ton), BSc(Tech)(NSW), MIE Aust

Swinburne College of TAFE

Director
J.G. Wallace, MA(Glas), MEd(Glas), PhD(Brist), FASSA
Assistant Director
R.C. Chamberlain, DipMechEng, CertEng(Aero), TTTC
Head, Business Studies Division
R.W. Conn, BBus, DipEd, AASA, CPA (Acting)
Head, Finance and Information Technology Department
W. Ponton, BE, DipEd (Acting)
Head, Marketing and Administration Department
I.M. Walker, MA, BCom, DipEd
Manager, Centre for Small Business
M.J. Joyce, BBus, DipEd, AASA, CPA
Head, Engineering Division
F.A. Gaunt, SEC A Grade Licence, DipTT, TechCert(Electronics) (Acting)
Head, Building Construction Department
R.L. d’Argaville, DipTT, BuildInsCert, TTrlC (Acting)
Head, Electrical and Electronics Technology Department
A.G. Hampton, BEd, TechCert(Electronics) (Acting)
Head, Mechanical and Manufacturing Technology Department
J. Brennan, BEng(Mech), DipEng(Naval Arch), DipEd, CEng, MI MechE
Manager, Centre for Engineering Technology
L.J. McLaughtan, TTrlC, DipTT
Head, Social and Applied Sciences Division
G.A. Harrison, BSc, DipMechEng, TTTC
Head, Applied Science Department
R. Gullan, BSc(Hons), MED, MACE
Head, Social Science and Humanities Department
G. Amott, BEc, BEd, GradDipBusAdmin (Acting)
Head, Access Education Department
J. Learmont, BA(Hons), MED(Mon), MACE
Senior Curriculum Development Officer
R.M. Carmichael, BA, BEd
Manager, Computer Services Unit
C.A. Burgess, BSc, DipEd (Acting)

Swinburne services

Computer-based Developments and Information Systems
Manager, Computer Centre
M.O. Plunkett, BE(Adel)
Education Unit
Head
B. Hawkins, BA(NewEng), MEd(Melb), MACE
Library and Information Technology Services
Swinburne Librarian
W. Linklater, BA, DipLib(NSW), DipEdTech(CNAA), ALAA
Head, Information Technology Services
K. Anderson, MA(Brad), BSc(Melb), DipEE, MIE Aust, MACE, TTTC
Corporate Division

Director
J.G. Wallace, MA(Glas), MEd(Glas), PhD(Bris), FASSA

Associate Directors
F.G. Bannon, BCom(Melb), FASA, ACIS, LCA
B.A. McDonald, BEd(Mon), DipEd(Rusd)

Catering Department
Manager
P. Boxshall, AFClA

Central Technical Workshops
Manager
G. Netleship, CEng, MIMarE

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

Finance Department
Principal Accountant
J. Vander Pal, DipAccy(PTC), BBus(SIT), AASA, CPA

Systems Accountant
A. White, BBus, GradDipCDP, AASA, MACS

Divisional Accountant, SCT
Philip Wilkins, BBus(VicC)

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

Gardens and Grounds
Head
G. Mickeleburough

Maintenance Department
Maintenance Officer
J.A. Williams, FLINs, Eng, MlnsEng(Aus), AMCIBSE

Personnel Department
Personnel Officer
P.D. Madd, BE(NSW), AFAIM

Planning Department
Planning Officer
T. Rosauer, BArch(Melb), FRAIA

Registrar and Academic Services
Registrars
G.L. Williamson, BSc(Adel)
Assistant Registrar (Services)
L. Scheuch-Evans, BS in Foreign Service (G'town)
Assistant Registrar (Student Administration)
P.E. Kokot, BEc(LaT)

Security Department
Chief Security Officer
S.A. Shawood

Swinburne Press
Manager
A.D. McNaughton

Equal Opportunity Officer
S. Reilly, PhD(Oregon), BEd, BA(Melb)

Swinburne Library

General Information

Library and Information Technology Services

Library

Swinburne Librarian
W. Linklater, BA, DipLib(NSW), DipEdTech(CNAA), ALAA

Administration
H.J. Sweeney, BScLibTech(SIT), ALAA

Audiovisual
B. Nichol, BScLibTech(SIT), BA(Melb)
K. Armitage, BA(SIT), GradDipLib(MCAE)
M. Hawkins, CertAppSocScLibTech

Periodicals
K.M. McGrath, BA(Mon), GradDipLib(RMIT), ALAA
C. Barnes, BA(UNE)

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

Acquisitions/collection
J. Thawley, BA(Qld), GradDipLib(RMIT), ALAA

Cataloguing
G. Hodges, BA(UWA), GradDipInfoServ(RMIT)
M. Wilkinson

Readers’ services
P.C. Simmenauer, BA, DipLib(NSW)

Circulation
E. Turner, CertAppSocScLibTech

Reference
I.A. Douglas, BA(N’vde), MSc(Strath)

Reference and reader education
B. Jones, BScLibTech(SIT), ALAA

C. Bates, BA(LaT), GradDipLib(MCAE), ALAA

B.A. Camfield, BA(SIT), AssocDipLib(RMIT)

J. Laster, BA(Mon), GradDipInfoServ(RMIT)

Periodicals
G. Turnbull, BEd(LaT), GradDipLib(RMIT), GradDipTeach(Bris

CAE), AssocDipFineArt(OCA), CertComm. Ill. (QCA)

S. Whelan, BA(LaT), GradDipLib(MCAE)

The reference and lending library is housed in a modern five-
storey building with capacity for 600 readers. The major pur-
purpose of the library is to supplement and support formal course
instruction in the two teaching divisions of Swinburne and to
provide ample opportunity for recreational and general reading.
There is a total of 67 staff in the department. All books,
periodicals and other materials in the collection are available for
use in the library and most may be borrowed. Copying facilities
are available at a reasonable cost.

In 1987 the collection comprised approximately 170,000 items.
In addition, 3,064 periodical titles are received, including a wide
range of indexes and abstracts. There is a large collection of
audiovisual material, including records, audio and videotapes,
slides and films.
Library staff work in close association with teaching staff in developing these resources, and in helping the students by introducing them to a diversified 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 catalogues, reference works and bibliographical aids both in direct connection with their courses, and also in relating their specialist courses to society as a whole. Reciprocal borrowing facilities at other tertiary educational institutions have been arranged to increase the resources available to students and staff.

**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 are welcome to read or use audio and video facilities within the library, provided that they, too, accept the rules. In general they are not entitled to borrow from the library. The Swinburne Librarian, or the senior staff member on the premises, may refuse entry to the library to any person not registered as an approved borrower.

Persons entitled to borrow from the Library

Members of the Swinburne Council.

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.

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
- Queen’s Birthday
- Show Day
- Cup Day
- Closed on all other public holidays.

**Teaching breaks**

- Monday to Friday — 9.00am 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 11.00am 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 to students are available only on presentation of the following conditions:

**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.

**Materials on loan that are required for inclusion in the Counter Reserve collection will be recalled. Failure to respond to a recall will incur suspension of borrowing entitlement.**

**Borrowing periods**

**Fortnightly loans**

The normal loan period for most books and pamphlets is a fortnight, and a week for audiovisual material. Some video cassettes are now available for 2 day loan. Language tapes and Art slides may be borrowed for four weeks. This period may be extended provided the item has not been reserved and it is not overdue.

**3-day loans**

Available for material on the shelves which is in moderately heavy demand, and is marked ‘3-day loan’. This material may be borrowed at any time of the day, but may not be renewed.

**Overnight loans**

Available for: unbound periodicals, including annuals and irregular publications (but excluding display issues). A small number of items in the Counter Reserve collection are also available for overnight loan.

This material may be borrowed after 4.00pm from the Counter Reserve and should be returned by 9.00am the next day.

This condition may be varied for part-time students.

**Counter Reserve collection**

Material in this collection may be borrowed for a period of two hours for use in the library, except as specified above, and will be issued in exchange for a current Swinburne identity card, which is held until the item is returned.

See the Guide to the Library for further details.

**Audiovisual materials and equipment**

Video cassettes and slide tape programs are available for use on the Swinburne campus only, with the exception of Art slides, which may be borrowed for four weeks. Language tapes may also be borrowed for four weeks. Most other material may be borrowed for one week and renewed if not reserved or overdue.

A range of instructional/personal computer software is available for use on learning stations located in the area. Both material 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’), vertical file material, microforms 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**

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 or part thereof overdue to a maximum of $5.00 per item, suspension of borrowing privileges and withholding of examination results.
Overnight loans — per item
First day: $0.50 per hour late. For each day thereafter: a further $2.00 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

Any items required for Counter Reserve will be recalled.

Lost library material

If an item is lost, the loss must be reported immediately to the Overdues Section, level 2. If after a reasonable search has been made, the item cannot be found, the borrower shall be responsible for the replacement cost plus a processing charge.

Identity cards

These are not transferable. Loss of an identity card must be reported immediately 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 Student Administration at a cost of $5.00.

Rules for general conduct

Eating is not allowed in areas of the library open to the public.

Drinking, except from the drinking fountain, or in the immediate vicinity of the drink vending machines, 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 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 note and abide by the relevant provisions of the Copyright Act.

Information Technology Services

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

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 audiovisual services well in advance of the recording date.

Also available is the short-term loan of slide projectors, opaque projectors, audio and videotape recorders and other audiovisual equipment.

Student Health and Welfare Unit

Unit staff
Head, Student Health and Welfare Unit
R. Vines, BA(Hons)(Melb), MSc(Edin), MAPsS, AssocBPSS
Administrative Officer
L. Cacavas, AssocDipPSP(SIT)

Student Counselling staff
Student Counsellors
R. Vines, BA(Hons)(Melb), MSc(Edin), MAPsS, AssocBPSS
L. Moloney, MA(ClinPsych)(Melb), MScEdPsych(Edin)
R. MacDonald, BA(Melb), DipEdPsych(Mon), MAPsS
A. McGennie, BSc(Melb), BSW(Melb)
H. Silberg, BA(Mon), GDipVocCoun(RMIT)
Receptionist
J. Ralph

Careers Information Centre staff
Careers Information Counsellor
S. Wayth, BA(Melb), GDipLibStud(WAIT), AILAA
Schools Liaison Officer
D. Wright, MB, BS, BMedSc
Administrative Officer
J. Duffy, BA(Hons)(Mon), MA(Mon)

Graduate Placement, Student Employment and Housing staff
Graduate Employment Adviser
R. Ware, BA(Altrktob), GradDipEd(MSC), PostGradDip in Careers (VicCollege)

Housing and Student Employment Officer
B. Graham, BAAppSoiPharm)(TCAE)
Receptionist
R. Hamlet

Student Health Service staff
Medical Officer
S. Clarke, MB, BS(Lond)

Sisters
J. Fischer, RN(Vic(UK), RN(USA)
A. Hart, RN(Vic)
Chaplaincy
Ecumenical Chaplain
H. Aveling, MA(Syd), BEd(WACAE), TSSF, STM(Wston)

Jewish Chaplain
M. Katz, BJunio(Mon)
Student health and welfare services

The following services are available to all students:

- Careers and course information
- Counselling — Course and vocational personal
- Employment — post secondary survival strategies
- Graduates and part-time

Health
- Housing
- Low interest loan
- Schools liaison program
- Chaplaincy

These services, with the exception of those of the Chaplain, are administered by the Student Health and Welfare Unit.

Student counselling
Location: room 206, level 2, BA 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.

Counsellorship 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 and 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.

The Counselling Service is open from 8.45am to 5.00pm on Monday, Tuesday, Thursday and Friday and from 12 noon to 8pm on Wednesday throughout the year. Times outside the advertised hours may also be arranged. The service operates on both a fixed appointment and ‘drop in’ basis.

Careers Information Centre
Location: room 206, level 2, Business and Arts Building
Telephone: 819 8023

The CIC is available to Swinburne students and staff, parents, prospective students and school teachers. The CIC service is free and offers a confidential Careers Information Counselling Service.

The CIC maintains an up-to-date Careers Library with information about courses, careers, prerequisite and recommended subjects, application and selection procedures, transition to the educational campus, special entry procedures and student financial assistance schemes, in particular, AUSTUDY. Students are assisted in accessing and understanding the information through a Careers Information Counselling Service.

A Schools Liaison Program is developed within the CIC to facilitate communication between secondary schools and Swinburne and to assist prospective students to explore the educational opportunities available at Swinburne.

The CIC is open throughout the year from 9am to 5pm on Monday, Tuesday, Thursday, Friday and from 12 noon to 8pm on Wednesday.

Information on employers and employment opportunities is provided by the Student Employment Office.

Student health
Location: Lane way 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, hearing tests (audiograms) and referral information is available (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 — 3 hours daily.

Student housing, part-time and vacation employment
Location: Room 401b, top floor, Student Union Building (above the Cafeteria)
Telephone: 819 8882

The housing service provides addresses of a wide range of accommodation offers 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, casual and vacation 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 and vacation employment notice-board.

The office is open from 9.00am to 5.00pm Monday to Friday (later on Wednesday by appointment for the convenience of part-time students).

Graduate or placement, student employment advice
Location: room 401a, top floor, Student Union Building (above the cafeteria)
Telephone: 819 8521

Assistance is provided for students, former students and graduates seeking full-time employment.

Several services are available including:

- an information and placement service for students seeking full-time employment and details of major recruiting campaigns;
- an employment register for students and graduates seeking work and wishing to change their employment;
- assistance with job application and interview techniques, individually or in group workshops;
- personal guidance and support for students in their search for appropriate employment;
- a campus interview program where a range of employers visit the campus to interview final-year diploma and degree students;
- an employment resources library including details of employment prospects and career opportunities with private and public employers.

The office is open from 9.00am to 5.00pm Monday to Friday (later on Wednesday by appointment for the convenience of part-time students).
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. Respecting 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 on level 2 (room 207), Business and Arts Building.

Telephone: 819 8025

Swinburne Chaplaincy
Location: room 207, level 2, BA 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. They are also involved in the community life of Swinburne and take part in student activities where appropriate. In particular, they seek to promote a deeper awareness of the dignity and value of human life in all its aspects. The Ecumenical Chaplain is available to celebrate weddings and christenings for members of the Swinburne community. Both the Ecumenical and Jewish Chaplain work in close co-operation with the Student Health and Welfare Unit.

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, long-term and short-term 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
Rotary Swinburne Bursary Fund

Enquiries should be made to the Student Counselling Service.

Telephone: 819 8025

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 1988 the following weekly benefits were available: These amounts will be adjusted in 1989.

Maximum living allowance for eligible full-time tertiary students (this includes TAFE associate diploma, certificate and technician students) *

<table>
<thead>
<tr>
<th>Age Group</th>
<th>16-17</th>
<th>18+</th>
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<tbody>
<tr>
<td>Dependent students at home</td>
<td>$50.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>Dependent students away from home</td>
<td>$76.00</td>
<td>$91.20</td>
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<tr>
<td>Independent students</td>
<td>$76.00</td>
<td>$91.20</td>
</tr>
</tbody>
</table>

Maximum living allowance for eligible full-time secondary students (this includes TAFE secondary level students)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>16-17</th>
<th>18+</th>
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<tbody>
<tr>
<td>Dependent students at home</td>
<td>$50.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>Dependent students away from home</td>
<td>see AIC</td>
<td>see AIC</td>
</tr>
<tr>
<td>Independent students</td>
<td>$76.00</td>
<td>$91.20</td>
</tr>
</tbody>
</table>

Maximum allowance for dependent spouse $42.70

Allowance for dependent child $17.00

Child care assistance for sole parents (new initiative for 1988)

Special payment to cover the Higher Education Administration charge $263.00

*Note: These figures were an estimate as at August 1988 when the final 1989 rates were not finalised.

Assistance for Isolated Children Scheme (AIC)
For students 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.

Aboriginal Secondary Assistance Scheme (ABSEC)
For secondary or primary students of Aboriginal or Torres Strait Islander descent.

Aboriginal Study Assistance Scheme (ABSTUDY)
This scheme provides assistance to tertiary students of Aboriginal or Torres Strait Islander descent. Details are available from the Careers Information Centre, Counselling (819 8025).

Young Homeless Allowance
This scheme was introduced by the Commonwealth Government on 1 July 1986 for full-time secondary or tertiary students or people receiving a Social Security benefit. Details are available from the Careers Information Centre.

Pamphlets and application forms are available from the Careers Information Centre, room 206, Business and Arts Building (818 8023) or the Commonwealth Department of Education, 17 Yarra Street, Hawthorn 3122. Tel: 810 0333.

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

Students who wish to purchase these tickets should go to the Student Administration Office to complete the necessary forms. Only full-time students are eligible for fare concessions.

Students must present their student card when applying for a concession form. Australian Airlines and Ansett airline concessions are available from the Sports Association.

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

Postgraduate awards
Commonwealth postgraduate awards assist people studying full-time for Master's degrees. Details are available from the Registrar.
The instrument workshop repairs and maintains instrumentation in the electronic, mechanical, electrical, and to a minor extent optical fields. Some manufacturing for student projects, in consultation with lecturers, is also undertaken.

Central Technical Workshops
Manager
G. Nettleship, CEng, IMarE, 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, electrical, and to a minor degree, optical fields. Some manufacturing for student projects, in consultation with lecturers, is also undertaken.

Access Education Department
Head
J. Learmont, BA(Hons), MEd(Mon), MACE, 819 8816
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 given to the provision of English tuition to TAFE and CIT students from non-English speaking backgrounds.
Tuition may be short-term to overcome a specific 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. Understanding staff are available to discuss people's problems in English and/or mathematics and follow-up with appropriate tuition.

Catering Department
Manager
P. Boxshall, AFCIA, 819 8172
The Cafeteria is located above the Ethel Swinburne Hall (see drawing 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 Applied Science 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 Applied Science Building, Room no. F318.

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 aim of the Centre revolve around encouraging a beneficial contact that will produce an understanding of the needs of the individual child and their family.
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
R. Hodges
Senior Programmer
R. Schorer, BSc(Hons)(Mon)
Operations Supervisor
Q. Kelly
Telephone: 819 8509
The Swinburne Computer Centre provides computing and data processing facilities for teaching, research and administrative applications.
In 1989 the Computer Centre will have three processors available to students who require access to Swinburne's central computing facilities. All these machines will be located in the Computer Centre's main computer room.

(a) IBM 3090/120E
The largest of these three systems is the IBM 3090 Model 120E. This system which replaced the Facom M180N and IBM 4341 mainframes was installed in 1988. The 3090 represents both a major upgrade to the Institute's computing resources and 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 giga bytes of disc storage and a communications subsystem to support asynchronous and synchronous 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, SAS, SIR, IMSL, PDE-PROTRAN, NASTRAN, CADAM and CATIA). Data base products available on the 3090/1120 are CICS/DB2 and Cullinet IMS. Support for artificial intelligence applications is provided by IBM's Expert Systems Environment (ESE) and the operating systems available include VM/XA, MV/XA and PICK.

Swinburne entered an arrangement in 1988 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 our commitment to the provision of industry standard computing facilities for our students.

(b) Expert Systems

In association with Intelligent Systems Research Pty Ltd., Swinburne has installed an Olivetti minicomputer to allow access to the 5th Generation language "XL". The facility allows post graduate students to undertake research in the area of expert systems.

(c) UNIX

The first semester 1989 will see the introduction of a new super mini computer specifically assigned to the UNIX operating system. It is anticipated all faculties will become users of the system which will ensure a steady growth path for UNIX at Swinburne. Access to the machine will be via the existing Micom based, campus wide network. Initially the system will be applied to the study of UNIX and the "C" language and simulation packages.

The Centre produces a publication 'User News' several times throughout the academic year. Designed to assist and acquaint teaching staff and students use the computing facilities in an efficient and co-ordinated manner. The Computer Centre also administers 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 terminal 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.

Support 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 is based on 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.

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**Education Unit**

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

The function of the Education Unit is to assist the teaching/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.

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**Equal Opportunity Office**

Equal Opportunity Officer
S. Reilly, PhD(Oregon), BED, BA(Melb) 819 8855

Assistant to Equal Opportunity Officer
L. Middleton, BA(RMIT), Grad Dip Urban Sociology 819 8804

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**Information Office**

Publicity Co-ordinator
R.J. Moore, 819 8460

General enquiries: 819 8444

The Information Office directs internal and community relations activities. The duties include writing and compiling the Swinburne magazine and Swinburne Staff News, producing the Swinburne Handbook and course brochures, staffing the Swinburne Enquiries Office, liaison with the media, placing course advertisements, disseminating course information and publicising the activities of the Swinburne Institute of Technology and Swinburne College of TAFE.

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**Student parking**

Enquiries: Student Union, 819 8520

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 a student car park;
- the car being within a parking space and not in an aisle, garden or other inappropriate area; and
- the driver's observance of directions given by any of Swinburne's Parking or Security Officers.
Parking permit stickers
Available free of charge from the Student Union Office. ID number and car registration number 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 parking 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 infringements on Swinburne land attract the same fines that apply on public roads, currently $30.00. Under the Transport Act 1983, 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 car park offers 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, four staff car parks may be used by students after 5.00pm only:

- North end of John Street
- East end of Wakefield Street
- Paterson Street
- Frederick Street

Additional parking areas which can be used are located immediately behind the Hawthorn Football Ground, accessible from Linda Crescent. Only 6 minutes walk from Swinburne, that area offers ample parking.

Swinburne Commercial Enterprises
Manager
P. Quail, BEc, DipEd, 819 8847
Assistant Manager
E. Gerrand, BBus(SIT), AASA, 819 8069
Swinburne Commercial Enterprises short courses
A. Cassidy, MA(Lond), MIPM, MAITD, 819 8463

Conference Centre bookings
M. Birthwhistle, 819 8554 or 819 8463

General enquiries
S. Donnheu, 819 8463 or 819 8847

The function of Swinburne Commercial Enterprises is to establish and maintain close working relationships between Swinburne staff and outside organisations. This involves interaction with industry, commerce, government organisations and the community.

The office manages the following services:

Swinburne Applied Research and Development Division
This division organises the services of the staff of Swinburne Institute of Technology or Swinburne College of TAFE for consulting, technical information services, testing or design and development of special projects.

Swinburne Intellectual Property and Technology Transfer
The Liaison Office provides assistance to Swinburne staff in the areas of patents, copyright and trade marks and assists in the marketing of Swinburne ideas and inventions.

Swinburne Conference Centre
The Swinburne Conference Centre is located at the north-west end of the campus. It is a pleasantly situated centre, ideal for small conferences, seminars and training courses. It comprises a large seminar room, several small discussion rooms 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.

Swinburne Commercial Enterprises short courses
The staff of the office co-ordinate and manage training courses. Organisations with training needs can have courses developed for special requirements. The office also assists Swinburne staff in planning departmentally-organised short courses.

Hire of Swinburne facilities
Outside groups wishing to use Swinburne facilities should contact the office to discuss their requirements. Swinburne lecture theatres and classrooms may be booked for use by outside organisations and such bookings must be made through SCE.

TechSafe
TechSafe is a joint venture between Swinburne Institute of Technology, Swinburne College of TAFE and the National Safety Council of Australia (Victorian Division), which provides consulting expertise and training in the field of occupational health and safety. Enquiries should be directed to 819 8463 or the TechSafe telephone, 819 2624.

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 the 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, student 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. It's objectives being to provide an efficient and convenient service to the Swinburne Community as a whole.

The bookshop was set up as a Co-Operative structure to be able to raise working capital via the sale of shares and also to ensure that the control of the operation remained with the members who used the Co-operative. All profits of the Co-Operative remain with the organisation to ensure its continued growth and viability.No external beneficiaries exist.
Further information, rules and regulations can be sought from the Registered Office of the Co-operative, situated in the Union Building, John Street, Hawthorn.

Services

- Computers, monitors, printers etc.
- Audio and video cassettes.
- Gifts, cards, wrapping paper and novelties.
- Secondhand books.
- Typewriters.
- Binding service for presentation of assignments etc.
- Film and film processing.
- Graphic and artist supplies.
- Calculators and accessories.
- Typewriters.
- 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.

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.

We sell:
- 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.

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 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 12-1.00pm
Christmas vacation:

Closed mid-December to early February

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.

General Information

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 co-ordinate 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 1988 Executive of the Union consisted of:

President: Lisa King
Vice-president: Michelle Fergus
Activities Director: Tory Meathrell
Education Director: Malcolm Harding
Media Director: Simon Kirby
Finance Director: Hilda Theriot

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 last 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 resuming. Preparing 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.

Activities Department — clubs and societies
The Activities Department of the Student Union and various clubs and societies organise numerous functions, both of a social and educational nature. The range of activities include lunches with bands, solo performers, Union nights, Union days with entertainment and barbecues, comedy and contemporary performers, workshops, Unions Issue weeks, part-time evenings, film afternoons, street theatre and plays, and not forgetting the event of the year — "The Union Ball". The Activities Department is also responsible for co-ordinating and assisting the student-based clubs and societies on campus. Those active in 1988 included:

- ACES (Association of Civil Engineering Students)
- ASPS (Association of Swinburne Psychology Students)
- Bahai Faith
- BIT P.C. (Bachelor of Information Technology P. Club)
- Business (TAFE)
- Christian Association
- Croatia Club
- Electrical & Electronics
- Esoteric Club
- Explorers Club
- Fire Technology (TAFE)
- Gay Society
- Greek Club
- Italian Club
- Japanese Club
- Laboratory Technicians (TAFE)
- Mechanical & Manufacturing (TAFE)
- MEKS (Mechanical Engineering Klub of Swinburne)
- MESS (Manufacturing Engineering Swinburne Students)
- Music Club
- Photographic Society
- Resistance
- SAM (Swinburne Association of Marketing)
- SCABS (Swinburne Chemical And Biology Students)
- SCATT (Swinburne Club Against Tertiary Taxes)
- SLABS (Swinburne Leaged of Advanced Bldg Students — TAFE)
- SLOCS (Swinburne League of Boisterous Students)
- Sociology (Applied Sciences (TAFE)
- SOSA (Swinburne Overseas Students Association)
- Swinburne Campus Chapter of Engineers
- Swinujss (Swinburne Jewish Students Society)
- Vietnamese Society
- Wargaming and Role-Playing Society
- Wine Appreciation Society
- Women's Support Network

World Issues Forum
For further information on clubs and societies (e.g. how to start a club, applying for affiliation and financial support from the Union etc.) see the Activities officer.

Union van
The Student Union provides a Toyota Hiace (12 seater) van for use by clubs and societies for their functions if required. Bookings can only be made at the Contact Desk.

Personal accident insurance scheme
All students enrolled in both Swinburne Institute and Swinburne College of TAFE who have paid their union fees are automatically covered by accident insurance.

This insurance scheme covers all accidents, 24 hours a day, worldwide. For further details, please contact the Administration Officer in the Union Office.

Union Office
This is situated 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.

Telephone numbers: 819 2156/2656/2966/8520/8553.

Contact/Information Desk
The Contact/Information Desk is the 'nerve centre' of the Student Union for information on Union services, activities and coming events — in effect a directory of all Union services. Students will find a 'Friendly Contact Worker' who will provide assistance on how to survive at Swinburne. The desk also has listings of various off-campus political/solidarity groups which you may wish to become involved with.

The Desk operates as the ticket sales point for Union activities, and sells t-shirts, windcheaters, and other Union memorabilia. The Australian Buying Advisory Service (ABAS) is available at no charge to students. This service guarantees that the price you have been quoted is in fact an unbeatable offer. So if you are considering buying a camera, television, stereo, etc., see us. Feel free to drop in anytime if you need help, direction, or for any enquiries. The Contact/Information Desk operates Monday to Thursday from 9.00am to 6.00pm, Friday from 9.00am to 4.00pm, and is located in the Student Services Centre (opposite Ethel Hall in John Street).

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 9291. As the library is a non-profit organisation, its hire rates are very reasonable. All equipment requires a deposit and student/staff ID for borrowing. Deposits can be waived for students/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.

Equipment available includes: lawn mowers, engine tune-up kit, arc welder, brush-cutters, electronic typewriters, auto tools, orbital sanders, percussion drills, belt sanders, barbecues, PA system, tents and rucksacks.

The Tool Library is open:
- Monday 9.00am — 5.00pm
- Tuesday 2.00pm — 6.30pm
- Wednesday 2.00pm — 5.00pm
- Thursday 2.00pm — 6.30pm
- Friday 9.00am — 5.00pm

Equipment may be borrowed and returned only during the above hours.
General Information

Union coffee lounge
Situated on the third level of the Union Building, this is a comfortable and popular lounge which serves tea, cappuccino, hot and cold drinks in the cafeteria. Business hours of the cafeteria are from 7am to 10pm. Its location is next to the Bookshop.

Union Cafe
The "Cafe" provides a wide range of food and beverages, including hot and cold drinks, sandwiches, salads, cakes, and pastries. Ideal for those who only want a "cuppa" without queueing in the cafeteria. There are two floors to the cafe with the top floor seating approximately 100 people.

Ethel Hall
Clubs and societies can use the hall for their functions. Bookings are 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. 3SSR provides students with a variety of music and other programs 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, carriage production facilities, an "on air" broadcast studio, sound 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. Appointment must be made at the Union Office.

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 it is in regard to their course/assessment, teacher relationship, enrolment process, or whatever. The unit can also help prepare students, who are called 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 Assistant Education Research Officer to undertake this program. This person is situated in the Union Office.

Campaigns and Pressure Group Coordination Centre
This is the place where students can contact the Student Union to undertake group action to help improve their situations. There are always well-organised students and staff members available to help.

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.

Campus Clippe Shoppe
The Union Hairdresser provides an excellent service at very competitive rates. Situated adjacent to the Video Pit — 4th level of the Union Building — the Shoppe is open three days a week. To check opening times, or make bookings, ring the hairdresser direct on 819 8495; or the Union Desk on 819 8520.

Student publications
A weekly publication, Sibull, is provided by the Student Union. This publication provides information about on-campus student activities and other matters of particular interest to students as well as free advertising. The Union also provides a free newspaper called The Student Advocate, which deals with issues of general public interest.

SCAM is the monthly newspaper of Swinburne students. SCAM is published every month, and carries articles on various subjects which probably won’t be found in the monopoly media. It is a monthly newspaper analysing social issues pertaining to students and the wider community of which they are part.

Both these are produced at the Media Office of the Student Union. Contributions by students to SCAM are always welcomed, in graphics, cartoons or articles. The Union diary and year planner are available at the beginning of each year from the Contact Desk and at re-enrollment.

Club printing
Clubs and societies can have their publicity materials printed free in the Contact/Information Centre. Other publicity materials can be produced at minimal cost.
Word Processing (Typing) Centre
Using IBM word-processors the Student Union operates an essay typing service. It is designed to give you, the student, the opportunity to present your assignments, resumes, etc. in a professional manner. The cost is extremely competitive with those available commercially, and the normal job “turn-around” time is 2-3 days (subject of course to demand). The centre is located on the 4th floor of the Union Building (opposite the Union Office).
Telephone numbers: 819 2966/8553.

Typing Room
A number of electric typewriters are made available by the Union, free of charge, for use by Swinburne students. To gain access to the machines, students need only exchange their ID cards for a typesetter at the Word Processing Centre (which is situated next door). The Typing Room is open Monday to Friday during Union Office hours.

Sports Association
Executive Officer
A. Clarke, B.AppSci(FIT), 819 8018
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 Recreation offered to members include: Aerobics, Athletics, Badminton, Bowling, Car, Circuit training, Cycling, Football, Golf, Hanggliding, Hockey, Horseriding, Indoor cricket, Indoor soccer, Meditation, Motorcycle, Netball, Nordic skiing, Orienteering, Sailboarding, SCUBA diving, Skydiving, Snowski, Squash, Surfing, Tai Chi, Tae Kwon 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.
Swinburne College of TAFE

Director
J.G. Wallace, MA(Glas), MEd(Glas), PhD(Brist), FASSA

Assistant Director
R.C. Chamberlain, DipMechEng, CertEng(Aero), TTTC

Head, Business Studies Division
R.W. Conn, BBus, DipEd, AASA, CPA (Acting)

Head, Finance and Information Technology Department
W. Ponton, BEc, DipEd (Acting)

Head, Marketing and Administration Department
I.M. Walker, MA, BCom, DipEd

Manager, Centre for Small Business
M.J. Joyce, BBus, DipEd, AASA, CPA

Head, Engineering Division
F.A. Gaunt, SEC A Grade Licence, DipTT, TechCert(Electronics) (Acting)

Head, Building Construction Department
R.L. d’Argaville, DipTT, BuildInspCert, TTTrC (Acting)

Head, Electrical and Electronics Technology Department
A.G. Hampton, BEc, TechCert(Electronics) (Acting)

Head, Mechanical and Manufacturing Technology Department
J. Brennan, BEng(Mech), DipEng(NAval Arch), DipEd, CEng, MIMechE

Manager, Centre for Engineering Technology
L.J. McLaughlan, TTTrC, DipTT

Head, Social and Applied Sciences Division
G.A. Harrison, BSc, DipMechEng, TTTC

Head, Applied Science Department
R. Gullan, BSc(Hons), MEd, MACE

Head, Social Science and Humanities Department
G. Arnott, BEc, BEd, GradDipBusAdmin (Acting)

Head, Access Education Department
J. Learmont, BA(Hons), MEd, MACE

Senior Curriculum Development Officer
R.M. Carmichael, BA, BEd

Manager, Computer Services Unit
C.A. Burgess, BSc, DipEd

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 from 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 are 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 section.
Application procedure

Entrance requirements
Apprenticeship courses
To be eligible to enter an apprenticeship in any of the trades for which a course is offered at Swinburne, a candidate should be at least fifteen years old and after having selected a trade, should:

1. Apply to the State Training Board, Nauru House, 80 Collins Street, Melbourne, 3000, for a certificate of qualification to enter into an apprenticeship.
2. Obtain work with an appropriate employer.
3. Serve a probationary period at the trade, then sign an indenture of apprenticeship.

After entering into the indenture, it is the responsibility of the apprentice in conjunction with the employer, to enrol at an appropriate TAFE college for the course of study to be undertaken.

Certificate courses
See under the entry in the appropriate Division.

Victorian Certificate of Education
See under Social and Applied Sciences Division.

Mature-age entry
Special provision is made for mature-age entry. The scheme is designed for applicants who have not satisfied the standard entry requirements but who are able to show that they can cope with their proposed course of study. Prospective students should contact the appropriate department for advice.

Closing dates for applications
Full-time study
For consideration in the first round of offers:
VCE (TOP) 4 November 1988
All other courses 9 December 1988
* (except Associate Diplomas)
* As Associate Diplomas are now post Year 12 and selection can, therefore, be dependent on VCE results, applicants should contact the appropriate department for information on application procedures.

(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.

Student Administration Office
The Student Administration Office provides information for students on admissions, enrolment and examinations 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 examinations regulations and procedures is outlined below.

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.

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, within seven days.
Students must notify the Student Administration Office of any withdrawal or additions of subjects:

(a) by Friday 14 April 1989 for subjects with a mid-year final examination result, and
(b) by Friday 1 September 1989 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.

**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 1989. 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 take extra subjects in the same or a different course should only complete an Amendment to Enrolment form to add those subjects which require a fee. 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 subject 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.

**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/validaton 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 the library 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 1989 had not been determined.

As a guide those for 1988 were:

- Full-time students — more than one semester academic $112.00
- Full-time students — at least one semester work experience $62.00
- Part-time students — $49.00

For all College purposes, a full-time student is one enrolled for a fee of $5.00.

**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 December exams, the conferring ceremony will be held 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 applicants together with an additional photocopy which will be retained by Student Administration. For more information refer to section on exemptions.
Examinations

1. Timetables
   Approximately half-way through each semester, a provisioonal examination timetable is displayed on notice-boards around Swinburne. 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, without room allocations, is posted at least one week before classes end. Room allocations are posted at least one week before classes end.
   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
Examination 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 of the above definitions.
   2.5 The Chief Examiner is the Director of Swinburne. Responsibilities of the Chief Examiner are, for the time being, delegated to the Assistant Director, Swinburne College of TAFE.
   2.6 An awarding division board is the Division Board responsible for making recommendations to the Swinburne Council for the grant of a particular award.

3. Subject panels
   3.1 The head of department shall appoint a subject panel for the necessary subject areas comprising at least two members of the teaching staff of SCT, one of whom shall be appointed the convener.
   3.2 The panel shall, when required, draft the appropriate division board of the panel's composition no later than the April meeting.
   3.3 A moderator shall be responsible for final submissions to the head of department.
   3.4 The convener of each panel shall be responsible for:
      3.4.1 In the case of examinations and tests, the allocation of questions, the final balance of the paper and the distribution of scripts for marking;
      3.4.2 In the case of continuous assessment, the method of assessment and the maintenance of the register of requirements, tests and performance.
   3.5 Each examination or test paper shall be provided with written solutions or a statement of basic skills to be attained. The panel must be in agreement with the solutions, statement and assessment.
   3.6 The convener shall arrange for appropriate proof-reading and checking of papers and assignments. All examination papers must be forwarded to the Examinations Officer accompanied by a completed Examination Face Sheet.
   3.7 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.
   3.8 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.
   3.9 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 9.05am and afternoon examinations at 1.35pm. 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.
      Unless expressly prohibited by the subject panel, electronic calculators may be used. Such calculators must be battery operated. Students are required to provide their own slide rules, calculators, and drawing instruments. Students will not be permitted to borrow or lend any equipment or material during an examination.

Swinburne College of TAFE
4.2 Special 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 Chief Examiner for approval. The Chief Examiner will notify approved 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 examinations scripts will be available at the Examination Centre when all relevant documents have been cleared but, in any case, not before the afternoon 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 paper. The Examinations Officer will immediately report the circumstances to the Chief Examiner, the subject convener, and the head of the teaching department.

4.4.2 At the conclusion of the examination the Chief Examiner shall convene a meeting of the subject convener, the student concerned and the head of the teaching department to determine:

(a) whether there has been a breach of examination discipline;

(b) whether there is a need for assistance with communication with the student; if it resolves that there is such a requirement it shall adjourn the meeting and arrange for the presence of appropriate professional services when the meeting is reconvened;

(c) if it resolves that there has been a breach of examination discipline, the penalty to be imposed upon the student.

4.4.3 The maximum penalty for cheating or other examination irregularity is that the student be permanently excluded from further study at the College of TAFE and if any penalty is imposed the student shall be notified in writing.

4.4.4 The student shall have the right of appeal as to the finding of a breach of examination discipline and/or the penalty imposed. Such appeal shall be determined by a committee appointed for the purpose by the Director. The Appeal Committee shall consist of five persons of whom:

(a) one shall be the nominee of the Chief Examiner;

(b) one shall be a student of the College nominated by the President of the Student Union;

(c) one shall be the nominee of the subject convener;

(d) two shall be members of the academic and teaching staff of the College nominated by the head of the teaching division;

provided that no member of the Appeal Committee shall have been a party to the original investigation.

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 in a form approved by the awarding faculty board, including:

(a) certification that these regulations have been carried out;

(b) a statement of the assessment procedure;

(c) copies of all examinations, tests and assignments;

(d) where appropriate, copies of solutions or statements of minimum qualities; and

(e) an appraisal of the subject as a whole.

The results under 5.1.1 above shall be transmitted by the head of the teaching department to Student Administration.

5.1.3 Before recommending the results to the awarding division board or its committee established for the purpose, the head of 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 Administration 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, results for subjects which are internally assessed shall use the following gradings:

<table>
<thead>
<tr>
<th>%</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>CR</th>
<th>P</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>100</td>
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<td>50</td>
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<td>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>%</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>100</td>
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<td>40</td>
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<td>39</td>
<td>39</td>
<td>39</td>
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</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>%</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>100</td>
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</tr>
</tbody>
</table>

and, where reports are in two categories only:

Satisfactory

Unsatisfactory
5.2.4 Apprenticeship module results are recorded as:
- Credit CR
- Pass P
- Not Completed NC

5.2.5 The following notations are applicable in special circumstances:
- Special Exam SPX
- Deferred Result DEF
- Not Completed - Continuing NC
- Ceased — no withdrawal CNW

Special circumstances in connexion with the NC category must be approved by the Board of Studies.

5.2.6 The following categories are applicable in the assessment of students in access courses:
- Access course completed ACC
- Access course not completed ACX

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 within forty-eight (48) hours of the examination, weekends and public holidays excluded.

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.

7.6 Student Administration shall notify the head of the awarding division of any deferred result which has not been finalised within three months of the date of publication of the deferment. The division board must deal with the matter at its next meeting.

8. Students discontinuing
Any student who is enrolled in a subject on the date on which final candidates lists are produced and who is known to the teaching staff to have discontinued the subject may be recorded as having ceased the subject. The result grade used in such a case shall be CNW — Ceased, no withdrawal.

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 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 for onward transmission to the division board.

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

EXTRACT:

9. Applications — Consideration and special examinations

9.1 Application for special consideration or admission to a special examination shall reach the office of the STB within the time limits shown in Section 10.3. Such applications will be accepted only on the appropriate form and should be sent to:

Examinations Unit
State Training Board
PO Box 6079
MELBOURNE VIC 3004

9.1.1 A candidate who applies on medical grounds for special consideration or a special examination shall submit an application and medical certificate in the form set out in Section 10.4.2. Such applications must be signed by a medical practitioner.

9.1.2 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 relies and shall furnish any corroborative evidence which may be required.
9.1.4 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 Unit.

10. Students with disabilities

10.1 Special examination facilities may be made available for students with disabilities. On application to the Examinations Unit, arrangements can be made for additional reading or writing time, special seating or rooms or any other assistance which may be necessary. Refer 8.11.2

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

10.3 Applications will only be accepted on the appropriate form.

8. Special Examinations

8.1 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.

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

8.3 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.

8.4 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.

8.5 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.

8.6 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.

8.7 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 within strict time limits.

8.8 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 or unclear basis for medical grounds will not be accepted. The report must be on the specified form and in the prescribed manner. See appendix 1.

(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 examination.

(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 of the time of sitting will be arranged rather than a granting of a special examination therefore prior notice is essential.

8.9 In certain circumstances, Colleges who strongly feel that a special 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 TEX 20 examiners handbook. Colleges must not proceed without the permission of the STB Examinations Unit.

8.13 Guidelines for Special Consideration
Students cannot apply 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.

8.10.1 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.

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

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

8.10.4 (c) & (d) must be received by State Training Board Examinations 14 days prior to the examinations. Evidence must be provided to support the application.

8.10.5 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 allowance for actual inability to perform or cope with the examination content. The candidate must be able (in general) to reach the common standard expected with only the borderline cases being considered.

8.10.6 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.

8.11 Chronic or Long Term Handicapped

8.11.1 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 photostats of that letter with each examination script so that further consideration can be given by the examiner who actually marks the paper.
8.11.2 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 time, (b) provision of scribe, (c) extra reading time, (d) isolation provision.

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

**STB Examinations — Application for access to examination 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:—
STB Examinations
STB, Victoria
P.O. Box 6079
Melbourne, 3004
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.

**STB — Application for Examiners report**

**Recorrections**
1. Any candidate who fails an externally set and marked examination other than a practice examination may, on payment of a fee of $20.00 (made payable to the STB, Victoria), have his/her examination paper in that subject recorrected. This fee is non-refundable.
   (a) Any application for a recorrection must be lodged, together with the prescribed fee, to the Examinations Unit not later than the end of August for first semester exams and the end of February for second semester exams.
   (b) Applications will only be accepted on the appropriate form which is available from the Student Administration Office.
   (c) Applications should be addressed to:
      STB Examinations
      State Training Board, Victoria
      P.O. Box 6079
      Melbourne, Victoria, 3004

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.
   (e) Please note deadlines are strictly applied.

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

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)
− Numerical control
− 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.
The Centre is also in the process of developing short courses in the areas of Robotics and CIM for introduction during 1989. These will be followed by courses in CAE, to be developed in conjunction with the Business Studies Division.
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 1988, the following weekly benefits were available: These figures are to be adjusted for 1989.*

<table>
<thead>
<tr>
<th>Benefit</th>
<th>16-17 years of age</th>
<th>18+ years of age</th>
<th>Adult Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum living allowance for eligible full-time tertiary students (this includes TAFE associate diploma, certificate and technician students)</td>
<td>$50.00</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>For dependent students at home</td>
<td>$50.00</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>For dependent students away from home</td>
<td>$76.00</td>
<td>$91.20</td>
<td>$91.20</td>
</tr>
<tr>
<td>For independent students</td>
<td>$76.00</td>
<td>$91.20</td>
<td>$91.20</td>
</tr>
<tr>
<td>Maximum living allowance for eligible full-time secondary students (this includes students in TAFE secondary level courses)</td>
<td>$50.00</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>For dependent students at home</td>
<td>$50.00</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>For dependent students away from home</td>
<td>see AIC below</td>
<td>see AIC below</td>
<td>$91.20</td>
</tr>
<tr>
<td>For independent students</td>
<td>$76.00</td>
<td>$91.20</td>
<td>$91.20</td>
</tr>
<tr>
<td>Allowance for dependent child</td>
<td>$91.20</td>
<td></td>
<td>$91.20</td>
</tr>
<tr>
<td>Allowance for dependent child</td>
<td></td>
<td></td>
<td>$91.20</td>
</tr>
<tr>
<td>Maximum allowance for dependent spouse</td>
<td>$42.70</td>
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</tr>
<tr>
<td>Child Care Assistance for Sole Parents (new initiative for 1988)</td>
<td>$17.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Aboriginal Secondary Assistance Scheme (ABSEC)**

This scheme provides assistance to secondary students of Aboriginal or Torres Strait Island descent.

**Young Homeless Allowance**

This scheme was introduced by the Commonwealth Government on 1 July 1986 for full-time secondary or tertiary students or people receiving a Social Security benefit. Details are available from the Careers Information Centre.

**Scholarships and Awards**

There are a number of scholarships and awards for which students from Swinburne College of TAFE may be eligible. Details of these awards are printed annually in the first issue for August of the Victorian Education Gazette and Teachers' Aid. This publication may be consulted at the Swinburne Library.
business studies

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Business Studies Division

Head
R.W. Conn, BBus, DipED, AASA, CPA (Acting)

Finance and Information Technology Department

Head
W. Ponton, BEc, DipEd (Acting)

Academic staff
M. Aronfeld, DipAcc, DipEd, AASA
L.G. Corrie, BCom, TSTC
G. Groom, BEc, DipEd
M.G. Doig, BBus, AASA, CPA
J.A. Mullen, AssDipPSP, DipTT, AlPS
R.N. Lewis, BCom, DipEd, AASA, CPA
L.D. Wynton, AssocDipPSP, DipTT

Marketing and Administration Department

Head
I.M. Walker, MA

Academic Staff
K. Allen, B.Com, DipEd
B. Havenhand, BA, NZTC
C.M. Kent, BA, NZTC
J.A. Mullen, AssDipPSP, DipTT, AlPS
S.E. Quail, BA, DipEd
M. Reardon, DipTT
G.I. Scott, BA, TTTC
C.P. Trahair, BA, DipEd, GradDipSecStud
L.D. Wynton, AssocDipPSP, DipTT

Centre for Small Business

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

Business associate diploma course

The following associate diploma courses are offered by the Business Studies Division:
Accounting
Marketing
Secretarial and Administrative Studies

Business certificate courses

The following advanced certificate and certificate courses are offered by the Business Studies Division:
Advanced Certificate in Accounting
Advanced Certificate in Management Accounting
Advanced Certificate in Taxation Practice
Computer Business Applications
Further Certificate of Business Studies — Management
Office and Secretarial Studies
Operations Management:
- Occupational Health and Safety
- Purchasing and Planning
- Work Study

Personnel
Retailing Certificate
Sales and Marketing

The Associate Diplomas in Accounting, Marketing and Secretarial and Administrative Studies are offered on a full-time basis over two years. The Advanced Certificate in Accounting and the Office and Secretarial Studies Certificate are one-year full-time courses.

The Retailing Certificate and the Further Certificate of Business Studies — Management are two-year part-time evening courses. The Computer Business Applications Certificate is a one-year part-time evening course.

Students pursuing the Operations Management course in any of the three specialist areas will 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 Certificate, Further Certificate of Business Studies — Management and the Retailing Certificate, may attend for one full year in common subjects followed by two years part-time evening studies in specialised subjects.

All of the above courses with the exception of Office and Secretarial Studies are also offered on a part-time evening basis involving four to five years' study.

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 — Law
- Banking — Materials handling
- Book trade — Public relations
- Building societies — Real estate
- Credit management — Records administration
- Customs procedures — Timber
- Hospital administration — Transport administration
- Insurance — general — Travel and tourism
- Insurance — life

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 or mature age entry for Associate Diplomas.

Career potential

The general aim of the Certificate and Associate Diploma Courses is to provide a variety of sub-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 and Advanced Diploma of Business Studies (CBS) units passed at other colleges

If a Victorian Certificate or Advanced Diploma of Business Studies unit has been passed at an 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 certificate 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 CBS 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 Department 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 Department.

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 Certificated Business Studies specialist units.

General rules for granting exemptions

(1) Credit will not be given for subjects which are 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 such as the Victorian Certificate of Education (Higher School Certificate), it may be necessary to provide 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 time

Applications are checked by heads of departments before being recommended to the Business Studies Division Board which meets monthly. Exemptions for Middle-level English and Business Mathematics must be recommended by the heads of Humanities and Mathematics and Science respectively. After approval, letters of notification are prepared and rechecked, therefore students should expect this process to take approximately two months.

Further information

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

Mr. R. Ponton
Head, Finance & Information Technology Dept.
Telephone: 819 8165

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 seeking information on previous course structures should consult earlier handbooks which are available in the Business Studies Department and the Library.
A21DAD Associate Diploma in 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. Post Year 11 students enrol for the Advanced Certificate in Accounting.

First year
Compulsory units
TH133 Communication Skills 1
TH134 Communication Skills 2
TM112 Business Mathematics 1
TS121F Business Computer Applications
TS122F Introduction to Business Computer Concepts
TS132 Keyboard Familiarisation
TS247 Business Law 1
TS301 Introduction to Accounting
TS302 Accounting Reports
TS303 Accounting Systems
TS304 Partnership and Introductory Company Accounting
TS315 Computer Based Accounting

Second-year specialisation in one of the following areas:

Management Accounting Specialisation
TS249 Business Law 2
TS305 Financial Management
TS306 Costing Principles
TS307 Costing Systems
TS309 Introduction to Budgeting
TS310 Advanced Accounting
TS314 Company Financial Reporting
TS316 Manufacturing Budgets
• Plus Electives (see below)

OR
Taxation Practice Specialisation
TS249 Business Law 2
TS305 Financial Management
TS309 Introduction to Budgeting
TS311 Taxation Fundamentals
TS312 Taxation Procedures
TS313 Taxation Practice
TS314 Company Financial Reporting
• Plus Electives (see below)

OR

TS124 Business IT 2

3300DBB 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 Associate 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 are eligible to obtain the Advanced Certificate in Taxation Practice. For the list of subjects, see the second-year specialisations of the Associate Diploma in Accounting.
340DDT Associate Diploma in Secretarial and Administrative Studies

Career potential
This is a two-year course which provides extensive training for students seeking employment in secretarial/office work. Completion of the first year qualifies the student for the award of the Office and Secretarial Studies Certificate (see Office and Secretarial Studies Certificate details).

Course structure
Compulsory units
TS601 Introduction to Computers
TS602 Keyboard Familiarisation
TS603 Using a Time Sharing System
TS604 Organisational Communications
TS605 Technical Writing and Report Writing
TS606 Business Information Requirements
TS607 Microcomputer Concepts and Usage
TS608 Developing Computer Systems
TS609 Stenography - Advanced
TS610 Bi-Lingual Secretary
TS611 Australian Business Environment 1
TS612 Australian Business Environment 2
TS613 Computer Based Management Information Systems
TS614 Management Project

Subject prerequisites
Keyboard Familiarisation should be completed in the first semester of the course. This unit is a prerequisite for the units Using a Time Sharing System and Microcomputer Systems and Usage.

Completion of the unit Business Information Requirements is a prerequisite for Developing Computer Systems.

It is recommended that Using a Time Sharing System and Business Information Requirements be completed prior to commencing Microcomputer Concepts and Usage.

Duration of course
The course is offered on a full-time or on a part-time evening basis. The minimum completion time is one year.

330DDA Office and Secretarial Studies Certificate

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 of stenographic skills, additional time being allocated within the course for the development of these.
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 Changes
- 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
- TS509 Work Analysis Clerical and Services
- TS510 Machine Tool Applications
- TS521 Safety I
- TS522 Safety 2
- TS523 Safety 3
- TS524 Safety 4
- TS525 Planning Procedures 1
- TS526 Planning Procedures 2
- TS533 Materials Management 1
- TS534 Materials Management 2
- TS571 Purchasing 1
- TS572 Purchasing 2

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 details

Compulsory units
- TH133 Communication Skills 1
- TH134 Communication Skills 2
- TS560 Practical Placement
- TS561 Office Computer Applications
- TS565 Administrative Procedures 1
- TS566 Administrative Procedures 2
- TS581 Typing Production 2 (2 unit value)
- TS584 Word Processing 1
- TS585 Word Processing 2

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

Duration of course

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

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, accident/loss statistical systems and a safety measurement program; and develop 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 Changes
- TS504 Predetermined Motion Time Standards
- TS505 Statistical and Estimating Techniques
- TS506 Financial Analysis and Labour Control
- TS531 Safety 1
- TS532 Safety 2
- TS533 Safety 3
- TS534 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
- TM112 Business Mathematics 1
- TM113 Business Mathematics 2
- TS226 Middle-management Practices 1
- TS227 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
- TS531 Planning Procedures 1
- TS532 Planning Procedures 2
- TS533 Materials Management 1
- TS534 Materials Management 2
- TS571 Purchasing 1
- TS572 Purchasing 2

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).

Membership of associations

Students completing the course of study can apply for membership of the Safety Institute of Australia.
3000DFJ Certificate of Business Studies
- Operations Management
- Purchasing and Planning

Career potential
The general aim of this course is to provide a range of middle- level vocational courses designed to educate:

(1) 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
- TS506 Implementation of Changes
- TS551 Planning Procedures 1
- TS552 Planning Procedures 2
- TS553 Materials Management 1
- TS554 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
- TM112 Business Mathematics 1
- TM113 Business Mathematics 2
- TS226 Middle-management Practices 1
- TS326 Middle-management Practices 2

Six elective units from the Certificate of Business Studies subjects
This group must include at least four of the specialised 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 title (Safety 1, 2, 3 and 4).

Membership of associations
Students completing the course of study can apply for membership of the Institute of Purchasing and Supply Management.
3000DGB Advanced Certificate in Personnel

Career potential
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.

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.

A2400C Retailing Certificate

Career potential
The course is designed for students who are working as salespersons in the retail industry, in particular, those with less than eighteen months experience. The course aims to improve the salesperson's performance and future career prospects by providing training in product knowledge, customer relations, stock control, profit planning and advertising. In addition, the course should develop appropriate professional/personal skills and attitudes for a successful career in retailing.

Prerequisites
The course assumes Year 11 standard in English and preferably evidence of satisfactory progress in Mathematics. Students with less than these academic prerequisites but with the experience and maturity to successfully undertake the course will be admitted, but if necessary they may be referred to supplementary programs to improve their skills in these areas.

Course structure
The Retailing Certificate should take two years of part-time study to complete.

Duration of Course
This course is offered on a part-time evening basis only.

First-year units
TS390 Customer Relations
TS391 Control and Movement of Stock

Second-year units
TS392 Store Profitability 1
TS393 Store Profitability 2
TS394 Product Knowledge elective*

*One of the following Product Knowledge electives must be studied in either the first or second semester in second year:
- Wearing Apparel
- Floor Coverings
- Footwear
- Electrical
- Food
- Hardware
- Furniture

A21DFA Certificate of Business Studies — Production

A21DFC Certificate of Business Studies — Supply

A21DFF 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.
A21ADM Associate Diploma -- Marketing

Career 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 age entry is granted if the student is considered to have sufficient maturity and experience to undertake the course successfully.

Length of course
The course is two years full-time study or the equivalent in part-time study, this is normally 4-5 years part-time.

Compulsory units (23 Units)

First Year
TH133 Communication Skills 1
TH134 Communication Skills 2
TS247 Business Law 1
TS248 Business Law 2
TS107 Accounting for Managers
TS360 Selling
TS361 Buyer Behaviour
TS362 Managing the Sales Operation 1
TS363 Managing the Sales Operation 2
TS364 Promotions 1
TS366 Marketing

Second Year
TS123 Keyboard Familiarisation
TS121F Business Computer Applications
TS122F Introduction to Business Computer Concepts
TS236 Economics 1
TS365 Promotions 2
TS367 Marketing Research
TS368 Innovation and Product Management
TS369 Logistics Management
TS370 Direct Response Marketing
TS371 Marketing Project

Plus one elective from the following units
TS372 International Marketing
TS373 Management and Marketing for the Small Business
TS124 Business to Business Marketing
TS375 Services Marketing
TS376 Retail Marketing

Related courses
The following courses are closely related to the Associate Diploma in Business Studies -- Marketing:
A21DCM Advanced Certificate in Marketing
A21DCS 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.

Business subject details

TH133 Communication Skills 1 (1 unit)
TH134 Communication Skills 2 (1 unit)
The general aim of this subject is to enable students to become more effective communicators within an Australian society by developing acclimatise communication and interpersonal skills.

TM112 Business Mathematics 1 (1 unit)
Coping with situations involving the use of business mathematics, more specified mathematics applicable to other subjects, acquiring skills 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 formulae 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 offers and the obligations 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 organisation.

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, aggregate economic behaviour, the role of government, trades 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 and accounting.

TS107 Accounting For Managers
This course is designed to enable 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 reports for sole proprietors, forms of business ownership, accounting reports for companies, limitation of accounting reports, cash management, cost volume profit relationship and budgeting.

TS121F Introduction to Business Computing Concepts
This unit covers the following topics: introduction to the basic concepts of computer hardware and software, computer terminology, the use of spreadsheets in business operations, computer systems and business computing, the use of software applications in business, the use of the Internet in business operations.

TS122F Business Computer Applications
This unit aims to introduce students to the operational characteristics of a range of popular user-oriented commercial packages: word processing, data base, spreadsheet, integrated accounting or industry specific package, graphics. Students will look into the general operation and capability of each package, use it and compare it with other similar packages available.

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.

Victorian Certificate of Education (HSC) Evening Classes

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

TS901 Accounting
TS902 Economics
TS903 Legal Studies

For a complete description of all VCE (HSC) subjects, see the end of the Social and Applied Sciences section.
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 planning process, computers in personnel, human resource implications of restructuring, mergers and takeovers, code of conduct and ethics of the personnel profession.

TS143 Training and Development
The administration of training and development policies, the principles of personal development, design and delivery, and assessment of training outcomes. The role of trainers and mentors. Organisational development, change management, ethics, social responsibility, and human resource planning, designing, delivering and evaluating training and development 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 or appropriate referral of individuals and groups, maintenance of appropriate records and reports, rehabilitation programs for workplace accidents and injuries. The health and safety impact of the OHS field.

TS145 Wage and Salary Administration
The administration of wage and salary policies, motivation and compensation, award interpretation, job evaluation and pricing of jobs, incentive schemes, supplementary benefits, liaison with payroll staff.

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

TS147 Personnel Project
The presentation of an integrated project on a topic to be negotiated, utilising a range of skills and knowledge covered during the course.

TS162 Salesmanship (2 units)
A course designed to identify and develop the quality and skills required to be a successful salesperson. Emphasis is on practical skills and role-plays. Topics covered include: the role of the salesperson, understanding buyer psychology, selling and merchandising techniques, time management and sales planning, the production and conduct of a sales presentation. Students will be required to prepare and conduct a sales interview covering and demonstrating the following: the opening, the use of aids, selling and benefits, overcoming objections and closing the sale.

TS190 Shorthand (Full year non-credit subject)
Development of knowledge and skill in shorthand (Pitman's) as a preparation for other secretarial subjects to be taken later.

TS217 Communication Skills 3 (1 unit)
Communication Skills 4 (1 unit)
TS218 Communication Skills 4 (1 unit)
Becoming aware of one's potentialities, interpersonal relationships, conflicts, difficult problem-solving, sociology and psychology, limitations in handling certain situations and problems, and techniques for handling them.

TS226 Middle-management Practices 1 (Planning and control)
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 programs and schedules and budgeting within a middle-management context. The topics include an overview of the functions of management and their integration. The planning process which includes setting organisational goals, long and short term planning, standing plans and single use plans. Forecasting techniques, principles and dimensions. Construction of objectives in terms of 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. Need for consultation in formulation and methods of policy implementation. Development of programs and schedules including network analysis.


TS227 Marketing Principles 1 (1 unit)
The meaning of marketing in our Australian society; marketing philosophy and organisation; the marketing environment; market research; segmentation of markets and consumer behaviour.

TS228 Marketing Principles 2 (1 unit)
The planning of product, price, place and promotion strategies; development of the strategic plan; marketing decision-making and the social implications.

TS231 Industrial Relations C
The structure and function of the Australian Trade Union Movement. Employer organisations and the Conciliation and Arbitration system; the functions of government departments related to industrial relations; study experiments to improve the industrial environment.

TS236 Economics 1 (1 unit)

TS237 Economics 2 (1 unit)
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.

TS247 Business Law 1 (1 unit)
History and development of Australian law and system of courts. The roles of court personnel, Acts of parliament, their purposes, procedures and interpretation. Case law and the doctrine of precedent. The application of the law, involving a detailed study of one or two areas such as negligence, workers compensation or defamation. Law of contracts.

TS248 Business Law 2 (1 unit)
Legal aspects of sole traders, partnerships and companies. The law relating to insurance, taxation, consumer protection, tenancy, property and negotiable instruments.

TS262 Promotional Techniques (1 unit)
Examines the interaction of research, merchandising, advertising and packaging with promotion of a product or image. Students will be required to produce a sales promotion plan from a case study from consumer, industrial, or service industries. Topics covered include the application of market research in promotion, merchandising techniques in various types of organisations and situations, the use of advertising and how to evaluate the effectiveness of a promotion plan.

TS266 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.

TS267 Marketing Research
Where marketing research is used. Marketing research procedures. Sources of information. Questionnaire construction and other survey methods. Interview techniques. Sampling techniques. The field worker's responsibilities and techniques. Selection, training, supervising and monitoring field workers. Collection, tabulation, analysis, validation and presentation of data. Marketing research recommendations. Prerequisites: Business Mathematics (or concurrently) Marketing.

TS268 Innovation and Product Management
TS301  Introduction to Accounting (1 unit)
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, imprest petty cash system, subsidiary ledgers for debtors and creditors and financial statements.

TS302  Accounting Reports (1 unit)
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 trading and service organisation. Revenue statements showing departmental contributions and final profit and loss. Preparation of funds statements for sole proprietors. Preparation of cash flow statements.

TS303  Accounting Systems (1 unit)
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, i.e., stock, payroll, debtors, creditors, cash receipts and payments and fixed assets. In this unit, the perpetual inventory system and the use of control accounts and subsidiary ledgers for stock, debtors, creditors and fixed assets, are considered in detail.

TS304  Partnership and Introductory Company Accounting (1 unit)
Essential differences between partnership and company forms of business ownership. Reasons for converting an existing business into a partnership or company. Formation of partnerships and companies and basic contents of documents involved. Journal and general ledger entries for the formation of a partnership and the admission of a partner to an existing business. Journal and general ledger entries in a company's books for: the formation of a company, the issue of shares to the public by a public company, the acquisition of the assets and liabilities of another business and the settlement of the purchase consideration with the previous proprietor(s). Statutory and other registers and records relating to the shares of a company. Profit distribution for partnerships including the profit and loss appropriation statement and a balance sheet of a partnership. Preparation of funds statements for partnerships in accordance with the accounting standards.

TS305  Financial Management (1 unit)

TS306  Costing Principles (1 unit)
Maintain process, operation and standard costing systems. Preparation of a profit and loss statement adopting variable and absorption costing principles. Analysis of costs for decision making.

TS307  Costing Systems (1 unit)
Process costing system, accounting for joint products, accounting for by-products, operation costing system, standard costing, computerised standard costing, variable and absorption costing and costs for decision making.

TS309  Introduction to Budgeting (1 unit)
Purpose of budgeting and performance reports. Manual and computerised preparation of sales, purchases, operating expense, cash and capital expenditure budgets. Also, preparation of budgeted financial statements.

TS310  Advanced Accounting (1 unit)

TS311  Taxation Fundamentals (1 unit)
Concepts relating to assessable income, allowable deductions, tax rates and preparation of taxation returns for individuals and businesses.

TS312  Taxation Procedures (1 unit)
Methods of taxation collections, assessment procedures (including objections), tax agents' responsibilities, preparation of taxation solutions using a computerised package and general features of taxation planning.

TS313  Taxation Practice (1 unit)
Taxation provisions relating to partnerships, trusts, primary producers, companies and superannuation funds. Preparation of all relevant taxation returns.

TS314  Company Financial Reporting (1 unit)
Preparation of company financial statements in compliance with the provisions of the Companies (Victoria) Code and accounting standards promulgated by the accounting profession. Consolidated financial statements and Stock Exchange requirements.

TS315  Computer Based Accounting (1 unit)
Using commercial computerised packages, update accounting records and produce final reports.

TS316  Manufacturing Budgets (1 unit)

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. Motivation including the theories of Maslow and Herzberg. Principles of motivation, recognitions, 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, forecasting and government interventions in the private sector. Recruitment and selection, training and development, appraisal, retirement, reinvestment. Training and development, induction general training programs, job rotation, internal and external programs, training costs, evaluating training. Staff appraisal, principles, staff development programs, performance counseling, health. Effects of appraisal, promotions, transfers, demotion.

TS330  Personnel 3A (1 unit)
Outlines of the historical development of the personnel function, evaluation of the varying types of personnel structures and their role within organisations. Identify personnel policy development requirements and formulate and administer appropriate policies in given situations. Evaluation of organisational development techniques, their application to an organisation and the personnel specialist's role in their application. To undertake a case study of a personnel area and apply the knowledge of the course to that study.

TS340  Training Manpower Planning (1 unit)
Organisational planning, management by objectives, relationship of manpower planning to organisational plans, assessing the organisation's human resources, prediction of future manpower requirements, appraisal of management quality, analysing training needs and deficiencies, preparation of submission for training programs, systems approach to job analysis.

TS341  Training Techniques (1 unit)
Characteristics of adults as learners, principles of training, training aids, program summary and session plans, planning a training session, dealing with problems arising in training session, need for evaluation. Change trainer effectiveness, planning and implementing trainer evaluation.

TS342  Training Practices (1 unit)
Courses and programs available, resources for course design and presentation, reinforcement audio-visual operating skills, development and presentation of a training program, training administration, pre- and post-course testing, marketing of training services.
TS504  
Predetermined Motion Time Standards  
(1 unit)  
Advantages and disadvantages of predetermined motion time standard systems. Different levels and types of PMTS systems. The principles and application of methods time measurement. Factors influencing the performance of simultaneous motions. The advantages and limitations of master standard time 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 MODAPTS for establishing standard times including the advantages and limitations of MODAPTS. 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-mnemonic coding system.

TS505  
Estimating and Statistical Techniques  
(1 unit)  
The objective of this unit is to enable the student to apply work measurement techniques to any relevant task. The main topics are as follows: activity sampling, including its statistical principles and uses, advantages and disadvantages, procedures for application, form design, confidence and accuracy calculations, control charts, standards setting and production study. Group timing technique which includes relationship to activity sampling, advantages and disadvantages, procedures for making a study, and statistical calculations for setting a standard time. Machine interference including the following topics: man and multi-machine workloads, cyclic and random interference, generating time calculations, 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, estimator's qualifications, uses of analytical estimating. Estimates 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 group 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 layout techniques, 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, technique in layout planning, application of the Systematic Layout Planning Technique, design checklists for evaluating plant layouts, nature of materials handling systems as integral to plant layout, the historical basis of the CPM/PERT technique and comparison of network planning with bar charts, networking conventions and logic relationship between activities, forward and backward pass calculations and identify critical path, float definitions and formulae, convert a network into a time bar diagram, effects of float manipulation on resource allocation, costing of projects and probability of achieving estimated costs, similarity of PERT and precedence diagrams to CPM arrow diagrams and complete network analysis procedure.

TS508  
Management — Team Techniques  
(1 unit)  
The objective of this unit is to enable the student to initiate and coordinate the application of management techniques by employee 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, proper materials management as an aid to efficient manufacturing, 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), forms analysis, design and control, clerical work study techniques, materials management and inventory control, warehousing and distribution analysis 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 BASIC programming, load, run, explain and test a commercially available operations management program and to run any operations management software package.

TS521  
Safety 1  
(1 unit)  
The main objectives of this unit are: to evaluate the need for and the nature of accident prevention. To approach injury prevention scientifically and through multidisciplinary methodology. Students will learn to identify injury hazards and select appropriate remedies, communicate the analysis of the problem and measure the effectiveness of the remedies that have been implemented. Other topics include, the appraisal of protective clothing and equipment and the problems associated with its use and acceptance, environmental hazards such as noise and temperature and toxic substances, legislation affecting OH&S and accident compensation, and the development of procedures for a range of different emergencies.

TS522  
Safety 2  
(1 unit)  
This unit will enable students to apply the techniques of accident reporting, accident investigation, accident loss statistical 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  
(1 unit)  
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: 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 hygiene and the MMES Model. The following epidemiological designs, retrospective, prospective and cross-sectional. How personal behaviour traits may affect accident and health profiles. The systems approach to occupational rehabilitation and the role of rehabilitation in minimizing 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 importance. The stages in preparing sales forecasts. Sources of information useful when preparing sales forecasts, the factors affecting estimates, production planning, planning and scheduling, master schedules, production planning and control, the use of control charts, machine loading charts, production control and its application to 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 estimates, production control using flow control, block control, master schedules, general loading charts and line of balance, using machine loading charts and the sources of information for their preparation, types of aids available for machine loading charts, production capacity shortfalls, consequences of adopting an unbalanced work program, 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.

The topics include: development and scope of materials management and why inventory management is important in a business, the function of the materials management function within a business organisation, inventory control and its importance, the role of materials management in a successful business, sources of inventory data, such as, engineering and departmental methods, terminology used in production control, the use of sales forecasts for production planning, master schedules, production control charts, calculation and interpretation of actual and scheduled performance for control purposes, 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.

TS554 Materials Management 2 (1 Unit)
The general purpose of this unit is to enable the student to identify 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 layout, choice of materials handling equipment, suitable packaging specifications during the production design stage, selection of a suitable mode of transport for the companies material purchases and distribution of end products, estimate true consumer sales off take, legislation and procedures that must be followed to ensure safe storage and transport of hazardous materials in compliance with relevant regulations and standards. The factors affecting the location, size and efficiency of a firm’s finished goods 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 a 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, the 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 considerations and regulations, operations of the international banking system, customs and tariff procedures, the effect of Australia’s main trade agreements on manufacturers, make or buy decisions for products, lease or buy decisions for capital equipment, method of ranking equipment, purchasing alternatives, speculative purchasing and minimizing the risks involved, selection within a government department, negotiating skills for purchasing officers.

TS601 Introduction to Management
This unit will include the following topics: development of management theory, business purpose and mission, the consequences of management, government service organisations, the management process including setting objectives, planning, decision-making, organisation, control, information facilitation, 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 relationships, 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.

TS605 Human Management
This unit includes the following topics: lines of authority and responsibility in an organisation, delegation of tasks, 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.

TS606 Personnel and Industrial Relations Management
This unit covers the following topics: nature of personnel function, recruitment, placement and separation, staff appraisal, wage and salary administration, training development, accidents and safety, welfare and service activities, counselling, industrial relations.
TS607 Public Sector Management
This unit covers the following topics: structure areas of Government, public service, Government Instrumentalities, safeguards, functional management areas, preparation and presentation of a case to have change brought about or change prevented, interdepartmental and community joint activities.

TS608 Retail Management
This unit covers the following topics: introduction – distribution system, retailing, current developments, customers, principles of customer service, buying, stock control, retailing calculations, pricing, legislation, managing and sales force, merchandising, visual merchandising, crime.

TS609 Office Management
This unit covers the following topics: organisation, office environment, office mechanisation, word processing, form design and control, filing and indexing, clerical work study, work measurement in the office, computerised clerical staff, job evaluation and grading.

TS610 Supply Management
This unit covers the following topics: supply department organisation and function, ethical buying behaviour, purchasing activity, purchasing techniques, materials specifications, availability and sourcing, inventory control of purchased goods and materials, stores procedures.

TS611 Production Management
This unit covers the following topics: production planning organisation, planning for optimum capacity, planning methods, production control organisation, scheduling and loading, production control methods, plant layout, work study, staff utilisation, safety.

TS612 Marketing Management
This unit covers the following topics: marketing concepts and philosophy, marketing information systems, marketing communications, new products, distribution process, after sales responsibilities, sales force (role and management).

TS613 Computer Based Management Information Systems
This unit covers the following topics: information systems defined, which data should be collected, data collection techniques, data organisation, data control, protection and review, dissemination of information.

TS614 Management Project
This unit is compulsory and involves a group research project relating to an area of current management practices and techniques which is of interest to the student. Students are required to present a paper on the project at a public seminar.

TS701 Introduction to Computers
This unit covers the following topics: the roles and relationship of computer personnel, the history and development of computers, the impact of computer technology on society, the components of a computer system and the key types of computer systems, the maintenance of a suitable physical environment for computers, factors in designing a successful computer room layout, the management of computer room consumables, security over computer installations, ergonomics and safety in relation to the use of VDU's, care and storage of magnetic media, ASCII and EBCDIC codes, types of files, their features and organisation: back-up and restore functions.

TS702 Keyboard Familiarisation
This unit will ensure that students understand the functions of all keys and can touch type at a minimum of twenty words per minute.

TS703 Using a Time Sharing System
This unit covers the following topics: the characteristics, advantages and disadvantages of a time sharing system, accessing a time sharing system, types of business software commonly used on time sharing systems, overview of the process of programming computers, selecting a programming language, coding simple programs in a commonly used language such as BASIC, COBOL or PASCAL.

TS704 Organisational Communications
A study of the formal and informal channels of communication in large and small organisations, the effective use of spoken and written media, and the interpersonal and group skills required for Information-sharing, problem solving and decision making.

TS705 Technical Writing and Report Writing
This unit focuses on the skills required for:
(a) the writing of clear and concise descriptions of equipment and processes, and instruction on procedures and operations relevant to the course of study; and
(b) the planning, preparation and presentation of short reports for computer business purposes.

TS706 Business Information Requirements
This unit covers the following topics: the main functions of management, the management information system, the information needs of managers at different levels, the concept of management by exception, the main information problems encountered in businesses, the use of computers to solve information problems, the major functional areas of businesses and their subsystems (order entry and sales analysis, inventory control, accounts receivable, accounts payable, payroll and labour analysis, general ledger, forecasting), use of software for at least one of the above applications, types of EDP systems, selecting a microcomputer system, networking including structure/architecture, main types, topologies, types of communication channels, database systems including usefulness, architecture, responsibilities of a data base administrator, types of database operations, data manipulation languages.

TS707 Microcomputer Concepts and Usage
This unit covers the following topics: components of a microcomputer including additional cards such as graphics adapters, microcomputer operating systems, conventions for naming files, backup of files, review of diskette handling, printers, overview of software terminology and concepts, word processing including extensive editing and formatting features, forms, libraries, spreadsheets, design and preparation of modules on spreadsheets, use of accounting software for exercises in applications such as general ledger, payroll, inventory, taxation, data base software including creating, editing, generating reports, multiple data files, interfacing with other software such as word processors, spreadsheets and accountinamodule...

TS708 Developing Computer Systems
This unit covers the following topics: introduction to systems analysis and design, systems development cycle, organisation problem areas, tools and techniques of the analyst and designer, the stages involved in system design, e.g. investigation (feasibility study), functional requirements analysis, systems design programming, implementation and maintenance (this section involves a detailed study of systems design and is based on one of the widely accepted models of systems design), user involvement in systems design.

TS800 Practical Placement (1 unit)
The Practical Placement Program is a compulsory unit in the Office and Secretarial Studies Certificate. To gain this unit the students are required to work for two weeks within a business organisation. The aims of the PracticalPlacementProgramme are:
– to provide practical experience consistent with theoretical course work;
– to provide students with an insight into tasks related to their own course;
– to give students a better understanding of the work situation;
– to enable students to relate effectively to adults and peers in a working environment.

Students are comprehensively insured by the College on the basis that the practical placement is an extension of the TAFE classroom and no students may receive any remuneration whatsoever from the host organisation.

TS820 Office Computer Applications (1 unit)
This subject aims to provide students with an appreciation of computer packages and programs in relation to business operations.

Students will, therefore, be given the opportunity to develop their skills in the processing of information by using computer packages and to gain an understanding of the potential and importance of computer systems in the business environment.

In order to achieve these aims students will be introduced to data processing hardware and software, systems and sub-systems in the business world and the decision-making process needed to obtain information which suits the management structure of an organisation. It is necessary, therefore, in meeting industry needs that students gain "hands-on" experience in utilising some common business systems, e.g. database package, spreadsheet, accounting package.
The purpose of this subject is to give students an understanding of the various facets of the office and the systems which determine the efficient flow of information. Subject topics will be aimed at giving the student the core skills most frequently carried out by all office support personnel.

To provide students with administrative skills and knowledge required to pursue a career as a senior secretarial/personal assistant at executive level (including human relations, analytical and organisational skills). Particular emphasis is placed on medical and legal work.

To provide students with administrative skills and knowledge required to pursue a career as a senior secretarial/personal assistant at executive level (including human relations, analytical and organisational skills).

To give an insight into the economic and legal aspects of the business environment.

This subject, together with TS881, is a compulsory unit in the Office and Secretarial Practices Certificate. Students are expected to acquire vocational skills and knowledge which will enable them to touch type at a speed of at least 25 wpm, produce typed tasks relevant to office work and be able to proofread and edit to mailable standard.

A further development of the skills acquired in Typewriting Production 1 but with more emphasis placed on increased production rates. Students will be expected to reach a speed of 45 wpm and type office related tasks of more complexity with efficiency.

The aim of this unit is for students to gain ‘hands on’ word processing training on an Olivetti dedicated word processor, series ETS 2000. Students will be able to identify hardware and access software; create, retrieve and print documents, and respond to equipment prompts. Final print instructions such as centring, underlining, bolding and justification can be programmed, and format changes and tabulation performed. Editing of text (deleting, inserting and text move) will be demonstrated and applied to a range of tasks. Deletion and duplication of documents from both hard disk and diskette is carried out, as well as storage of both.

Students will also acquire theoretical knowledge of care and handling of equipment and capabilities and limitations of word processors.

This unit carries on from Word Processing 1, building on the skills acquired. Students will be working on multi-page documents, paginating and numbering, inserting headers and footers, using advanced editing techniques and windowing into other documents. Standard documents will be prepared where variables can be keyed in; in addition, global search and replace functions will be carried out and advanced tabulation methods used. Text will be displayed on pre-printed stationery and advanced format changes processed. Fault identification awareness and hardware maintenance, such as changing print wheels and ribbon cartridges, will be taught.

Continues development of skills from Typewriting Production 1 and 2 (55 wpm, 98% accuracy). Production of complex keyboarding tasks.

This subject is being offered for students who wish to pursue careers as stenographers and senior secretarial/personal assistants. A shorthand system will be studied with the aim that students will be able to transcribe shorthand notes fluently and accurately from both speed and office style dictation. This subject will be assessed internally by a theory test and transcription of business matter of average difficulty from the 700 common words list, of one and a half minutes at 50 wpm with 95% accuracy. The pass mark for the theory component is 60%.

This subject is aimed at further developing the skills learnt in Shorthand Theory. Assessment consists of two components: Speed — a final examination to be externally set and marked — 3 minutes at 80 wpm with 95% accuracy. Stenography — externally set, internally marked 2 hour examination to include office style dictation.

Provides students with the ability to take notes quickly and accurately in order to produce typescript (80 wpm, 95% accuracy).
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  - Building Construction Certificate ....................... CT29
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  - Building Surveyor .......................................... CT30
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  - Certificate courses
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    - Advanced Certificate in Electrical Technology .... CT36
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  - Manufacturing Engineering ............................. CT45
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    - Mechanical Engineering ............................... CT46
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- Post-apprentice and special courses
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- Welding courses
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Swinburne TAFE information ................................... CT1
Engineering Division

Head
F.A. Gaunt, SEC A Grade Licence, DipTT, TechCert(Electronics) (Acting)

Building Construction Department

Head
R.L. d'Argaville, DipTT, BuildInsPCert, TTrlC(Acting)

Academic staff
A. Boltman, DipEd, MIE Aust
A.R. Cottle, BConstrEcon, DipBldg, DipEd, BuildForemanCert, CoFWCert, BuildingSunCert, BuildInsPCert, ScafflnspCert, MAIC, FAIBS
D.R. Dendle, DipTT, BuildInsPCert
M.J. Finney, BA(Lat), DipTT, CoFWCert, BuildForemanCert, BuildInsPCert
T. Harris, TechCert(Build GB), TTrlC
S. Mitchell, DipTT, TechCert
V.N. Osterlund, DipTT, BuildInsPCert
A.L. Patience, BE(Ed), DipBldg, MEEdStuds, MAIC, MAIE, MIAA
Z.P. Szrom, DipTT, TTrlC
R.P. Ulbrick, DipTT, TechInsPCert, CoFWForman
C.W. Watson, ACTT

Department of Electrical and Electronics Technology

Head
A.G. Hampton, BE(Ed), TechCert(Electronics) (Acting)

Academic staff
K.E. Albon, HNDip(Electronics), MIERE
P. Brewin, HNCert(Electrical & Electronics), CertEd, MIETE
M. Cadilhac, COT(Electronics), DipTT
R.M. Edwards, SEC A Grade Licence, DipTT, TechCert(Electronics)
B.T. Fanagan, BE(Ed), TechCert(Electronics), SEC A Grade Licence
A. Hackett, BE(Elec), DipEd
A. Johnston, SEC A Grade Licence, DipTT
B. McAuline, CEng, TIlMarE, 1stCSM(Marine), AdvEC(NZ), SEC A Grade Licence
D.V. McMahon, SEC A Grade Licence, DipTT
I. Simmons, SEC A Grade Licence, TechCert(Electronics), AssDipSocWel
G.H. Sutherland, DipEE, DipEd
R.G. Warren, JP, TTrlC, TechCert(Electronics)
T. Woolcock, BE(Ed), DipEd

Department of Mechanical and Manufacturing Technology

Head
J. Brennan, BE(Mech), DipEng(Naval Arch), DipEd, CEng, MIMechE

Academic staff
D. Amato, BE(Mech), DipEd, MIE Aust
K. Battersby, TTrlC, TechCert(Prod)
M. Baum, TTrlC
L. Dodde, TTrlC
G. Dzioba, TTrlC, DipTT
A.O. Edgell, REng, MPlanEng, LIProfEng, CEd
W. Haulston, DipEd, TTrlC
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K. O'Neill, BE(Ed), DipTT, TTrlC, COTMechEng
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F. Sandstrom, TTrlC, DipTT
S.D. Scott-Branagan, TTrlC
R.S. Somerville, DipTT, TTrlC
A.J. Stapley, PhD, DipEd
B. Stevens, DipMechEng, MIE Aust
P. Tomat, BE(Ed), Cert(Toolmaking), CertPressToolmaking, DipTT, TTrlC
Building Construction courses
The following courses are offered by the Building Construction Department:

Technician Certificate courses
The building technician certificate is accepted as evidence that certificate holders have received training which should enable them to accept positions of responsibility in the industry. It is possible to complete the course by evening and/or part-time day attendance at the College. Apprentices may take a technician course concurrently with normal apprenticeship training, but attendance at evening classes is necessary.

The following courses are available:
B34CAF  Building Construction Certificate
B34CAD  Building Inspector

The Technician Certificate — Building (Building Inspector) course meets the academic requirements of the Building Qualifications Board for the issue of the Municipal Building Inspectors Certificate.

Certificate of Technology courses
To train, for a variety of special areas of responsibility in the building industry; immediate support personnel to management and the professions.

The following courses are available:
B21CAD  Building Surveyor
B21CAL  Certificate of Advanced Building Construction

The Certificate of Technology — Building (Building Surveyor) course meets the academic requirements of the Municipal Building Surveyors Certificate.

Special courses
B42CAK  Scaffolding Inspection
B45CBQ  Timber Framing Code
B45CWB  Women Into Building

Technician Certificate courses
B34CAF  Building Construction Certificate

The certificate will be offered as part-time day and part-time evening courses.

Entrance requirements
Entry to the certificate course may be by way of:
(i) Successful completion of Year 11 schooling.
(ii) An equivalent (to (i)) year of study.
(iii) A completed year of indenture in a building trade.
(iv) Mature-age entry.

The single compulsory subject for entry is Year 11 English. If it has not been previously gained, however, it may be studied concurrently.

Issue of award
Prior to any certificate being awarded, it is necessary for the candidate to complete the academic requirement and have at least two (2) years of recent and relevant industrial experience.

Course detail
The course consists of core and elective subjects. Core subjects represent a total of 425 hours of study and elective subjects represent a total of 170 hours of study.

Semester 1
Core subjects
<table>
<thead>
<tr>
<th>Hours</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB216</td>
<td>Building Construction 1 (Theory) 2</td>
</tr>
<tr>
<td>TB217</td>
<td>Building Construction 1 (Tutorial sessions incorporating Drafting for Builders) 2</td>
</tr>
<tr>
<td>TB711</td>
<td>Structural Applications 1 1</td>
</tr>
<tr>
<td>TH115</td>
<td>Communication Studies 1A 2</td>
</tr>
<tr>
<td>Total</td>
<td>119 hours each semester</td>
</tr>
</tbody>
</table>

Semester 2
Core subjects
<table>
<thead>
<tr>
<th>Hours</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB216</td>
<td>Building Construction 1 (Theory) 2</td>
</tr>
<tr>
<td>TB217</td>
<td>Building Construction 1 (Tutorial sessions incorporating Drafting for Builders) 2</td>
</tr>
<tr>
<td>TB711</td>
<td>Structural Applications 1 1</td>
</tr>
<tr>
<td>TH116</td>
<td>Communication Studies 1B 2</td>
</tr>
<tr>
<td>Total</td>
<td>119 hours each semester</td>
</tr>
</tbody>
</table>

Semester 3
Core subjects
<table>
<thead>
<tr>
<th>Hours</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB720</td>
<td>Estimating and Cost Control 1 2</td>
</tr>
<tr>
<td>TB705</td>
<td>Site Supervision and Management 2</td>
</tr>
<tr>
<td>TB710</td>
<td>Safety in Construction 1 2</td>
</tr>
<tr>
<td>Total</td>
<td>102 hours each semester</td>
</tr>
</tbody>
</table>

Semester 4
Core subjects
<table>
<thead>
<tr>
<th>Hours</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB703</td>
<td>Regulations and Government Authorities 2</td>
</tr>
<tr>
<td>TB704</td>
<td>Contract Law 1 3</td>
</tr>
<tr>
<td>TB707</td>
<td>Business Management for Builders 2</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
</tr>
</tbody>
</table>

Semesters 5 and 6
Elective subjects
<table>
<thead>
<tr>
<th>Hours</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB322</td>
<td>Building Construction 2 (Theory) 2</td>
</tr>
<tr>
<td>TB712</td>
<td>Structural Applications 2 1</td>
</tr>
<tr>
<td>TB323</td>
<td>Building Construction 2 (Tutorial sessions incorporating Design Specification) 2</td>
</tr>
<tr>
<td>Total</td>
<td>2 x 5 = 85 hours each semester = 170 hours</td>
</tr>
</tbody>
</table>
B34CAD Technician Certificate — Building (Building Inspector)

1976 syllabus

General description and aim of course
The course is designed:
(a) to be a job-oriented extension to the basic vocational courses;
(b) to suit the particular needs and interests of students and employers;
(c) to meet the minimum entrance requirements of the Certificate of Technology — Building.

Entrance requirements
Completion of a Year 10 standard of education, and engaged in an appropriate vocational program.

Career potential
Substantial opportunities exist in municipal building inspection and similar positions may be available with the building departments of various large organisations, e.g., banks, government departments and authorities.

Course detail
The course consists of twelve subjects. All subjects are offered on an evening part-time basis and all subjects are offered during the day.

Prospective students can also apply to complete the first year on a full-time basis.

Completion of course
The Technician Certificate — Building (Building Inspector) course meets the academic requirements of the Building Qualifications Board for the issue of the Municipal Building Inspectors Certificate.

Students who have completed the Technician Certificate — Building (Building Inspector) are eligible to continue studies leading to a Certificate of Technology — Building (Building Surveyor) or other Certificate of Technology — Building courses.

Course structure

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB716 Building Materials and Services 1</td>
<td>9</td>
</tr>
<tr>
<td>TB721 Estimating and Cost Control</td>
<td>2</td>
</tr>
<tr>
<td>TB724 Industrial Relations A</td>
<td>2</td>
</tr>
<tr>
<td>TB725 Industrial Relations B</td>
<td>2</td>
</tr>
<tr>
<td>TB722 Network Scheduling for Critical Path 1</td>
<td>3</td>
</tr>
<tr>
<td>TB701 Construction Surveying (Introduction)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>170 hours</strong></td>
</tr>
</tbody>
</table>

Certificate of Technology courses

B21CAD Certificate of Technology — Building (Building Surveyor)

1976 syllabus

Course structure

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB216 Building Construction 1A</td>
<td>2</td>
</tr>
<tr>
<td>TB217 Building Construction 1B</td>
<td>2</td>
</tr>
<tr>
<td>TB222 Technical Reports (Building)</td>
<td>2</td>
</tr>
<tr>
<td>TB232 Building Construction 2A</td>
<td>2</td>
</tr>
<tr>
<td>TB233 Building Construction 2B</td>
<td>2</td>
</tr>
<tr>
<td>TB435 Scaffolding Inspection A</td>
<td>1</td>
</tr>
<tr>
<td>TB439 Building Construction 3A</td>
<td>2</td>
</tr>
<tr>
<td>TB441 Building Construction 3B</td>
<td>2</td>
</tr>
<tr>
<td>TB442 Building Administration and Supervision</td>
<td>2</td>
</tr>
<tr>
<td>TB419 Communication Studies 1A</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>272 hours</strong></td>
</tr>
</tbody>
</table>

B21CAL Certificate of Advanced Building Construction

The certificate will be offered as full-time day, part-time day and part-time evening courses.

Entrance requirements
Entry to the certificate course may be by way of:
(i) Successful completion of Year 11 schooling.
(ii) An equivalent (to (i)) year of study.
(iii) A completed year of indenture in a building trade.
(iv) Mature-age entry.

The single compulsory subject for entry is Year 11 English. If it has not been previously gained, however, it may be studied concurrently.

Issue of award
Prior to any certificate being awarded, it is necessary for the candidate to complete the academic requirement and have at least two (2) years of recent and relevant industrial experience.

Course detail
The course consists of core and elective subjects. Core subjects represent a total of 1,292 hours of study and elective subjects represent a total of 272 hours of study.

Semester 1 Full-time course

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB216 Building Construction 1A (Theory)</td>
<td>4</td>
</tr>
<tr>
<td>TB217 Structural Applications (Building)</td>
<td>2</td>
</tr>
<tr>
<td>TB217 Building Construction 1 (Tutorial sessions) (Semester 1)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

Course structure

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB716 Building Mathematics 1 (T)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total = 425 hours each semester</strong></td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td>Core subjects</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
</tr>
<tr>
<td>TB322</td>
<td>Building Construction 2 (Theory)</td>
</tr>
<tr>
<td>TB712</td>
<td>Structural Applications 2</td>
</tr>
<tr>
<td>TB323</td>
<td>Building Construction 2 (Tutorial sessions incorporating Design Specification)</td>
</tr>
<tr>
<td>TB715</td>
<td>Building Practice 2</td>
</tr>
<tr>
<td>TH116</td>
<td>Communication Studies 1B</td>
</tr>
<tr>
<td>TB701</td>
<td>Construction Surveying (Introduction)</td>
</tr>
<tr>
<td>TB703</td>
<td>Regulations and Government Authorities</td>
</tr>
</tbody>
</table>

| Total | 245 hours each semester |

<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Core subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB717</td>
<td>Building Materials and Services (Major Bldgs)</td>
</tr>
<tr>
<td>TB718</td>
<td>Quantity Surveying for Builders 1</td>
</tr>
<tr>
<td>TB720</td>
<td>Estimating and Cost Control 1</td>
</tr>
<tr>
<td>TB704</td>
<td>Contract Law and Contract Administration</td>
</tr>
<tr>
<td>TB722</td>
<td>Network Scheduling for Critical Path 1</td>
</tr>
<tr>
<td>TB705</td>
<td>Site Supervision and Management</td>
</tr>
<tr>
<td>TB706</td>
<td>Self Development and Interpersonal Skills</td>
</tr>
<tr>
<td>TB724</td>
<td>Industrial Relations A</td>
</tr>
<tr>
<td>TB435</td>
<td>Scaffolding Inspection A</td>
</tr>
<tr>
<td>TB439</td>
<td>Scaffolding Inspection B</td>
</tr>
<tr>
<td>TB707</td>
<td>Business Management for Builders</td>
</tr>
</tbody>
</table>

| Total | 442 hours each semester |

<table>
<thead>
<tr>
<th>Semesters 4 and 5</th>
<th>Core subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum of eight (8) hours per week per semester:</td>
<td></td>
</tr>
<tr>
<td>TB412</td>
<td>Building Construction 3 (Theory)</td>
</tr>
<tr>
<td>TB713</td>
<td>Structural Applications 3</td>
</tr>
<tr>
<td>TB413</td>
<td>Building Construct-0- (Tutorial sessions incorporating Design Specification)</td>
</tr>
<tr>
<td>TB702</td>
<td>Construction Surveying 2</td>
</tr>
<tr>
<td>TB437</td>
<td>Statutory Control of Buildings</td>
</tr>
<tr>
<td>TB719</td>
<td>Quantity Surveying for Builders 2</td>
</tr>
<tr>
<td>TB721</td>
<td>Estimating and Cost Control 2</td>
</tr>
<tr>
<td>TB115</td>
<td>Building Mathematics (T)</td>
</tr>
<tr>
<td>TB725</td>
<td>Industrial Relations B</td>
</tr>
<tr>
<td>TB436</td>
<td>Practical Inspection (Building)</td>
</tr>
<tr>
<td>TB726</td>
<td>Safety in Construction 2 (Applied Practice)</td>
</tr>
<tr>
<td>TB723</td>
<td>Network Scheduling for Critical Path 2</td>
</tr>
<tr>
<td>TB430</td>
<td>Building Administration and Supervision</td>
</tr>
</tbody>
</table>

| Total | 2 x 136 hours each semester |

### Special courses

#### B42CAK  Scaffolding Inspection

Scaffolding Inspection meets the requirements of the building surveyor’s course, the building inspector’s course, and is suitable for those who are to be employed as scaffolding inspectors. The duration of the subject is one year, based on two hours per week.

**Course structure**

| TB435     | Scaffolding Inspection A |
| TB439     | Scaffolding Inspection B |

### B45CBQ  Timber Framing Code

As a result of changes to the Uniform Building Regulations, the provisions of the Timber Framing Code AS1684-1979 are being increasingly enforced by Local Authorities.

The course requires a minimum of 24 hours class study. At the end of the course there will be an assessment based on a practical exercise that covers the major aspect of the Timber Framing Code.

**Course structure**

| TB440     | Timber Framing Code |

### B45CWB  Women Into Building

The Women Into Building course is an introductory program for women interested in a career in the building industry. The course is of one year’s duration, and requires no previous skills or experience.

The course involves practical and theoretical work which will lead to possibilities of further studies and employment in the areas of supervision, estimating, inspection and practice.

**Course structure**

| TB216     | Building Construction 1A |
| TB217     | Building Construction 1B |
| TB222     | Technical Reports (Building) |
| TB426     | Building Administration and Supervision |
| TB600     | Introductory Graphics |
| TB810     | Computer Practices |
| TB714     | Building Practice 1 |
| TB715     | Building Practice 2 |
| TB720     | Estimating and Cost Control 1 |

**Tutorials**
To augment other subjects and provide an opportunity to overcome study difficulties.

**Site excursions**
To provide a context for the formal studies and an opportunity to observe theory in practise.

Some units, such as tutorials and site excursions, will be heavily emphasised in the first semester to provide an appreciation of the working nature of the building industry.
Subject details
Subjects are listed in alpha-numeric order of subject codes.

TB126 Building Mathematics (T)

TB216 Building Construction 1A
Basic principles of structure. Timber technology. Domestic building construction including timber framing, brickwork, masonry, foundations, footing, roof plumbing, joinery, internal fittings, services, plastering, painting. Simple concrete work.

TB217 Building Construction 1B
A folio of drawings covering eight selected topics, appropriate to the grade, to be submitted for examination at the end of the year. Some of the drawings will be solutions to given problems.

TB220 Building Science (T)

TB222 Technical Reports (Building)
Summaries, comprehension, records used in industry, types of reports, (written and oral). Logical argument and the use of the spoken word. Use of library material. Uses of visual aids in reports.

TB322 Building Construction 2A

TB323 Building Construction 2B
A folio of drawings covering eight selected topics, appropriate to the grade, to be submitted at the end of the year for examination. Drawings will be solutions to given problems.

TB412 Building Construction 3A

TB413 Building Construction 3B
A folio of drawings covering eight selected topics, appropriate to the grade, to be submitted at the end of the year for examination. Drawings will be solutions to given problems.

TB426 Building Administration and Supervision
Approached from the points of view of the builder, the client and public authorities.

TB427 Building Construction 2C

TB428 Building Construction 3C
Design principles applied to structures.

TB435 Scaffolding Inspection A

TB439 Scaffolding Inspection B
Covers interpretation of scaffolding regulations, defines responsibilities of all persons involved in the provision, erection, and use of scaffolding, including steel tube, frames, suspended cantilever bracket, ladders and miscellaneous equipment.

TB436 Practical Inspection (Building)
Designed to train potential building inspectors to inspect construction. The aims of inspection include: protection to owners, builders and workers, prevention of unsound practices and strict adherence to codes of material and craftsmanship.

TB437 Statutory Control of Buildings
Administration and law. Regulatory control and inspectional procedure.

TB504 Applied Geomechanics

TB601 Professional Practice of a Building Surveyor
Administration and law. Town planning. Building regulations.

TB603 Introductory Graphics
An introduction to general graphics designed to augment Building Construction 1B.

TB610 Computer Practices
To provide an introduction to computers and keyboard use.

TB701 Construction Surveying 1
To understand the implications of and become proficient in 'setting out' a building from a scale drawing. To become familiar with the methods of establishing building lines and levels on site.

TB702 Construction Surveying 2
To become proficient in establishing and maintaining control over horizontal and vertical dimensions from a scale drawing of major buildings.

TB703 Regulations and Government Authorities
Basic knowledge of the roles of all government authorities involved in the design and construction of domestic, commercial and industrial buildings.

TB704 Contract Law and Contract Administration
A basic knowledge of contract law, use of main and sub-contract documents. Liabilities and legal responsibilities which flow from contracts between parties capable of entering into agreements, etc.

TB705 Site Supervision and Management
The tasks and responsibilities related to establishing, planning, monitoring and financing for a continuous flow of activities on an efficiently managed building site.

TB706 Self Development and Interpersonal Skills
The communication aspects of interpersonal behaviour, learning, perception and personality development.

TB707 Business Management for Builders,
To develop an appreciation of management practices, as applied to the building industry. Planning, financing, setting-up, controlling and operating a business within a relatively high-risk industry.

TB710 Safety in Construction 1
An in-depth knowledge of safety precautions to be adopted, particularly when working on and around a construction site. Basic knowledge of common causes of accidents, and statutory requirements directly influencing 'safety' within the industry.

TB711 Structural Applications 1
A study of structural components, particularly of buildings studied in Building Construction 1. To explain how computations determine structural design and the likely behaviour of materials/components subject to load (S).

TB712 Structural Applications 2
To familiarise students with structural components, particularly of buildings studied in Building Construction 2. To explain how computations determine structural design and the likely behaviour of materials and components under load.

TB713 Structural Applications 3
An advanced study of the structural components related to buildings studied in Building Construction 3. To effectively liaise with structural engineers.

TB714 Building Practice 1
To provide an environment for development of an appreciation for manual skills and trade practice and explain trade techniques by 'hands-on experience involving the use of hand and power tools.

TB715 Building Practice 2
To provide a further environment for development of an appreciation for manual skills and trade practice and explain trade techniques by 'hands-on experience involving the use of hand and power tools.
TB716  Building Materials and Services 1
Basic knowledge of nature, properties, quality standards of building materials and background information of manufacturing methods for processed (building) materials.

TB717  Building Materials and Services 2
Basic knowledge of nature, properties, quality standards of building materials. Knowledge of trade practices to allow for effective liaison and supervision on site.

TB718  Quantity Surveying for Builders 1
Related to the standard method of measurement for building materials, format for a ‘bill’ of quantities.

TB719  Quantity Surveying for Builders 2
As related to the standard method of measurement for building materials. Familiarise students with currently applied methods of electronically storing information for future data and developments in the use of computers.

TB720  Estimating and Cost Control 1
To learn proficiency in ‘speed-take-off for qualities. To apply a cost rate per unit, build up ‘rates’ and modify as appropriate.

TB721  Estimating and Cost Control 2
The development of further proficiency in estimating techniques, the extension of ‘rates’ for ‘bills’ applications to the preparation of tenders.

TB722  Network Scheduling for Critical Path 1
To develop an understanding of and efficiency in co-ordinating activities and ancillary items relating to a building project.

TB723  Network Scheduling for Critical Path 2
The co-ordination of all activities and associated supply/plant items related to a building project.

TB724  Industrial Relations A
An understanding of the relationship between various members of the industrial community and the restraints which are applied within an industrial relations agreement.

TB725  Industrial Relations B
The identification of causes of industrial conflict and an understanding of the nature and roles of parties in the industrial relations system.

TB726  Safety in Construction 2
In-depth knowledge and practice of safety precautions to be adopted when working on and around a construction site.

TB940  Timber Framing Code
The aim of this subject is to explain the requirements of this National Code and give some practice in establishing the appropriate sizes of structural members in timber-framed buildings.

TH115  Communication Studies 1A (1 unit)
Communication theory and its application to the collection, organisation and presentation of scientific information. Forms of task documentation: laboratory and project reports, memos and letters. Oral reports and presentations.

TH116  Communication Studies 1B (1 unit)
Research and presentation of analytical reports, job briefs and specifications. Group communications skills: meetings, discussions and interviews. Audio-visual techniques and presentations.

TS215  Behavioural Studies 1A (1 unit)
Becoming aware of one’s potentialities, interpersonal relationships, conflicts, difficult problem-solving, sociology and psychology, limitations in handling certain situations and problems.
Electrical and Electronics Technology courses
The following courses are offered by the Electrical and Electronics Technology Department:

Apprenticeship course
E32ECG  Electrical Mechanics
The course is conducted as a combination of block release and day release apprenticeship course of three years' duration 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 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 'B' Grade or '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
E42ECB  Basic Electronics Certificate
A basic vocational program incorporating the common core elements of Certificate of Technology — Electronics and the Technician Certificate — Electrical.

E34ECB  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.

E35ECU  Industrial Electronics Certificate
A certificate is issued to all students who successfully pass the Basic Electronics Certificate plus a further year of approved post BEC study.

The course is designed to provide electrical tradespersons with improved technical knowledge and understanding of the latest techniques employed in a wide variety of modern electrical, electronic or digital control equipment and systems. This course is currently under review and may be subject to change.

E32ECF  Electrical Industrial Control Certificate (formerly Electric Motor Control)
Provides electrical tradespersons, technicians and people employed in the electrical switchgear industry with the relevant knowledge to install and maintain sophisticated electric motor control equipment in industrial installations. Subjects are normally available as evening classes or day classes. This course is currently under review and may be subject to change.

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 Electrical Design.

To complete the Associate Diploma course successfully the candidate must complete a minimum of 1888 credit hours for the Associate Diploma of Engineering (Electronics) 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.

The courses offered is the E35ECB Associate Diploma in Engineering (Electronics).

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 both 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
- Physics

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

E32ECG  Apprenticeship: Electrical Mechanics

Course structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Modules</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>TEU00  Electrical Wiring Theory – Unit 1A</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>TEU01  Electrical Wiring Theory – Unit 1B</td>
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<td></td>
<td>TEU02  Electrical Wiring Theory – Unit 2</td>
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<tr>
<td></td>
<td>TEU03  Electrical Wiring Theory – Unit 3</td>
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<tr>
<td></td>
<td>TEU04  Electrical Wiring Theory – Unit 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TEPO1  Electrical Wiring Practice P1</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td>TEU05  Electrical Wiring Theory – Unit 5</td>
<td></td>
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<tr>
<td></td>
<td>TEU06  Electrical Wiring Theory – Unit 6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>TEU07  Electrical Wiring Theory – Unit 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TEU08  Electrical Wiring Theory – Unit 8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TEPO2  Electrical Wiring Practice P2</td>
<td></td>
</tr>
</tbody>
</table>

Note:
New course structure. Repeat modules TE001-TE024 are available one evening per month.

3rd year

<table>
<thead>
<tr>
<th>Modules</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE017  Module CS1 Electrical Wiring</td>
<td></td>
</tr>
<tr>
<td>TE018  Module CS2 Electrical Wiring</td>
<td></td>
</tr>
<tr>
<td>TE019  Module CS3 Electrical Wiring</td>
<td></td>
</tr>
<tr>
<td>TE020  Module CS4 Electrical Wiring</td>
<td></td>
</tr>
<tr>
<td>TE021  Module CS5 Electrical Wiring</td>
<td></td>
</tr>
<tr>
<td>TE022  Module CS6 Electrical Wiring</td>
<td></td>
</tr>
<tr>
<td>TE023  Module CS7 Electrical Wiring</td>
<td></td>
</tr>
<tr>
<td>TE024  Module CS8 Electrical Wiring</td>
<td></td>
</tr>
</tbody>
</table>

External examinations

<table>
<thead>
<tr>
<th>Subject examined</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE305  Electrical Wiring Theory 3.1</td>
<td>SEC</td>
</tr>
<tr>
<td>TE306  Electrical Wiring Theory 3.2</td>
<td>'B' Grade</td>
</tr>
<tr>
<td>TE307  Electrical Wiring Practice 3</td>
<td>'A' Grade</td>
</tr>
<tr>
<td>TE405  Electrical Wiring Theory 4.1</td>
<td>'A' Grade</td>
</tr>
<tr>
<td>TE406  Electrical Wiring Theory 4.2</td>
<td>'A' Grade</td>
</tr>
<tr>
<td>TE407  Electrical Wiring Practice 4</td>
<td></td>
</tr>
</tbody>
</table>

Note:
The SECV set minimum standards for passes in the units before being eligible to sit the Licensing exams.

Examinations are as indicated

<table>
<thead>
<tr>
<th>Examinations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TE058 – June and November</td>
<td></td>
</tr>
<tr>
<td>TE307 – June</td>
<td></td>
</tr>
<tr>
<td>TE058 – June and November</td>
<td></td>
</tr>
<tr>
<td>TE07 – November</td>
<td></td>
</tr>
</tbody>
</table>

Enquiries
Mr A. Hampton, 819 8493
or
Mr B. Johnston

Certificate courses

E42ECE  Basic Electronics Certificate

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 TE520 to TE523, TE532 and TE535.

(c) An applicant whose maturity and experience indicates an ability to successfully undertake the course will be considered.

Course structure

The Basic Electronics Certificate consists of 15 learning units. A Basic Electronics Certificate (BEC) will be awarded, upon application, to any student who successfully completes all the BEC 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>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE520  Basic DC Circuits</td>
</tr>
<tr>
<td>TE521  Inductance and Inductors</td>
</tr>
<tr>
<td>TE522  Capacitance and Capacitors</td>
</tr>
<tr>
<td>TE523  Basic AC Circuits</td>
</tr>
<tr>
<td>TE524  Semiconductor Fundamentals</td>
</tr>
<tr>
<td>TE525  Amplifier Principles</td>
</tr>
<tr>
<td>TE526  Amplifier Applications</td>
</tr>
<tr>
<td>TE527  Timing and Control Devices</td>
</tr>
<tr>
<td>TE528  DC Power Supplies</td>
</tr>
<tr>
<td>TE529  Digital Fundamentals</td>
</tr>
<tr>
<td>TE530  Digital Applications</td>
</tr>
<tr>
<td>TE531  Microprocessor Control Systems</td>
</tr>
<tr>
<td>TE532  Industrial Practices</td>
</tr>
<tr>
<td>TE533  Basic Test Equipment</td>
</tr>
<tr>
<td>TE534  Transducers</td>
</tr>
<tr>
<td>TE907  BEC Exam – Basic Electrical Principles</td>
</tr>
<tr>
<td>TE908  BEC Exam – Basic Electronics Theory</td>
</tr>
<tr>
<td>TE909  BEC Exam – Basic Digital Theory</td>
</tr>
<tr>
<td>TE910  BEC External Exam</td>
</tr>
</tbody>
</table>

Note:

TE910 will be replaced by TE907, 908 and 909 for students enrolling in the course from 1988 onward.

Additional studies are required in addition to the BEC for entry into the Advanced Certificate or the Associate Diploma (Electronics) these are TE145 Mathematics 1E, TH133 Communication Skills, TE141 Electronic Drafting Principles and TE126 Electronic Circuits.
Study modes

Full-time study. Students will take a Basic Electronics Certificate in the first two semesters together with additional credit studies in Mathematics, Electronics Drafting and Electronic Circuits and a non-credit unit of Computer Studies.

Students who have satisfactorily completed year twelve need only complete the 15 B.E.C units.

Part-time study is offered on a full day, half day or evening basis commencing with "E33ECF Electrical Industrial Control" then "E33ECU Industrial Electronics Certificate" followed by "E33EDF Advanced Certificate in Electrical Technology".

A part-time evening program is available where "E33ECF Electrical Industrial Control" and "E33ECU Industrial Electronics Certificate" are taken on one evening, Mathematics IE and the remainder of the B.E.C excluding "E33ECF Electrical Industrial Control" are taken over two additional evenings. By attending three evenings a B.E.C can be virtually completed in one year.

E33ECF Electrical Industrial Control

Entry level

Satisfactory completion of two years of an electrical trade course or an equivalent standard in any other approved course.

Course structure

This is a Swinburne College of TAFE based certificate and will be issued to all students who successfully complete an approved program of not less than 432 hours of study with a minimum of 288 hours of study at the final level.

Subjects

<table>
<thead>
<tr>
<th>Introductory level</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE150 Electrical Industrial Control</td>
<td>144</td>
</tr>
<tr>
<td>TE663 Programmable Controllers 1</td>
<td>72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final level</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE662 Generating Plant Control</td>
</tr>
<tr>
<td>TE664 Programmable Controllers 2</td>
</tr>
<tr>
<td>TE666 Crane and Conveyor Control</td>
</tr>
</tbody>
</table>

E33ECU Industrial Electronics Certificate

Entry level

Satisfactory completion of two years of an electrical trade course or an equivalent standard in any other approved course of study.

Course structure

This is a Swinburne College of TAFE based certificate and will be issued to all students who successfully complete an approved program of not less than the following:

<table>
<thead>
<tr>
<th>Non-electrical tradesperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
</tr>
<tr>
<td>Basic Electronics Certificate</td>
</tr>
<tr>
<td>Specialist subjects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical tradesperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
</tr>
<tr>
<td>Basis Electronics Certificate</td>
</tr>
<tr>
<td>Specialist subjects</td>
</tr>
</tbody>
</table>

Availability of this course is dependant on having sufficient enrolments.

An electrical tradesperson can qualify for a Technician Certificate – Electrical by completing the outstanding subjects listed under the Electrical Technician course. The Industrial Electronics course may be studied as part of an Electrical Technician course.

Specialist subjects

<table>
<thead>
<tr>
<th>Specialist subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE308 Microprocessor Fundamentals</td>
</tr>
<tr>
<td>TE438 Microprocessor Applications</td>
</tr>
<tr>
<td>TE660 AC/DC Motor Speed Control</td>
</tr>
<tr>
<td>TE663 Programmable Controllers 1</td>
</tr>
<tr>
<td>TE664 Programmable Controllers 2</td>
</tr>
<tr>
<td>*Industrial/Heating</td>
</tr>
<tr>
<td>*Induction Heating</td>
</tr>
</tbody>
</table>

Note: *Subjects not yet available.

E33EDF Advanced Certificate in Electrical Technology

Entry level

This course is available to electrical tradespersons 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>Electrical Mechanic Training</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Electronics Certificate</td>
<td>242</td>
</tr>
<tr>
<td>(exempt Units 1, 2, 3, 4, 13 and 16)</td>
<td></td>
</tr>
<tr>
<td>Mathematics IE</td>
<td>72</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>72</td>
</tr>
<tr>
<td>Technician subjects</td>
<td>288</td>
</tr>
</tbody>
</table>

| Total | 1634 |

The technician subjects are divided into two categories: foundation or introductory level and application or final level. Of the 288 hours required, a minimum 144 hours must be completed at the final level.

Subjects

Electrical Mechanic Training (for subjects see listing under Apprenticeship course).

Basic Electronics Certificate (for subjects see listing under Basic Electronics Certificate course).

Compulsory subjects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE145 Maths IE</td>
<td>72</td>
</tr>
<tr>
<td>TH133 Communication Skills</td>
<td>72</td>
</tr>
</tbody>
</table>

Technician subjects introductory

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE150 Electrical Industrial Control</td>
<td>144</td>
</tr>
<tr>
<td>TE338 Microprocessor Fundamentals</td>
<td>96</td>
</tr>
<tr>
<td>TE663 Programmable Controllers 1</td>
<td>72</td>
</tr>
<tr>
<td>*Industrial/Heating</td>
<td></td>
</tr>
</tbody>
</table>

Technician subjects final

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE438 Microprocessor Applications</td>
<td>96</td>
</tr>
<tr>
<td>TE651 Electro-pneumaticControl</td>
<td>72</td>
</tr>
<tr>
<td>TE652 Generating Plant Control</td>
<td>72</td>
</tr>
<tr>
<td>TE664 Programmable Controllers 2</td>
<td>72</td>
</tr>
<tr>
<td>*Induction Heating</td>
<td></td>
</tr>
</tbody>
</table>

Note: *Syllabus not yet available.
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 hours with at least two subjects at the application level. The certificate 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.

Course Structure

<table>
<thead>
<tr>
<th>Core Subjects</th>
<th>Hours</th>
<th>Sem</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE520 to Basic Electrical Principles*</td>
<td>108</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>TE523 and TE524 to Basic Electronics Theory</td>
<td>144</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>TE528 and TE534</td>
<td>108</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>TE529 to Basic Digital Theory*</td>
<td>108</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>TE531</td>
<td>54</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TE532 Industrial Practices 1, from the Basic Electronics Certificate</td>
<td>72</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>TE546 Mathematics 2E</td>
<td>126</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>TE561 Circuit Theory 2</td>
<td>126</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>TE571 Electronics 2</td>
<td>126</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>TE339 Microprocessor Fundamentals</td>
<td>108</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>TE470 Digital Electronics 2B</td>
<td>54</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Occupational Health and Safety Principles</td>
<td>36</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>TE580 Analogue Communications 1</td>
<td>126</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>TE323 Electronics 3H</td>
<td>126</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Electives

Group A
- TE141 Electronic Drafting Principles | 54 | 3   |
- TE235 Computer Studies 1H | 54 | 3   |
- from the Basic Electronics Certificate

Group B
- TE437 Data Communications 1 | 108 | 6   |
- TE319 Circuit Theory 3H | 126 | 7   |
- TE438 Mathematics 3E | 90 | 5   |
- TE439 Microprocessor Applications | 144 | 8   |
- TE449 Testing Techniques and Instruments | 126 | 7   |
- TE450 Electronic Personal Computer applications | 126 | 7   |
- TE451 Microprocessor System Design (Hardware) | 108 | 6   |
- Basic Supervision | 72 | 4   |

Enrichment Subjects

- TE145 Mathematics 1E | 72 | 4   |
- TH33 Communication Skills Core | 72 | 4   |
- Printed Circuit Technology A | 36 | 2   |
- Printed Circuit Technology B | 36 | 2   |
- TE225 Wiring and Assembly Methods 2 | 72 | 4   |

Other subjects may become available during 1989-90.

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.
Subject details

This section contains a brief description of subjects offered by the Department of Electrical and Electronics Technology. The subjects are listed in alpha-numeric order of subject codes.

**TEU00 Unit 1A**
Ferrous and non ferrous metals, basic units, derived units, multiples and sub-multiples, safety, acts and regulations, responsibilities, plans and drawings, marking out tools, telephonic answering.

**TEU01 Unit 1B**
Structure of matter, materials, mechanical units, electrical units, sources of EMF, resistance, safety, SAA Wiring Rules, acts standards and regulations, cables, basic estimating and planning, circuit and plan fundamentals, electrical accessories, hand tools, power tools.

**TEU02 Unit 2**
Measurement of resistance, V, I and R relationships, series and parallel circuits, lighting 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, fault finding.

**TEU04 Unit 4**
Electromagnetic induction, sinusoidal waveforms, generation of poly-phase EMF, AC generators, power supply and distribution, wiring systems, welding and brazing.

**TEP01 Prac 1**
Assessment of practical component units 1-4.

**TEU05 Unit 5**
Inductors and inductance, capacitors and capacitance, trigonometry and phasors cables, cable jointing and termination, wiring systems.

**TEU06 Unit 6**
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.

**TEU07 Unit 7**
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.

**TEU08 Unit 8**
R, L and C in parallel AC circuits, power factor, resonance, instrument transformers for measurement and protection, chemical effects of electric current, electrolytic effects, primary and secondary cells, battery supplies, wiring systems.

**TEP02 Prac 2**
Assessment of practical component units in Units 5-8.

**TE020 Module C54**
Single-phase motors, series universal, split phase, shaded pole motors, repulsion and repulsion-induction motors.

**TE021 Module C55**
Three-phase alternator, star-delta connections, three-phase power, power measurement methods, three-phase power factor, three-phase four-wire system, three-phase switchboards.

**TE022 Module C56**
Three-phase transformers, loading, interconnections, volt drop in a three-phase circuit, calculation of maximum demand in a three-phase installation.

**TE023 Module C57**
Polyphase motors, slip speed three-phase motor starters, synchronous motors, protective devices, calculations of operating conditions.

**TE024 Module C58**
Rectification AC to DC, applications for current control, SCR, DIAC, TRIAC, illumination, mercury vapour lamp, fluorescent lamp, sodium vapour lamp, neon lighting comparison of types, need for power factor improvement.

**TE126 Electronic Circuits**
This is a block diagram approach to electronic systems.

**TE141 Electronic Drafting Principles 1H**
Use of Australian Standards for introduction to mechanical drafting, electrical symbols, electrical installation diagram, printed circuit board design.

**TE145 Mathematics 1E**
Full-time: five hours per week (day) over one semester.
Part-time: two hours per week (day) over two semesters
Prerequisite completion of Year 11
Assessment consists of two parts:
1. Topic tests. one on each topic, contributing to thirty per cent of the final mark.
2. One three-hour examination held in mid-June (or in November) contributing thirty per cent of the final mark.
Mathematics 1E is a service subject for a number of certificate qualifications offered. Topics covered are: numbers and the number line, equations and formulae, relations and functions, trigonometry and applications, number systems, complex numbers, Boolean algebra.

**References**
Supplied notes.
A scientific calculator is also required.

**TE150 Electrical Industrial Control 1T**
Study of component parts, full and reduced voltage starting, control of a wound rotor motor, braking, control circuit reading and design, safety.

**TE235 Computer Studies 1H**
To enable the student to become competent in writing programs in BASIC or another high level language. To solve problems in the electrical electronic areas and know how to use resident complex programs in the computer’s library.

**TE245 Mathematics 2E**
Five hours per week over one semester or two hours per week over two semesters, both day and evening.
Prerequisites: Mathematics 1E, or qualifications deemed equivalent by the Head of Department, Applied Science.
Assessment: classwork (thirty per cent) and one final examination (seventy per cent).
An extension of Mathematics 1E (TM123). The topics include complex numbers, limits, differentiation and applications, integration and applications, differential equations, Boolean algebra.

**References**
Supplied notes.

**TE301 Electrical Wiring Theory 3**
Equivalent SEC ‘B’ Grade theory. This subject covers the theoretical content of electricalmechanics E32ECG course. Externally examined.

**TE302 Electrical Wiring — Grade III (‘B’ Grade) Practice**
Equivalent SEC ‘B’ Grade practice. This subject covers the practical content of electricalmechanics E32ECG course. Externally examined.

**TE323 Electronics 3H**
Classification of amplifiers, feedback amplifiers, operational amplifiers, direct coupled amplifiers, differential amplifiers, frequency response of amplifiers, active filters, power amplifiers, harmonic distortion analysis in amplifiers, power and heat dissipation in amplifiers. Rectification and power supply specifications.

**TE324 Electrical Apparatus and Circuits**
Electrical components, DC and AC motor starters, automatic starters, speed control of motors, rectification, alarm systems, generating systems.
The aim of the course is to provide a wide knowledge of microprocessors available in the market today. The areas covered are: organisation of computers, memory types, memory organisation, MPU operation. 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.

Techniques and Instruments

Practical meters, bridges, application of bridges, signal generators, cathode ray tube, cathode ray oscilloscope, time domain reflectometer digital equipment, audio testing, group delay and system testing.

Basic Programmable Controllers

Types of control, programmable controllers block diagram scanning, programming, including timer and counters, fault finding, safety.

Electrical Design 2H

Elements of electrical design, conductors, insulation, magnetic circuits, elements of circuitry and systems.

Digital Electronics 2B

Combination circuits, clocked sequential circuits, circuit design with multiplexers and demultiplexers, oscillators, timers, subsystems and interfaces.
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:

- M32EFG Fitting and Machining (1985 syllabus)
- M32EJB Boilermaking and Structural Steel Fabrication

Each course is structured according to the requirements of the Industrial Training Commission of Victoria.

Technician courses

- M34EFA Production
  This course has a 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.

Certificate of Technology courses

- M21EEA Mechanical
  Courses are based on a core of basic mechanical subjects and elective streams in Applied Mechanics, Installation and Maintenance, Fluid Power and Building Mechanical Services. These streams provide for the needs of aides to professional mechanical engineers.

- M21ENA Mechanical Design Drafting
  Students who are employed or seeking employment in drawing offices and possess the necessary qualifications may enter this course.

Post-apprentice course

- M33EFE Toolmaking (Certificate)
  Toolmaking is a post-apprenticeship (fitting and machining) course designed to provide advanced training for tradespersons. Classes are available during day and evening.
  This course involves three years' study and includes practical training in jig boring, tool and gauge manufacture and thread grinding. 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 practice, a certificate from the Ministry of Employment and Training (Technical Services Branch) for the welding of pressure vessels may be obtained by the applicant, subject to satisfactory evidence of suitable industrial experience.

  Courses incorporate welding of ferrous and non-ferrous metals, flame cutting and gouging, all-positional welding of plate pipe, rolled and hollow steel section, use of all types of electrodes, weld testing.
  For arc welding, courses are available for instruction in pressure pipe and stainless steel pressure plate to DLI standards. The welding section of this department is an approved school of instruction in welding of all phases for the purpose of welding certificates to AS1796.
  Courses include oxy-acetylene cutting, welding of cast irons, 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.
  Day classes in welding are conducted as required for degree students, technicians and metal fabrication apprentices.
  Enquiries: 819 8529

Hobby courses

Engineering Workshop Practice
Hobby Welding

Short Course in CAD Skills

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 suitable for engineers, draftspersons, architects, business managers, technicians, technical officers, etc., and does not specialise in any particular drafting area.

The course runs for one day per week, for six consecutive weeks, from 1.00pm to 9.00pm and at other selected times.

Further information: 819 8079
Short Course in Micro-Based CAD/CAM

This course is designed to facilitate the introduction of micro-computer based CAD/CAM to the Australian manufacturing industry.

The course is essentially hands-on and aims to train personnel in the operation of a CAD/CAM system. As a consequence of this approach, it also enables managers and small business owners to evaluate low cost, micro-computer based, CAD/CAM as it applies to their particular fields.

Previous experience in CAD short courses has shown that personnel trained on micro-based systems readily adapt to larger systems, as the principles involved are the same.

The following topics will be covered:

(a) Preparation and plotting of drawings using AUTOCAD software.
(b) Creation of a library of parts.
(c) Programming and operating Fanuc controlled vertical machining centre.
(d) Communication with machine-tools and paper tape punches from the micro-computer.
(e) Production of a drawn component on the vertical machining centre using the direct link between micro-computer and machine-tool control.

This course is designed to facilitate the introduction of micro-computer based CAD/CAM to the Australian manufacturing industry.

The following topics will be covered:

(a) Preparation and plotting of drawings using AUTOCAD software.
(b) Creation of a library of parts.
(c) Programming and operating Fanuc controlled vertical machining centre.
(d) Communication with machine-tools and paper tape punches from the micro-computer.
(e) Production of a drawn component on the vertical machining centre using the direct link between micro-computer and machine-tool control.

Further information: Laurie McLaughlan, 819 8079.

Apprenticeship courses

M32EFG  Apprenticeship, Fitting and Machining

(Revised syllabus 1985)

Career potential

A part-time 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.

Course structure

(a) The course consists of the following levels:

Level 1: Common core
Level 2: Electives
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.

Units

<table>
<thead>
<tr>
<th>Level</th>
<th>Core units</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
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<tr>
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<td>Introduction</td>
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<td>TFC02F</td>
<td>12</td>
<td>Engineering/Material Cut Off Machines</td>
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<td>TFC03F</td>
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<td>Machining Technology</td>
</tr>
<tr>
<td>TFC04F</td>
<td>14</td>
<td>Drill</td>
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<td>Mill</td>
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<td>Portable Power Tools</td>
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<tr>
<td>TFC07F</td>
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<td>Basic Metals</td>
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<td>Level 2</td>
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<td>TFC13F</td>
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<td>Cylindrical Grinder</td>
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<td>TFC14F</td>
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<td>Heat Joining Processes</td>
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<td>TFC15F</td>
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<td>Assembly Fitting</td>
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<td>TFC16F</td>
<td>30</td>
<td>Tool and Cutter Grinder</td>
</tr>
<tr>
<td>TFC17F</td>
<td>31</td>
<td>Introduction to Numerical Control</td>
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<tr>
<td>TFC18F</td>
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<td>TFC19F</td>
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<td>Level 3</td>
<td>Electives</td>
<td></td>
</tr>
</tbody>
</table>

Further information: Laurie McLaughlan, 819 8079.
M32EJB  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

<table>
<thead>
<tr>
<th>Module</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>Theory and Practice</td>
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<tr>
<td>Module 2</td>
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<td>Module 24</td>
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<td>Module 25</td>
<td>Structural</td>
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<tr>
<td>Module 36</td>
<td>Pressure Vessel</td>
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</tbody>
</table>

Technician courses

Entrance standard
These courses are available to apprentices who are prepared to undertake more study than is provided in the apprenticeship course. Students are usually required to complete English, Mathematics, Science and Technician Drawing at Year 11 level at an early stage of the course. Minimum entry is satisfactory completion of a suitable Year 10 course.

Career potential
Technician courses are essentially extensions of apprenticeship training designed so that more able apprentices or tradespersons may undertake advanced trade training in order to equip themselves for positions such as detail draftspersons, technical assistants or to qualify for entrance to higher courses such as the Certificate of Technology.

Entrance requirements
To gain admission to a course an applicant must:
(a) be studying an apprenticeship course or be a qualified tradesperson;
(b) have approved prerequisite qualifications.

Minimum entry level is satisfactory completion of a suitable Year 10 course and the technician course is designed to take four years on this basis. However, for students with a higher entry level and for apprentices released for additional hours by their employers this time is reduced.

Certificate of Technology courses

M21EEA  Certificate of Technology — Mechanical

Career potential
Graduates with a Certificate of Technology — Mechanical are employed as technical assistants, technical officers and works engineers. They are generally concerned with the maintenance of manufacturing equipment in order to maintain a smooth production flow, or with the development and manufacture of new ideas and products. Their field of application covers most industries including metal trades, clothing, food, mining and electrical.

Entrance requirements
The standard entry requirements for admission to the course are:
(a) Satisfactory completion of a Year 11 course, including passes in English, Mathematics, Science and Technician Drawing/Engineering Graphics, to a standard approved by the College.
(b) Experience and maturity, sufficient to undertake the course.

Note:
As the entrance requirements are flexible, prospective students who do not fit exactly into the categories as shown should not be deterred from applying.

Students should be prepared to devote four years of part-time study to complete the course, although it is possible to complete two years (stages) of part-time study in one year of full-time study.

Course structure
The course consists of thirty units taken from the areas below. Each area specifies the number of units to be taken. Each unit consists of two to three hours per week of study for a semester (three hours applies where practical work is involved).

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

Common core subjects

<table>
<thead>
<tr>
<th>Units</th>
<th>Semester</th>
</tr>
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<tr>
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<tr>
<td>TF315 316</td>
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<td>TF310 311</td>
<td>1</td>
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<tr>
<td>TH115 116</td>
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<td>TF129</td>
<td>1</td>
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<tr>
<td>TF561 562</td>
<td>2</td>
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<tr>
<td>TF241 242</td>
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Hours/week

| TF650 | 1 |
| TF651 | 2 |
| TF652 | 2 |
| TF653 | 2 |
| TF654 | 2 |
| TF655 | 2 |
| TF656 | 2 |
| TF657 | 2 |
### Specialist area subjects

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<thead>
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#### (1) Building and Mechanical Services

<table>
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<th>Semester</th>
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<tr>
<td>1AD</td>
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<tr>
<td>1BD</td>
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<tr>
<td>2AD</td>
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#### (2) Fluid Power

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#### (3) Applied Mechanics

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<thead>
<tr>
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<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

#### (4) Projects

Students must complete the project relevant to their elected stream satisfactorily before a certificate can be awarded.

<table>
<thead>
<tr>
<th>Units</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

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### M21 ENA Certificate of Technology — Mechanical Design Drafting

(1981 syllabus)

#### Career potential

Graduates with a Mechanical Design Drafting Certificate are employed as draftpersons, technical assistants, technical officers and project engineers. They work on the design of equipment for the many and varied fields of mechanical and production engineering. These fields are diverse and include the aircraft and motor car industries, food processing, clothing, footwear, air-conditioning, earth-moving and road construction equipment.

#### Entrance requirements

The standard entry requirements for admission to the course are:

(a) Satisfactory completion of a Year 11 course, including passes in English, Mathematics, Science and Technical Drawing/Engineering Graphics to a standard approved by the College.

(b) Experience and maturity, sufficient to undertake the course.

Note: As the entry requirements are flexible, prospective students who do not fit exactly into the categories as shown should not be deterred from applying.

Students should be prepared to devote four years of part-time study to complete the course, although it is possible to complete two years (stages) of part-time study in one year of full-time study.

#### Membership of associations

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

### Course structure

<table>
<thead>
<tr>
<th>Unit</th>
<th>Stage</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>TF455</td>
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<tr>
<td>TF561</td>
<td>Introduction to Design 1AD</td>
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<tr>
<td>TF310</td>
<td>Engineering Materials and Processes 1AD</td>
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<td>TF311</td>
<td>Engineering Materials and Processes 1BD</td>
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<td>TF315</td>
<td>Engineering Principles 1AD</td>
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<td>TF316</td>
<td>Engineering Principles 1BD</td>
<td>1/2</td>
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<td>TF449</td>
<td>Stage 3</td>
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<td>TF454</td>
<td>Design for Economic Manufacture 1AD</td>
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<tr>
<td>TF468</td>
<td>Mechanical Design 2AD</td>
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<tr>
<td>TF469</td>
<td>Mechanical Design 2BD</td>
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<td>TF375</td>
<td>Fluid Machinery and Applications 1AD</td>
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<tr>
<td>TF380</td>
<td>Applied Mechanical 2AD</td>
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<tr>
<td>TF382</td>
<td>Applied Mechanical 2BD</td>
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<tr>
<td>TF412</td>
<td>Thermodynamics and Heat Transfer 1AD</td>
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<td>TF449</td>
<td>Stage 4</td>
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<td>TF481</td>
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<tr>
<td>TF482</td>
<td>Design for Economic Manufactures 3AD</td>
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</table>

### Projects

Students to select one of:

- (a) Process Plant and Pipe Work
- (b) Structures

<table>
<thead>
<tr>
<th>Unit</th>
<th>Stage</th>
<th>Value</th>
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<td>TF482</td>
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<tr>
<td>TF483</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total 30
M21EFR Certificate of Technology — Manufacturing Engineering

Career potential
The Certificate of Technology — Manufacturing Engineering has been designed to provide Australian industry with the trained personnel it urgently needs — skilled technologists who have a considerable understanding of the latest manufacturing technologies, equipment and their applications to industry. This course is oriented basically towards the metal trades and related industries, where graduates will find employment.

Entrance requirements
The standard prerequisite qualifications for admission to this course are:
(a) Satisfactory completion of Year 11 at a Technical School with passes in English, Engineering Graphics and appropriate Mathematics and Science, or
(b) Satisfactory completion of Year 11 at a High School with passes in English, Mathematics and Physics. Students should undertake Mechanical Drawing or Engineering Graphics bridging units as a preparation for Technician Drafting, or
(c) Qualifications deemed by the TAFE Board to be equivalent to those in (a) and (b), or
(d) Maturity and sufficient experience to enable a student to complete the course successfully.

Course structure
Core subjects
- TF570 Engineering Computations 1A 1
- TF571 Engineering Computations 1B 1
- TH115 Communication Studies 1A 1
- TH116 Communication Studies 1B 1
- TF128 Technician Drafting 2
- TF310 Engineering Materials and Processes 1A 1
- TF311 Engineering Materials and Processes 1BD 1
- TF339 Jig and Tool Drafting 1 2
- TF318 Metrology 1T 2
- TS453 Industrial Supervision 2
- TF581 Modern Metal Cutting 2
- TF391 Materials Handling 1B 1
- TF351 Computer Aided Design/Computer Aided Manufacture Basic 1

Electives
- TF584 Specialist Machine Tools 2
- TF312 Engineering Materials 2A 1
- TF313 Engineering Materials 2B 1
- TF322 Engineering Processes 2A 1
- TF323 Engineering Processes 2B 1
- TF301 Welding and Fabricating 2
- TF451 Computer Aided Design/Computer Aided Manufacture Advanced 2
- TF402 Robotics 1
- TF491 Materials Handling 2AB 2
- TF462 Reliability and Prototype Testing 1
- TF196 Organisation and Management for Quality A 1
- TF196 Organisation and Management for Quality B 1
- TF464 Product Liability and Product Recall Management 1
- TF463 Quality Costs and Budgeting 1
- TF411 Electrical Manufacturing Techniques 1
- TF485 Hydraulics and Pneumatics 2
- TF359 Finishing Processes 1
- TF355 Job Instruction and Presentation 1
- TF420 Metrology 2A and 2B 2

Certificate to be awarded on completion of 30 units

M22EFA Certificate of Quality Control

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:
- protecting the consumer against the purchase of faulty manufactured goods,
- 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.

Entrance requirements
The standard entrance requirements for admission to the course are:
(a) Satisfactory completion of a Certificate of Technology or a Certificate of Applied Science with 2 years of relevant industrial experience,
(b) Experience and maturity, sufficient to undertake the course, and to be employed in some function of quality control.

Prospective students who do not fit exactly into the category (a) as shown should not be deterred from applying, as the course is designed to enable students from various fields involved in quality control to complete the Further Certificate.

Duration of course
Two years.

Course structure
The Further Certificate course is structured around 5 units of core subjects and a choice of 3 units of elective subjects.

Core subjects
- TM127 Statistics 1
- TF197 Statistical Quality Control 1 2
- TF195 Organisation and Management for Quality A 1
- TF196 Organisation and Management for Quality B 1

Elective subjects
- TF297 Statistical Quality Control 2 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
- TF463 Quality Costs and Budgeting 1
- TF464 Product Liability and Product Recall Management 1
- TF465 Quality Control Systems and their Assessment 1
- TF467 Human Factors 1

Certificate to be awarded on completion of 30 units
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; or
Experience and maturity deemed by Swinburne College of TAFE necessary to succeed in the course, such as satisfactory progress in, or completion of, the 32EFG Fitting and Machining trade course.

Note: For those students that do not have the prerequisite academic qualifications, then a bridging program comprising Engineering Computations, Communication Skills, Introduction to Computers and Engineering Principles is to be initially undertaken.

Associate Diploma
Same as Advanced Certificate or completion of an advanced certificate in Engineering.

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.

3300EEA Advanced Certificate of Engineering (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>TD001 Engineering Practice 1A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TD002 Engineering Practice 1B</td>
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<td></td>
<td>TD003 Engineering Practice 2A</td>
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<td>TD004 Engineering Practice 2B</td>
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<td>TD005 Engineering Practice 3A</td>
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<td></td>
<td>TD018 Communication Skills 1A</td>
</tr>
<tr>
<td></td>
<td>TD019 Communication Skills 1B</td>
</tr>
<tr>
<td></td>
<td>TD020 Engineering Principles 1A</td>
</tr>
<tr>
<td></td>
<td>TD021 Engineering Principles 1B</td>
</tr>
</tbody>
</table>

Sub Total 18

Compulsory Subjects

<table>
<thead>
<tr>
<th>Units</th>
<th>TD024 Applied Mechanics 1A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TD025 Applied Mechanics 1B</td>
</tr>
<tr>
<td></td>
<td>TD026 Applied Mechanics 2A</td>
</tr>
<tr>
<td></td>
<td>TD027 Applied Mechanics 2B</td>
</tr>
<tr>
<td></td>
<td>TD028 Statics</td>
</tr>
</tbody>
</table>

Sub Total 5

Broadening Subjects

One broadening unit must be selected.

Broadening subjects are essentially those that are available in existing Certificate of Technology course.

Total 24
**Associate Diploma (Mechanical Design Drafting)**

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</td>
<td>1A</td>
</tr>
<tr>
<td>TD032 Mechanical Design and Drafting</td>
<td>1B</td>
</tr>
<tr>
<td>TD034 Mechanical Design 2A</td>
<td>1</td>
</tr>
<tr>
<td>TD035 Mechanical Design 2B</td>
<td>1</td>
</tr>
<tr>
<td>TD036 Mechanical Design 3A</td>
<td>2</td>
</tr>
<tr>
<td>TD037 Mechanical Design 3B</td>
<td>2</td>
</tr>
</tbody>
</table>

SubTotal 8

Broadening Subjects must be selected. Total 36

---

**Associate Diploma (Mechanical Engineering)**

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 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</td>
<td>1</td>
</tr>
<tr>
<td>TD043 Production Planning and Control</td>
<td>1</td>
</tr>
<tr>
<td>TD044 Production Planning and Control</td>
<td>2</td>
</tr>
<tr>
<td>TD045 Production Planning and Control</td>
<td>1</td>
</tr>
</tbody>
</table>

SubTotal 8

Elective Subjects must be selected to a value of four units from the following:

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD048 2</td>
</tr>
<tr>
<td>TD056 2</td>
</tr>
<tr>
<td>TD045 1</td>
</tr>
<tr>
<td>TD053 1</td>
</tr>
<tr>
<td>TD050 1</td>
</tr>
<tr>
<td>TD051 1</td>
</tr>
</tbody>
</table>

SubTotal 8

Broadening Subjects

Six broadening units must be selected. Total 36

---

**3300EEA Advanced Certificate of Engineering (Manufacturing Engineering)**

Course Structure

The core subjects are the same as the Advanced Certificate (Mechanical Engineering).

<table>
<thead>
<tr>
<th>Compulsory Subjects</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD009 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>2</td>
</tr>
</tbody>
</table>

SubTotal 4

Elective Subjects

Elective subjects must be selected to the value of two units from the following:

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD048 2</td>
</tr>
<tr>
<td>TD056 2</td>
</tr>
<tr>
<td>TD046 1</td>
</tr>
<tr>
<td>TD052 1</td>
</tr>
<tr>
<td>TD050 1</td>
</tr>
<tr>
<td>TD051 1</td>
</tr>
</tbody>
</table>

SubTotal 2

Total 24
Post-apprentice course

**M33EFE Post-trade Certificate Toolmaking**

**Career potential**

Students who have already completed a fitting and machining apprenticeship course will develop a higher level of ability in the theory and practice of tools, gauges and development work, which will enable them to enter more highly skilled and lucrative positions such as foremen and leading hands in a very wide variety of manufacturing industries. The tool and gauge making and press tool streams of the Toolmaking Certificate are of three years' duration and are available both day and evening, i.e. one half-day or two evenings per week.

**Entrance requirements**

Completion of a fitting and machining apprenticeship course in the basic twenty modules, plus four alternative modules from certain streams (G, H and I).

**Course structure**

**Area of study**

**Year 1**

<table>
<thead>
<tr>
<th>Module</th>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF501</td>
<td>Toolmaking Theory 1</td>
<td>1</td>
</tr>
<tr>
<td>TF502</td>
<td>Toolmaking Practice 1</td>
<td>2</td>
</tr>
</tbody>
</table>

- **Unit 1**
  - Principal and basic applications
  - Precision turning, precision boring, vertical spindle milling, precision grinding.

- **Unit 2**
  - Associated studies, measurement and calculations
  - Micrometers and indicators, vernier instruments, application of tooling and trigonometry, gage blocks, measurement of angles, squareness testing, measurement by optical projection.

- **Unit 3**
  - Workshop and laboratory activities
  - Turning operations, positioning of holes, milling operations, grinding operations.

**Year 2**

<table>
<thead>
<tr>
<th>Module</th>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF503</td>
<td>Toolmaking Theory 2</td>
<td>1</td>
</tr>
<tr>
<td>TF504</td>
<td>Toolmaking Practice 2</td>
<td>2</td>
</tr>
</tbody>
</table>

- **Unit 1**
  - Relief turning, jig boring, thread grinding, form tools, milled type cutters, lapping, precision grinding.

- **Unit 2**
  - Calculations, thread measurement, surface finish, measurement of taper and form gauges.

- **Unit 3**
  - Relieved cutters, jig boring, thread gauges, form tools, taper reamer, taper gauges.

**Year 3**

<table>
<thead>
<tr>
<th>Module</th>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF505</td>
<td>Toolmaking Theory 3</td>
<td>1</td>
</tr>
<tr>
<td>TF506</td>
<td>Toolmaking Practice 3</td>
<td>2</td>
</tr>
</tbody>
</table>

- **Unit 1**
  - Thread grinding 2, relief turning 2, cams, cutting tools, tool materials, jig boring 2, electro-machining, precision grinding.

- **Unit 2**
  - Screw thread measurement, calculations, single and compound angles, optical/measuring methods.

- **Unit 3**
  - Thread grinding 2, cam manufacture, cutting tool manufacture, jig or bush plate, electrode manufacture, surface grinding.

**Welding courses**

**M42EPA TAFE Basic Welding Certificate Course**

**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 content is stated as training objectives based on the Systems Approach to training. All objectives are performance objectives.

- 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 be not 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**

**Module**

<table>
<thead>
<tr>
<th>Module</th>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TW001</td>
<td>Manual Metal Arc Welding</td>
<td>1</td>
</tr>
<tr>
<td>TW002</td>
<td>Gas Metal Arc Welding</td>
<td>2</td>
</tr>
<tr>
<td>TW003</td>
<td>Flame Cutting and Gouging</td>
<td>3</td>
</tr>
<tr>
<td>TW004</td>
<td>Flame Gas Welding</td>
<td>4</td>
</tr>
<tr>
<td>TW005</td>
<td>Practice Associated Theory</td>
<td>5</td>
</tr>
<tr>
<td>TW006</td>
<td>Additional Theory</td>
<td>6</td>
</tr>
</tbody>
</table>

**M42EJB Electric Welding Post-trade**

**General**

The courses have been designed to meet the increasing demand for general instruction in welding processes.

- All courses cover both theory and practice.

- To complete a course successfully, a student must obtain a pass in all grades of theory and practice and obtain at least fifty per cent of the marks allotted for each grade of welding.

**Entrance requirements**

There are no prerequisite qualifications for these courses. However, preference will be given to those students who are seeking welding qualifications in connection with their employment.

**Certificates**

The Victorian Department of Employment and Industrial Relations may grant Government Welding Certificates, in accordance with Australian Standard 1796-1975, to applicants who have obtained a minimum of sixty-five per cent of marks for both Theory and Practice in Grade I Electric Welding examinations. Documentary evidence, satisfactory to the examination authority, of acceptable training and/or industrial experience is necessary.

**Course structure**

Each course consists of three years part-time study. Both courses are run separately. Time allocations for both theory and practice in each course are identical.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours week</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF810</td>
<td>Electric Welding Theory 2</td>
</tr>
<tr>
<td>TF811</td>
<td>Electric Welding Practice 2</td>
</tr>
<tr>
<td>TF910</td>
<td>Electric Welding Theory 3</td>
</tr>
<tr>
<td>TF911</td>
<td>Electric Welding Practice 3</td>
</tr>
</tbody>
</table>
Special subject
Electric Welding
A subject to enable qualified tradespersons to improve knowledge and skills in order to pass special government welding examinations.
TF415 Electric Welding Special

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

Mechanical and Manufacturing Technology subject details
TE133 Electrical Drafting 1H
The aim of the course is to provide an appreciation of drafting convention used in mechanical, electrical and civil engineering and to develop an ability to interpret drawings and extract information from them.

TE233 Electrical Drafting 2H
Types of electrical diagrams and drawings, electrical drafting symbols, presentation of circuit diagrams, drawing office practices, typical electrical drawings.

Fitting and Machining (Apprentices)
TF001 Module 1

TF002 Module 2
Lathe work. Safety. Operational planning.

TF003 Module 3

TF004 Module 4
Turning operations. Cutting fluids. Equipment used for setting up. Science and materials.

TF005 Module 5
Filing. Drilling. Machine cutting tools

TF006 Module 6
Turning operations. The shaping machine

TF007 Module 7
Screw cutting. Grinding.

TF008 Module 8

TF009 Module 9
Lathe operations. Cemented carbide cutting tools, economical use of machine tools, indicators.

TF010 Module 10
Revision of addition, subtraction, multiplication and division of decimals, simple and compound ratios, economical use of machine tools, revised and removed sections, dimensioning and tolerances, sketching, assembly and detail drawings. Bearing metals, copper and nickel alloys, joining of metals.

TF011 Module 11
Screw cutting, form turning. Turret and capstan lathes.

TF012 Module 12
Calculation of minor diameters, gear ratios, revision of trigonometry. Aligned and pictorial views, geometric tolerancing bearings, assembly and detail drawings, sketching. Systems of limits and fits, limit gauges, metric measurement.

TF013 Module 13
Fitting, checking a lathe for accuracy, setting up and marking out, scraping, lubricants, bearings and clutches.

TF014 Module 14
Revision of trigonometry, transportation, and substitution of formulae. Third angle projection, scale drawings, adjacent parts, assembly and detail drawings, sketching. Material testing methods and machines hydraulics.

TF015 Module 15
Milling machine and operations, types and uses of cutters, arbors and adaptors, speeds and feeds, attachments.

TF016 Module 16
Materials and heat treatment, pyrometry, plain carbon and alloy steels, surface hardening, nitriding.
TF017  Module 17
Multiple start threads; locating methods, cutting and checking, gear
rates, revision of trigonometry, calculations, tool sharpening.

TF018  Module 18
Operational planning and production tooling. Uses of jigs and fixtures,
consideration of machining operations, technical sketching and detail
drawing, surface finish symbols.

TF019  Module 19
Precision cylindrical and surface grinding, plain and universal cylindrical
grinding machines, parallel grinding, precision grinding, lapping
work centres, surface grinding plain and angular surfaces, work holding
methods.

TF020  Module 20
Revision and craft examinations.

Fitting and Machining (Alternative Modules)

TF021- General Fitting A51-A53 inclusive
TF023  (Industrial Hydraulics)
Basic principles of hydraulics, a simple hydraulic system, pumps,
directional control valves, actuators, pressure control, filters, seals, pipe
lines, trouble shooting, speed control, reservoirs, miscellaneous com-
ponents, hydraulic liquids, transmissions, servo mechanisms and
trouble shooting of systems.

TF024  General Fitting A54/A55
(Industrial Pneumatics)
Gas laws, basic principles, a basic system, F.S.A., directional control
valves, air service units, speed control, compressors, miscellaneous
components, air lines, moisture control, circuits, seals, air motors,
maintenance, standards, air gauging units and air lubrication of
bearings.

TF025- Welding B51-B54 inclusive
TF028  (Oxy-acetylene)
Oxy-acetylene process, personal aspects, care of equipment, safety,
pre-weld preparation, welding techniques, hard surfacing, welding of
mild steel, welding of thermo-plastics, heat treatments, identification of
metals, fusion welding of cast iron, bronze weldings, welding of
aluminium.

TF029- Welding B55-B58 inclusive
TF032  (Electric arc welding)
Electric arc process, safety, care of equipment, welding procedures,
power sources, electrodes, fillet welding, types of welded joints, Faults,
effects of heat, cyc and steel welding, heat treatment resistance
welding, weld testing, pre-heating and post-heating procedures.

TF045- Gear Cutting F51-F54
TF048  inclusive
Types and elements of gearing for parallel shafts. Milling spur tracks and
gears, helical racks and gears. Hobbing spur gears, helical gears and
gear gaging, production of gears by generating. Gear grinding.

TF053- Tool and Gaugemaking H51-H54
TF056  inclusive
Precision measurement — standards of accuracy, sources of error in
workshop measurement, direct versus comparative measurement,
gauging, measuring instruments, measuring with precision instruments.
Helical milling, tool and cutter grinding. Explanations of toolroom func-
tions, press toolmaking, die-making for plastic and die casting, tool and
gaugemaking.

TF089- Construction Equipment C51-C53
TF091  (Industrial Hydraulics)
Basic principles of hydraulics, a simple hydraulic system, pumps,
directional control valves, actuators, pressure control, filters, seals, pipe
lines, trouble shooting, speed control, reservoirs, miscellaneous com-
ponents, hydraulic liquids, transmissions, servo mechanisms and
trouble shooting of systems.

TF092  Construction Equipment C54
(Industrial Pneumatics)
Compressors, miscellaneous components, air lines, moisture control,
circuits, seals, air motors, maintenance, standards, air gauging units and
air lubrication of bearings.

TF094  General Fitting A56
Portable power tools, press fits, preparation for welding, plastics,
adhesives and glues.

TF095  General Fitting A57
Installation of equipment, safety precautions, uses of plant equipment,
testing of machines.

TF096  General Fitting A58
Power transmission, clutches, brakes, bearings. Special tools, preven-
tion maintenance.

Fitting and Machining (other than Apprentices)

TF001  Module 1
Theory and practice. Safety principles. Principles of marking out. Hand-
tools, files and filing, measuring and testing tools, the lathe, lathe
operations, planning.

TF003  Module 3
Theory and practice. Files and filing, chisels and chipping, screw
threads, drills and drilling, turning operations, equipment used for setting
up and holding in work on machines, cutting fluids.

TF005  Module 5
Theory and practice. Files and filing, drills and drilling, turning opera-
tions, the shaping machine, machine cutting tools.

TF007  Module 7
Theory and practice. Files and filing, drilling, grinding practice, simple
screw cutting, the slitting machine and planing machine.

TF009  Module 9
Theory and practice. Lathe operations. Cemented carbide cutting tools,
economical use of machine tools, indicators.

TF011  Module 11
Theory and practice. Single start vee and square threads, form turning,
turret and capstan lathe.

TF013  Module 13
Theory and practice. Accurate fitting and maintenance of pumps,
clutches and bearings, checking a lathe for accuracy, marking out,
scrapers and scraping, lubricants.

TF015  Module 15
Theory and practice. Milling operations, the milling machine indexing,
tooth forms of milling cutters.

TF017  Module 17

TF019  Module 19
Theory and practice. Precision cylindrical grinding, surface grinding.

TF020  Module 20
Theoretical revision and practical revision of modules 1-19 inclusive. Theoretical
(three hours) and practical examination (five hours) of work covered in
modules 1-19.

TF021- Modules 21-24
TF024  inclusive
Four (4) alternative modules to be chosen from the following areas:
A. General fitting. B. Welding. C. Construction equipment. D. Turning
making. I. Metrology.

TF126  Technician Drafting
This subject provides a basic understanding in projection, arrangement
and detail drawings. Methods of fastening, transmission, introduction to
steel framework, dimensioning.
TF129 Costing and Estimating 1AM
Cost estimation from bills of materials. Budgeting of control of expendi-
ture on maintenance projects. Economy of design. Calculations relating
to engineering costs, profit, percentages, overheads, etc. Expenditure
trends analysis. Project feasibility studies and management. Financial
management.

TF130 Logic Approach to System Design 1AM
Logic approach to system design. Programmable logic controllers.
The use of logic diagrams in both system design and the trouble-shooting of systems. The interface
between hydraulic, pneumatic, electrical, and electronic systems. The
theory of process control. The reading of control and pneumatic diagrams.

TF131 Logic Approach to System Design 1BM
Logic approach to system design. Programmable logic controllers.
The use of logic diagrams in both system design and the trouble-shooting of systems. The interface
between hydraulic, pneumatic, electrical, and electronic systems. The
theory of process control. The reading of control and pneumatic diagrams.

TF195 Organisation and Management for Quality A
Introduction to the concept of quality control as a system. Quality control
and planning, standards specification, quality of design, confor-
rence and performance, laboratory management, quality review and
audit.

TF196 Organisation and Management for Quality B
Introduction to the concept of quality control as a system. Quality control
and planning, standards specification, quality of design, confor-
rence and performance, laboratory management, quality review and
audit.

TF197 Statistical Quality Control 1
Application of principles of statistics to production quality control, pro-
cess control, control of 20 and 30 limits, charting systems, sampling
inspection, operating characteristic curves, inspection levels and severity.

TF225 Mechanical Design 1BD
Bearings, belt drives, chain drives, clutches, brackets, riveted joints,
modes of failure, bolts and locking devices, welded joints, frames, beam
deflection, machine frames, pipe and pipe design, technical report
writing, meeting procedure, hydraulic fluid power systems, ergonomics,
safety, felling and hoisting equipment.

TF232 Properties of Materials 1AD
Dielectric constant, X-ray, ultrasonic, eddy current, tensile, compres-
sion, impact and fatigue testing. Metal failure, corrosion, poly-
mers and fabrics, shaping of plastics, adhesives, electrical materials.

TF235 Applied Mechanics 1AD
Applied Mechanics 1BD Strength of materials, basic beam design, use of commercial steel
codes, principles of stress, strain, engineering and profile

TF241 Mechanical Design and Drafting 1ABDK
Drafting practices and the use of bearings, their lubrication and applica-
tion. Belt and chain drives, clutches and gears. Joining methods
including fasteners and welds. Piping arrangements, valves

TF242 Mechanical Design and Drafting 1ABD
Drafting practices and the use of bearings, their lubrication and applica-
tion. Belt and chain drives, clutches and gears. Joining methods
including fasteners and welds. Piping arrangements, valves

TF253 Computer Appreciation and Applications to Quality Control
This subject provides an appreciation of the range of uses and methods of application of computers in quality control work, including concepts
doing this subject are: BASIC, FORTRAN and COBOL, programming, megaproc-
cessors, computer graphics, use of computer packages in quality control

TF279 Statistical Quality Control 2
Study of methods applied in measuring and assessing variance in quality, continuous and acceptance sampling, design of experiments,
failure modes, verification of statistical sampling results, cumulative
sampling, capability studies, detection of defective material, acceptance and
concrete, use of machine tools, metal working processes, lubricants.

TF310 Engineering Materials and Processes 1AD
Engineering Materials and Processes 1BD
A general appreciation of the following areas: properties of materials,
characteristics of non-ferrous metals, plain carbon steels, alloying
elements, cast iron, heat treatment, bearing materials, timber and

TF312 Engineering Materials 2A
TF313 Engineering Materials 2B
A detailed study of plastics and steels in relation to properties, applica-
tions, chemical make-up, strength measurement, testing methods. Non-fer-
rous metals are also studied in less detail, together with destructive and non-
destructive testing.

TF315 Engineering Principles 1AD
TF316 Engineering Principles 1BD
Study of moments, force systems, friction, optics, linear and circular
motion, energy, basic electrics and sound.

TF317 Dimensional Metrology
Precision measuring techniques and application of principles of
measurement. Length metrology (standards and gauges), flatness as-
essment, auto-collimator and alignment telescope, surface texture,
roundness, squareness and parallelism, co-ordinate measurement.

TF318 Metrology 1T
This subject is concerned with the basic principles, correct procedures
and methods associated with accurate measurement. It covers diameter,
length, squareness and angular measurement, use of slip gauges, comparators, sine bars and tables. A significant amount of time is spent
on practical work.

TF320 Applied Mechanics 2AD
TF322 Applied Mechanics 2BD
The application of principles of mechanics to multi-element systems,
analysis of positive and non-positive drive systems.

TF332 Engineering Processes 2A
TF333 Engineering Processes 2B
A general appraisal of processes of forming plastic products. Other
topics include composite materials, adhesives, powder metallurgy, EDM,
investment casting, chemical milling and creep feed, and abrasive belt
grinding.

TF340 Principles of Measurement
This covers the basic scientific principles of measurement. Standards for
engineering quantities, SI derived units, nature of light and optical
concepts, mechanical concepts in design and measuring instruments,
thermometers, electrical measurement, calibration of instruments and
standards.

TF351 CAD/CAM Basic
Topics include: introduction to automation, the computer, the role of the
computer in manufacturing, numerical control, robots, other applications.

TF352 Finishing Processes
This unit is an introduction to the various types of finishing processes
and the factors influencing the choice of coating and/or finish.

TF359 Jig and Tool Drafting 1T
This subject covers the basic principles of location and clamping, guiding
and location of cutting tools, and general jig and fixture construction. A
Good proportion of the time is spent in producing working drawings.

TF375 Fluid Machinery Applications 1AD
Fluid fundamentals, dynamics of fluids, ventilax orifices and weirs.
Pumps, their operation and applications

TF383 Modern Metal Cutting
A theoretical approach to aspects of cutting materials, 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.

TF384 Specialised Machine Tools
The various aspects of special production machine tools such as
automatic lathes, centreless grinding and specialist machine tools
related to laser technology, are examined.

TF385 Job Instruction and Presentation
Introduction to training aids, methods and presentation examining ques-
tioning techniques, training situations and the evaluation of training.

TF391 Materials Handling 1B
The acts and regulations governing materials-handling equipment, types and functions of various materials-handling equipment and plant layout
and flow patterns.
TF410 Electrical Machine Applications 1AD
Basic electricity, AC and DC generation, AC and DC motors, motor starting and protection, motor characteristics and selection.

TF411 Electrical Manufacturing Techniques
This subject offers a general appraisal of electrical circuit diagrams and electrical control of pneumatic/hydraulic systems. It covers SAA symbols, identification and designation of components, printed circuit techniques, solenoids/valves, control circuits and practical circuit examples.

TF412 Thermodynamics and Heat Transfer 1AD
The concepts of temperature and heat, thermal expansion and heat transfer, Heat measurement. The properties of steam, its generation and usage. Air compressors, internal combustion engines and the use of fuels.

TF422 Applied Mechanics 3AM
Machines and mechanisms, vibrations, design of components, machine frames and structures, balancing of reciprocating masses, variable speed and differential drives and couplings.

TF423 Applied Mechanics 3BM
Basic pipe work and associated equipment. The application of engineering principles and applied mechanics to the analysis of design problems in manufacturing, warehousing and distribution of products and materials, selection to equipment, packaging and unit loads, transport systems, acts and regulations and involves preparing a detailed specification for tender for materials-handling equipment and installation.

TF449 Toolmaking (other than Apprentices)
Toolmaking (other than Apprentices) includes the following components related to industrial robots: description, definition, safety of operation, work layouts, tooling and end effectors, installation costs, an understanding of the robot’s actuators and the various types of programming.

TF451 CAD/CAM Advanced
Covers the topics included in CAD/CAM basic in more depth and detail.

TF452 Robotics
Robotics includes the following components related to industrial robots: description, definition, safety of operation, work layouts, tooling and end effectors, installation costs, an understanding of the robot’s actuators and the various types of programming.

TF453 Design for Economic Manufacture 1AD
Designs for life cycle costs and quality control, Cost structures of typical business with batch sizing and economical order quantities.

TF454 Design for Economic Manufacture 2AD
Consideration of economic factors in plant construction, fabrication and manufacturing processes.

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 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 process, 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 assurance, calibration system requirements, quality control system assessment concepts, contractor supplier quality requirements, customer/supplier agreement of quality control assessment, 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.

TF468 Mechanical Design 2AD
The application of engineering principles and applied mechanics to the analysis of design problems in machine elements, structural work and basic pipe work and associated equipment.

TF469 Mechanical Design 2BD
Select one of the following:
(a) Products of Mechanical Plant
Further analytical design and selection of multi-element systems together with material selection, manufacturing methods and design costing.
(b) Structures
Additional principles of design of structures and structural projects. Use of AS1250 (the structures code) and the application of production and costing techniques of steel structure design.
(c) Process Plant and Pipe Work
The design principles used in process plant and pipe work, costing and selection techniques and the principles of plant layout.

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.

TF491 Materials Handling 2AB
Contains material related to manufacturing, warehousing and distribution of products and materials, selection to equipment, packaging and unit loads, transport systems, acts and regulations and involves preparing a detailed specification for tender for materials-handling equipment and installation.

TF503/4 Second year Theory and Practice

TF505/6 Third year Theory and Practice

TF561 Introduction to Design and Drafting
The drawing of dia components, together with tolerancing and surface finish.
Boilermaking

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, oxyacetylene welding and cutting. Safety precautions for confined spaces, hazardous locations and containers.

TF603 Module 3

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.

TF605 Module 5
Protective clothing and accessories for electric welding. Selection of electrodes by classification, electric welding techniques and exercises. Electrical terms associated with MMA welding, types of welded joints. Weld defects.

TF606 Module 6
General terms associated with gas welding and brazing. Types of joints, weld defects. Low temperature brazing. Flat butt and corner gas welds. Flat brazing and brazoning.

TF607 Module 7

TF608 Module 8

TF609 Module 9
Drilling, selection and use of portable grinders, dressing grinding wheels, distortion control, straightening by contra-heating.

TF610 Module 10
Flame-gouging, flame-cutting and piercing heavy plate, flame-cutting profile shapes, safety precautions when using compressed gases.

TF611 Module 11
Fabrication of pressed channel, calculations, forming of cylinders and sections, hopper fabrication.

TF612 Module 12
Layout and fabrication of pipe handrail, fabrication of truss panel point, layout and fabrication of pressure pipe branch.

TF613 Module 13
Marking out cutting and fabrication of column, fabrication and assembly of taper flange beams.

TF614 Module 14
Characteristics of electric welding current, electrode selection and characteristics. Electric welding techniques, fillet, multipass, horizontal pad, butt, plate to sections.

TF615 Module 15
Gases for MIG and TIG welding. Arc welding techniques on MIG, TIG and submerged arc. MIG fillet and butt welds. TIG welding outside corner, submerged arc butt weld. Arc-air gouging.

TF616 Module 16
Development of flat and curved surfaces. Exercises in the development of oblique cylinder, pipe gusset, conical sections, off-set hoppers, rectangular to round transition piece, lobster-back bend and pipe branch templates.
Welding

TF810 Electric Welding Theory 2

TH110 Technician Communications 1
This subject broadens the work covered in TH110 Technician Communications 1 and also includes the writing of simple technical reports and practise in clear and critical thinking.

TM127 Statistics
Introduction to basic statistical techniques, including arithmetic and geometric progressions, histograms, normal, binomial, Poisson and hypergeometric distributions, standard deviation, regression and correlation.

TS236 Economics 1

TS237 Economics 2
Four out of the following six topics to be studied: economic role of government, economic measurement, economic systems, international trade, the financial market and the level of economic activity, the labour market.

TS247 Business Law 1
History and development of Australian law and system of courts. The roles of court personnel. Acts of parliament, their purposes, procedures and interpretation. Case law and the doctrine of precedent. The application of the law, involving a detailed study of one or two areas such as negligence, workers' compensation or defamation. Law of contracts.

TS248 Business Law 2
Legal aspects of sole traders, partnerships and companies. The law relating to insurance, taxation, consumer protection, tenancy, property and negotiable instruments.

TS250 Production Techniques 2A
More sophisticated examination of the production management roles in organisation, policies, forecasting, estimating and control to achieve economic operation of the company.

TS453 Industrial Supervision
This subject covers the topics: job analysis and description, industrial relations, methods improvement, plant layout, estimating and planning, production control, materials handling and control, quality control, equipment and maintenance, factory records, personnel department, accident prevention program, first-aid.

Basic Welding Modules
TW001 Module 1 (Manual Metal Arc Welding)
Pad fillet and butt welding in various positions. Rolled steel sections to plate. Rolled steel sections end to end butt.

TW002 Module 2 (Gas Metal Arc Welding)
Rolled horizontal fillets in various positions. Flat single vee butt. Rolled hollow section tee joint. Dip and spray transfer techniques.

TW003 Module 3 (Flame Cutting and Gouging)
Setting up and closing down equipment. Flame cutting freehand and using roller guides. Flame bevelling by machine. Flame and arc gouging.

TW004 Module 4 (Flame Gas Welding)
Flat outside corner with and without filler rod. Flat open butt. Hollow section end to end butt. Pipe to plate braze. Flat bronze weld on cast iron.

TW005 Module 5 (Practice Associated Theory)

TW006 Module 6 (Additional Theory)

TF811 Electric Welding Practice 2
Building up of worn surfaces. Fillet welds; all welds to gauge size, using a wide selection of electrode types and sizes. Flat and H position up to 12mm, multiple pass. Vertical up and down, overhead, horizontal positions, up to 100mm. Joining of RSS to CCS plate in vertical position. single and multiple pass.

TF890 Welding and Fabricating
The object of these units is to provide a general knowledge of: general fabrication techniques, jigs and fixtures, methods of joining, welding processes, testing techniques, standards and codes, metallurgical effects of welding and plant layout and work flow.

TF910 Electric Welding Theory 3
General knowledge of SAA codes relating to welding. Safety requirements, welding, cutting, general, personal and operational requirements related to various applications. Elementary first-aid requirements.

TF911 Electric Welding Practice 3
Filler welds, all positions, full range of sizes and types, 6mm and smaller. Welding of 1.6mm LCS sheet. Butt welds, square and prepared, all positions, 1.6mm and thicker sections. Pad welds. Corner, edge and lap welds.

TH115 Communication Studies 1A
The examination of methods of collecting, organising, evaluating and presenting factual information. Oral presentation, report writing, letters, memos and media analysis.

TH116 Communication Studies 1B

social and applied sciences

Academic staff
Access Education Centre
Applied Science Department
Social Science and Humanities Department
Courses offered
Victorian Certificate of Education
(Tertiary Orientation Programs)
- Humanities/Business—full-time
- Humanities/Business—part-time
- Science/Engineering—full-time
- Science/Engineering—part-time
Certificates of Applied Science
- Science Laboratory
- Biology
Certificate of Technology
- Fire Technology
Bridging and Community Access Programs
Programs for Mildly Intellectually Disabled Adults
Social and Community Services Courses
Victorian Certificate of Education
(Higher School Certificate)—part-time
Traineeships
Subject details
- VCE (Tertiary Orientation Program)
- VCE (Higher School Certificate)
General Information
Swinburne TAFE Information

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### Social and Applied Sciences Division

**Head**
G.A. Harrison, BSc, DipMechEng, TTTC

**Access Education Department**

**Head**
J.R. Learmont, BA(Hons), MEd, MACE

**Academic staff**
- G. Blengini, BEc, DipEd, GradDipTESL
- P. Cross, BA, DipEd
- C. Davis, BA, DipEd
- C. Grimmet, BA, DipEd
- J. Martin, BSc, TSTC
- S. McBride, TSTC, DipDomArts
- N. Moncrieff, BA, BEd, GradDipTESL
- V. Reddaway, BA, DipEd
- M. Ridsdale, BA, BEd, GradDipTESL
- M. Ruscoe, BA, DipEd, GradDipSpEd
- M. Sutherland, BA, DipSocWork
- R. Thomas, BA, DipEd

**Applied Science Department**

**Head**
R. Gullan, BSc(Hons), MEd, MACE

**Academic staff**
- J. Cashion, BSc, DipEd, DipCompSc, GradAIP
- B. Lirn, BAppSc, BEd
- A. Hennesey, BEc(Hons), DipEd
- J.A. Johnston, BSc(Studies)
- S. Chakman, BA, DipEd
- J.A. Chandler, BA, DipEd
- S. Duke, BA(Hons), MEd, GradDipEdAdmin
- A. Gelfand, BA(Teaching Diploma)
- M. Gemmell, BA, DipEd
- P. Gibson, BA(Hons), DipEd
- D. Holmes, BA, DipEd
- B. McLennan, BA, DipEd
- K. Matthieesson, BA(Hons), DipEd
- J. Paisley, BA, LRAM, TTTC
- D. Poyser, BA, DipEd
- L. Price, DipPhysEd, DipMotion and Dance, DipCareersEd
- A. Prins, BA, DipSocWork, BEd(Hons)
- M. Sharp, BA, DipEd
- M. Strefford, BA, TPTC, RSA, TEFLCert
- N. Valling, BA, SecTeachersDip
- L. Veltjins, BEd, MA
- K. Wiltshire, BA, BEd(Studies)

---

### Social Science and Humanities Department

**Head**
G. Arnott, BEc, BEd, GradDipBusAdmin(Acting)

**Academic staff**
- N. Backstrom, BA, MEd(Studies), TPTC, TSpTC
- F. Banky, BA, DipEd
- E. Bolton, BEd
- S. Campbell, CASS(Child Care), AssocDip(Child Care)
- Teaching Cert.
- S. Chakman, BA, DipEd
- J.A. Chandler, BA(Hons), DipEd
- S. Duke, BA(Hons), MEd, GradDipEdAdmin
- M. Elliot, PhD
- A. Gelfand, BA(Teaching Diploma)
- M. Gemmell, BA, DipEd
- P. Gibson, BA(Hons), DipEd
- D. Holmes, BA, DipEd
- B. McLennan, BA, DipEd
- K. Matthieesson, BA(Hons), DipEd
- J. Paisley, BA, LRAM, TTTC
- D. Poyser, BA, DipEd
- L. Price, DipPhysEd, DipMotion and Dance, DipCareersEd
- A. Prins, BA, DipSocWork, BEd(Hons)
- M. Sharp, BA, DipEd
- M. Strefford, BA, TPTC, RSA, TEFLCert
- N. Valling, BA, SecTeachersDip
- L. Veltjins, BEd, MA
- K. Wiltshire, BA, BEd(Studies)
The Social and Applied Sciences Division consists of two departments and a centre as follows:

**Access Education Centre**

The Centre provides 1:1 and/or small group tuition to students enrolled in all Swinburne courses who may have problems coping with the English and/or mathematics components of their courses. Lack of skills in English and/or mathematics may affect students’ progress in the range of subjects which make up their courses. Adult members of the local community can also avail themselves of mathematics and English tuition. Such tuition is available on an individual or small group basis.

**Applied Science Department**

The Department has responsibility for Certificates of Applied Science (Science Laboratory) and (Biology) and the Certificate of Technology (Fire Technology). In addition, it offers Victorian Certificate of Education (TOP) science and engineering programs, a bridging technology program and a number of short courses including Women's Bridging Science, Computing, Fire Technology and Scientific Instrumentation.

**Social Science and Humanities Department**

The Department has responsibility for the humanities and business Victorian Certificate of Education (TOP) and HSC courses. In addition it offers a bridging humanities program which can lead to tertiary entry (known as the Arts Preparatory Program) and a number of short courses.

The following courses are offered:

**Victorian Certificate of Education (Tertiary Orientation Program) courses**

- S21ABC Certificate of Applied Science (Science Laboratory)
- S21ABG Certificate of Applied Science (Biology)
- S51WBC Maths/Science Bridging Course for Women
- S45ABP Introduction to School Laboratory Practices
- S45ABS Laboratory Safety
- S51ABC Certificate Bridging Program
- S21CAG Certificate of Technology (Fire Technology)

**Higher School Certificate**

A range of Group 1 subjects are offered by the Social Science and Humanities Department. Subjects can be taken in the evening. Three subjects are offered in the day.

**Applied Science programs**

- S21ABC Certificate of Applied Science (Science Laboratory)
- S21ABG Certificate of Applied Science (Biology)
- S51WBC Maths/Science Bridging Course for Women
- S45ABP Introduction to School Laboratory Practices
- S45ABS Laboratory Safety
- S51ABC Certificate Bridging Program
- S21CAG Certificate of Technology (Fire Technology)

**Bridging and Community Access programs**

- C45LDB Volunteer Tutor Training
- C45LVP Vocational Preparation Program
- C51LDB Basic Studies Program
- H51LDI English for Further Study (Adult Migrants)
- H51LDN Returning to Study
- H52APP Arts Preparatory Program
- S51AZY Bridging Technology
- S51LZN Special Bridging Program

**English Language Assistance**

The Access Education Centre provides 1:1 and/or small group tuition for TAFE and SIT students, who have English as their second language.

**Programs for Students with Disabilities**

**Mildly Intellectually Disabled Students**

- C52LDB Basic Studies Program (Special)
- C52LZT Transition Program

**Hearing Impaired Students**

- C51LDB Basic Studies Program

**Social and Community Service courses**

- H52CCA Child Care Assistant Course
- H52HTP Home Carers Training Course

**Victorian Certificate of Education (Higher School Certificate)**

- H55LZB Victorian Certificate of Education (HSC) – part-time

A range of Group 1 subjects are offered by the Social Science and Humanities Department.

**Short courses**

The Division will offer a range of short courses in recreational and vocational areas. The courses may include Public Radio Production, Creative Drama, Theatre Skills, Basic Photography, and VHS Production from the Social Science and Humanities Department, and Computing and Scientific Instrumentation from the Applied Science Department. Further information is available from the respective departments.

**English Language Assistance**

The Access Education Centre provides 1:1 and/or small group tuition for TAFE and SIT students, who have English as their second language.
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, art, applied science, business and engineering of Swinburne Institute of Technology.

The course offers a bridging program to tertiary education for students with a variety of backgrounds. While the program is based on needs for secondary student transition to tertiary study, it also provides a most suitable preparation for tertiary study for more mature people.

The program is studied in a tertiary environment. First class educational facilities are available; these include library, audio-visual, computer, student amenities and counselling. Experienced teaching staff maintain a close liaison with staff in the tertiary division.

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
- TH001 Themes in Australian History
- TH010 English
- TH020 Introduction to Politics
- TH032 Media Studies
- TH035 Sociology, Technology and Change
- TH060 English as a Second Language
- TH065 Women in Society
- TH075 Psychology
- TM004 Biology
- TM005 Chemistry
- TM026 Mathematics (Science)
- TM027 Concepts of Mathematics
- TM028 Computer Studies
- TM030 Mathematics (General)
- TM040 Physics
- TS006 Legal Studies
- TS008 Economics
- TS009 Accounting

Victorian Certificate of Education (Higher School Certificate)

In 1989 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 part-time adult students or full-time students wishing to take additional or alternative subjects to those offered at their schools.

Subjects
- TH910 Australian History
- TH911 English
- TH912 English Literature
- TH913 Human Development and Society
- TH914 Politics
- TM921 Mathematics A
- TM924 Biology
- TM925 Chemistry
- TS901 Accounting
- TS902 Economics
- TS903 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.

Three composite courses are also offered: Behavioural Science, Liberal Arts and Business Studies. Students in these courses take VCAB approved combinations of TOP and HSC subjects.

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. Although preference is given to students from Eastern Metropolitan and Maroondah region technical schools and to people who have had a break from formal secondary schooling and now wish to return, there are usually a number of places available for other applicants.

Enquiries
Information Office, 819 8444
Humanities/Business, 819 8370
Science/Engineering, 819 8378
This course has two main aspects.

**The course particularly involves a critical, historical and appreciative study of ldeas.** This subject offers an interdisciplinary approach to the study of ldeas. Topics in the core include: an examines of men and women's 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**

**TM004 Biology**

The intention in this course is to investigate a practical way, what takes place within the individual organism — with the internal structure, physiology and biochemistry — and with the ways in which the characteristics of the organism are determined and passed from one generation to the next.

A previous study of biology is recommended but not compulsory.

**Course structure in 1989**

Unit 1

(a) **Scientific method and (b) Cellular activities**

(a) **Scientific observations**

- Characteristics of life
- Experimental methods

(b) **Cellular structure**

- Cellular activities: chemical reactions, diffusion and osmosis
- Multicellularity
- Systems
Unit 2
Animal structure and function
Food breakdown and absorption
Transport of materials — blood
Exchange of gases
Removal of wastes
Integration and control

Unit 3
(a) Diversity and classification and (b) Plant structure and function
(b) Photosynthesis and autotrophic design
Transport systems — phloem and xylem
Structure and function — relationships

Unit 4
(a) Genetics and (b) Natural selection and evolution
(a) Cell division (mitosis and meiosis)
Origin of different alleles
Predicting the results of a cross:
— one gene pair
— two gene pairs
— multiple alleles
— sex-linked inheritance
(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: Topic tests 4 x 10% 40%
Two (2) special assignments 2 x 10% 20%
Practical reports 40% 40%

— 100%

Chemistry
This subject comprises five hours per week, three hours of theory and a two-hour practical session in the laboratory
Prerequisite, Year 11 applied science standard chemistry

Course structure in 1987

Unit 1
Stoichiometry
Unit 2
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.

Mathematics (Science)
Prerequisite, Year 11 applied science standard mathematics
This subject is desirable for all science/engineering VCE (TOP) students, and intends to provide participants with mathematical skills prerequisite to their enrolment in engineering and applied science courses in tertiary institutions.

Course structure in 1987

Unit 1
Investigating space
Introduction
Co-ordinate geometry — straight lines and conic sections
Polar co-ordinates
Complex numbers
Vectors
Examination
Unit 2
Change
Differentiation
Curve sketching
Circular functions
Exponential and logarithmic functions
Examination
Unit 3
Integration
Integration — techniques
— area under curve
Applications of integration — volume
— RMS, average
— vectors
Examination
Unit 4
Challenges
Rates of change
Maximum and minimum problems
Approximations
Differential equations
Examination

Duration: Five hours per week.
Assessment: Two-hour examination at the completion of each unit. Attendance at all examinations is compulsory.

A scientific calculator is essential

Concepts of Mathematics
Prerequisite, Year 11 applied science standard mathematics
Course structure

Unit 1 (7 weeks)
The sample space in probability and introduction to computing
Set theory
Permutations and combinations
Boolean algebra
Computer structures
Operating system
Introduction to programming

Unit 2 (8 weeks)
Probability, statistics and computer programming
Probability
Statistics
Programming in BASIC

Unit 3 (8 weeks)
Linear algebra and computer applications
Matrix theory
Linear systems
Linear programming
Markov chains
Game theory
Social implications of computer technology
Programming applications to limits and series

Unit 4
Sequences and computer software applications
Curve fitting
Arithmetic and geometric progressions
Mathematical software
Applications of spreadsheets
Duration: Five hours per week for each unit.
Assessment: A two-hour exam at the end of each unit and two computer assignments per unit.
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 these algorithms into a programming language;
(f) to familiarise the student with the concepts of data manipulation and file handling;
(g) to give students an insight into the range of applications and the social implications of the use of computers;
(h) to give students an appreciation of the history of computing and future trends in computing.

No previous computing studies are required.

TM030 Mathematics (General)

Prerequisite, a pass in Year 11 mathematics

The course covers fundamental mathematical ideas for students who might be considering post-Year 12 courses in Business Studies, Social Sciences such as Sociology and Psychology, Nursing, Physical Education and Primary Teaching. It also gives the opportunity to students to develop sufficient skills to have a broad understanding of fundamental mathematical concepts and methods, and of its applications to a range of situations which are practical and relevant to the technologically advanced society in which we live.

Course structure in 1987

<table>
<thead>
<tr>
<th>Topics</th>
<th>Topic Code</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>Semester one</td>
<td></td>
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<tr>
<td>A review of fundamental algebra</td>
<td>FA</td>
<td>15%</td>
</tr>
<tr>
<td>Basics of calculus</td>
<td>BC</td>
<td>15%</td>
</tr>
<tr>
<td>Practical applications 1</td>
<td>PA1</td>
<td>10%</td>
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<tr>
<td>Option 1</td>
<td>X1</td>
<td>10%</td>
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<tr>
<td>Semester two</td>
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<td></td>
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<tr>
<td>Probability and statistics 1 and 2</td>
<td>PSI &amp; PS2</td>
<td>30%</td>
</tr>
<tr>
<td>Personal and business applications</td>
<td>P6</td>
<td>10%</td>
</tr>
<tr>
<td>Option 2</td>
<td>X2</td>
<td>10%</td>
</tr>
<tr>
<td>Total: 100%</td>
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</tr>
</tbody>
</table>

Option topics (either student selected or teacher selected from):

- Matrices and linear systems
- Computer programming in BASIC
- Social implications of computer technology
- Trigonometry, mensuration and complex numbers
- Number systems and Boolean algebra
- Applications of calculus 1
- Practical Applications 2

Students must possess a calculator which has the following keys: log x, In x, 10^n, e^x, y^x. Any scientific non-programmable calculator should be adequate.
**Applied Science programs**

**Certificate of Applied Science**
- S21ABC  - Science Laboratory
- S21ABG  - Biology

**Certificate of Technology**
- S21CAG  - Fire Technology

Applied Science programs are currently undergoing accreditation procedure.
For details of courses contact:
Applied Science Department Secretary, 819 8378

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**Bridging and Community Access 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 hours/session

- **TR106 Life Skills**
  - 7 sessions, 2 hours/session

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**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 armed forces.

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**Maths/Science Bridging Course for Women**

Many women feel they are being left behind by technology, when their children are using computers at school or when they lose their jobs as clerical assistants when word processors move in. Some regret giving up maths and science at school but feel that it is too late to do anything about it. Often women are more anxious about maths and science than men. They feel they are 'male' areas or that they are too hard for women to attempt.

The Swinburne course sets out to get rid of these anxieties, to show that maths can be enjoyable and that science is certainly not boring!

The course consists of Chemistry, Physics and Mathematics. There are 3 x 3 hour sessions per week during the day for 16 weeks, or the course may be taken in the evening when there is 1 x 2 hour session each for science and maths on different days.

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**Introduction to School Laboratory Practices**

This course offers a program of elementary laboratory skills for prospective school laboratory assistants. The course is of approximately 70 hours duration.

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**Laboratory Safety**

This course, of approximately 30 hours duration, is designed to promote safe laboratory practices in industrial, research and school laboratories. Topics covered include: role of laboratory personnel, safety procedures, radiation hazards, biological hazards, chemical hazards, mechanical hazards, fire prevention and protection, accident investigation and reporting.

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**English for Further Study (Adult Migrants)**

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 1989.

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.

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TJ004 Return to Study/ESL
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 Advanced Listening and Speaking (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 Advanced Reading and 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. Applicant 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 1989. Applications made in October

H51LDN Returning to Study
Short courses of three hours per week for twelve to fourteen weeks are offered. They enable students to establish, or re-establish, study, reading, and expression skills. The courses are used to prepare students for entry to tertiary institutions and TAFE colleges. Individualized programs ensure that students work at their own rate, so the courses cater successfully for students at all levels.

The three short courses are:
TJ001 Reading, Writing, and Study Skills
TJ002 Efficient Reading
TJ003 Images of Australia

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 1988 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
TH302 Theories of Human Nature
TH303 Images of Australia through Film and Television
TH304 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.

S51AZY Bridging Technology
There are many people who would like to enter further study in the area of maths/science/technology, but find they do not have the necessary prerequisite subjects. This course is designed to meet the needs of these students. This is a full-year course, but is structured to allow mid-year entry to students with the necessary mathematics background. On completion of the course, students can proceed to V.C.E. (TOP) and certificate programs.

Students may select subjects from the following, after consultation with teachers:
Chemistry
English as a Second Language/Communications
Mathematics
Microcomputing
Physical Science
Physics
Wiring & Assembly Methods (intro. electronics)
Work in Society

S51LZN Special Bridging Program
A bridging program is offered from time to time to meet the needs of special groups in the community. At present the College offers a program, in science, for Vietnamese students who wish to prepare for tertiary and TAFE courses in science and engineering.

Subjects of the program are:
TH300 English M
TM301 Mathematics M
TM302 Science M

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 Vocationally-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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR110</td>
<td>Building</td>
</tr>
<tr>
<td>TR111</td>
<td>Clothing Trade Skills</td>
</tr>
<tr>
<td>TR112</td>
<td>Electrical</td>
</tr>
<tr>
<td>TR113</td>
<td>Fitting and Machining</td>
</tr>
<tr>
<td>TR114</td>
<td>Home Economics</td>
</tr>
<tr>
<td>TR115</td>
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</tr>
<tr>
<td>TR116</td>
<td>Sheetmetal</td>
</tr>
<tr>
<td>TR117</td>
<td>Keyboard Skills</td>
</tr>
</tbody>
</table>

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.

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.

Intending students should be in paid employ 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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH310</td>
<td>Infant and Child Development</td>
</tr>
<tr>
<td>TH311</td>
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</tr>
<tr>
<td>TH312</td>
<td>Children’s Experiences</td>
</tr>
<tr>
<td>TH313</td>
<td>Communication and Life Skills</td>
</tr>
</tbody>
</table>

H52HTP Home Care Training Course

Basic training for council home help. Run in conjunction with Hawthorn and Kew City Councils.

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.

Core topics
1. Aboriginal experience
2. European settlement and the effects on Aboriginal society
3. Colonial society in early years in NSW and Victoria
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

- 2%-hour written examination
- School-based assessment

Subject total 50%
School-based assessment 25%
Total for core 75%

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%
TH911   English
Aims of course
1. To extend, deepen and enrich students' experience through reading, discussion and writing.
2. To help students develop further their abilities to deal with points of view relevant to their own experiences and those of others; how to reach such points of view, how to clarify and defend them, and how to evaluate and modify them.
3. To encourage students to pay close attention to the details of language used by themselves and others through active engagement in the four language modes, so that a balance is achieved between speaking and writing on the one hand, and listening and reading on the other.
4. To encourage and further develop students' abilities to read a variety of texts with accuracy, discrimination and enjoyment.
5. To develop further students' abilities to use writing efficiently as a tool for thinking and communicating, employing and experimenting with different forms, styles and conventions of writing in order to express adequately their ideas and experiences.

Reportng method
Letter grades A-F based on standardised scores
Core
Content
All Darts are compulsory.
Part 1 — Single text (minimum of 2 books to be chosen)
Part 2 — Thematic study (minimum of 2 books to be chosen)
Part 3 — Essay
Prescribed texts
See annually revised list in VISE circular. Also published as a separate leaflet.
Assessment
- 3-hour written examination
- School-based assessment

Length of core
Approximately four hours per week for 20 weeks.

Optional units
A. Writing workshop
B. Oral English
C. Focus on language
D. Language development through social analysis
E. The writer's self
Assessment
- School-based assessment

Length of optional unit
Approximately four hours per week for 10 weeks

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 discussing literature.
2. To reach, clarify and defend considered and relevant points of view about the texts they read.
3. To pay close attention to the details of their own and others' language 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 chronologicarange, 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 must consist of at least three middle or longer poems and 3 or 4 sonnets.

Prescribed texts
See annually revised list in VISE circular. Also published as a separate leaflet.

Assessment
- 3-hour written examination
- School-based assessment

Total for core
70%

Length of core
Approximately four hours per week for 20 weeks

Optional units
A. The play in performance
B. Henry Lawson and the 1890s
C. Women in contemporary fiction and society
D. 'Symbols and searchers' — a unit on religious literature
E. Early narrative literature
F. The individual in the nineteenth century novel
G. An introduction to Charles Dickens
H. Twentieth century Australian novels
I. The poetry of alienation
Assessment
- School-based assessment

Total for optional unit
30%

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
Theory
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
- School-based assessment

Total for core
70%

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

In addition students must prepare an individual investigation based on either the optional unit studied or an aspect of the core modules.

Assessment
- School-based assessment

Total for optional unit
30%

Length of optional unit
Approximately 10 weeks

Swinburne College of TAFE
TH914 Politics

Aims of course
1. To enable students to develop an understanding of politics based on facts, generalisations, concepts and theories derived from a study of the Australian political system and Australia's place in the world.
2. To enable students to develop and practise a variety of intellectual and work study skills which facilitate understanding of politics.
3. To develop an empirical, reasoned and humane outlook on social and political behaviour; to encourage a predisposition to responsibility and involvement in political dialogue which are at once effective and respectful of the rights of others; to enable students to reflect on social values as discovered through the study of politics, recognise the values of others and clarify a personal set of values.

These aims could be fulfilled by a study of certain political processes evident in the Australian local and wider regional contexts.

In particular, it is intended that students will:
- develop an understanding of significant aspects of Australian politics and government
- gain an awareness of relevant contemporary events, of the major political dialogues, and the perceptions of the main actors in the political arena
- gain an awareness of the power relationships between individuals, groups, governments and countries as they affect the process of making and enforcing political decisions in Australia
- develop skills of — critical thinking, classifying, conceptualising, generalising, hypothesising, theorising, interpretation and use of evidence — reading, listening, viewing, speaking and writing about politics

The course provides the opportunity for students to develop and test their attitudes and values (although these will not be assessed), in particular:
- to develop personal attitudes/values to key political theories and concepts
- to develop personal means for sustaining these attitudes/values in writing or dialogue

Reporting method
Letter grades A-F based on standardised scores.

Core Content
Ten core units are provided, six concerned with Australian domestic politics and four with international affairs. Students concerned MUST study a minimum of FIVE of these units.

1. The Constitution
2. Voting and elections
3. Political parties
4. Pressure groups
5. Political representation and Parliament
6. Executive government
7. Foreign policy 1901-1945
8. Australia's relations with the USA since 1945
9. Australia and the South-East Asia region 1945=1970
10. Australia, South-East Asia and Papua New Guinea since 1970

Prescribed texts
No prescribed texts. See course description for list of resources.

TM921 Mathematics A

Aims of course
To develop an understanding of various mathematical concepts and skills. The ability to formulate 'real world' problems in mathematical terms should be given particular emphasis.

Reporting method
Letter grades A-F based on standardised scores.

Core Content
- Measurement including three-dimensional problems, prisms, cones, spheres, angles of elevation, sine and cosine rules.
- Probability including combination, permutations, conditional probability, Bayes' theorem, discrete random variables and discrete probability distributions.
- Functions and calculus including circular functions, sketch graphs, composite functions, differentiation, antidifferentiation applications and definite integral.

Prescribed texts
No prescribed texts. See course description for list of references.

Assessment
- 3-hour written examination Subject total 70%

Length of core course rule
- Approximately four hours per week for 20 weeks.

Optional units
A. Mathematics of Earth and space
B. Mathematics of growth and decay
C. Computer applications in mathematics

Or two of the following:
1. Business applications of sequences and series
2. Statistical sampling
3. Continuous probability distributions
4. Logic and proof
5. Transformation geometry
6. Linear programming

Assessment
- School-based assessment Subject total 30%
- 3-hour written examination 60%
- Total for core 70%

Length of optional unit
Approximately four hours per week for 20 weeks.

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 Subject total 60%
- School-based assessment 10%
- Total for core 70%

Length of 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 40%.

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.

**TM925 Chemistry**

**Aims of course**
To provide students with some knowledge and understanding of basic chemistry and how it relates to the world around them.

**Reporting method**
Letter grades A-F based on standardised scores.

**Core Content**
**Theory**
1. Atomic theory
   1.1. The electron
   1.2. Structure of atoms
   1.3. The periodic table
2. Chemical reactions
   2.1. The mole and chemical formulae
   2.2. Chemical reactions/equations
   2.3. Stoichiometric calculations
   2.4. Chemical equilibrium
3. Energy
   3.1. Energy resources in human society
   3.2. Relation of energy by chemical reaction
   3.3. Production of electrical energy by chemical reactions
   3.4. Chemical reactions driven by electrical energy
4. The biosphere
   4.1. Historical development of the periodic table
   4.2. Carbon and silicon
   4.3. Nitrogen and phosphorus
   4.4. Oxygen, sulfur, and the metals

**Practical**
At least 14 hours of practical work related to the course to be carried out in the same year as the theory components of the course. Practical exercises must be chosen to fulfil the requirements of section 3.5.1 of the course description.

At least 26 hours of practical work associated with both core and optional unit must total at least 26 hours.

No prescribed texts but the following are strongly recommended:

**Assessment**
- 3-hour written examination
- School-based assessment

**Length of core**
Approximately four hours per week for 20 weeks

**Optional units**
- Any combination of pairs of topics may be chosen with the exception that no student may choose both of Topics 9 and 10. Aims of course

**TS001 Accounting**

**Aims of course**
1. To introduce and examine the function and role of accountants 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 understandings appropriate to living and/or working in a business environment.

**Reporting method**
Letter grades A-F based on standardised scores.

**Core Content**
- Recording, 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**
- 3-hour written examination 60%
- School-based assessment 20%

**Total for core** 70%

**Length of core**
Approximately four hours per week for 20 weeks

**Optional units**
- Topics 1 is a prerequisite for Topics 3 and 5; Topics 2 and 3 are alternatives.
- Topics 9 and 10 are alternatives.
- No prescribed texts. See course description for suggested references.

**Aims of course**
1. 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**
- The Australian economy including: economic systems, the level of economic activity.
- Economic objectives and performance criteria: price stability, full employment, external stability, economic growth, distribution of income.
- 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

Length of core
Approximately four hours per week for 20 weeks.

Optional unit
Options
If the optional unit of the Group 1 Economics course is composed entirely of these options, then any TWO must be studied.

A. Developing economies
B. Alternative economic systems
C. The nature, extent and alleviation of poverty in Australia
D. Population and capital movements to Australia since 1945
E. The international monetary system since 1945
F. Financial relations between federal, state and local governments in Australia
G. The economics of energy
H. Technological change and the Australian economy

Assessment
For total optional unit
- School-based assessment 2 x 15%

Length of optional unit
For all options
Approximately four hours per week for 5 weeks.

TS903 Legal Studies

Aims of course
To provide an understanding of the relationship between law and society, the social function of law, and the position of the individual within the legal system.

Reporting method
Letter grades A - F based on standardised scores.

Core
Content
The core is divided into five sections:
A. Sources of law in Australia
B. The adjudicating and enforcement process
C. The functions of law in Australian society
D. Imperfections in the legal system
E. Changing our law

Each section must be studied; approximately half the time must be given to Sections A and B, in roughly equal proportions, and approximately half the time to Sections C, D and E, in roughly equal proportions.

Prescribed texts
No prescribed texts.

Assessment
- 3-hour written examination

Length of core/course rule
Approximately four hours per week for 20 weeks.

Optional units
Topics
1. The motor car and the law
2. Problems of the criminal justice system
3. The consumer and the law
4. The family and the law

If an optional unit in the Group 1 Legal Studies 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.

The optional units are composed of the following allowed combinations of topics.

<table>
<thead>
<tr>
<th>Optional unit</th>
<th>Topic combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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</tr>
<tr>
<td>B</td>
<td>3 1</td>
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<tr>
<td>C</td>
<td>4 1</td>
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<tr>
<td>D</td>
<td>3 2</td>
</tr>
<tr>
<td>E</td>
<td>4 2</td>
</tr>
<tr>
<td>F</td>
<td>4 3</td>
</tr>
</tbody>
</table>

Assessment
For total optional unit
- School-based assessment 2 x 15%

Length of optional unit
For all options
Approximately four hours per week for 5 weeks.

In previous years, the Department has run short courses in the applied media, vocational, social and community services areas. Many of these courses will run again in 1989.

Traineeships
The Australian Traineeship System is a form of vocational training for young people which gives benefits to industry by increasing skills in young workers.

The students in the scheme combine on-the-job training with selected employers, with a 13 week off the job training spread throughout one year at TAFE. Swinburne is one of a number of participating TAFE providers.

The Commonwealth Government makes available training funds to both employers and TAFE, while the State Government is responsible for approving and monitoring these arrangements and issuing Traineeship Certificates.

Students are between 15 and 19 years and most have left school before Year 12. Some are classified as disadvantaged because of a range of handicaps.

Swinburne offers Trainees the equivalent of a Year 11 course with Year 12 and post secondary options available where required. In semester 1988, Swinburne TAFE (Department of Business Studies) has 112 Office/Finance Trainees and Applied Science Department has 16 Fire Technology Trainees. Swinburne TAFE Department of Humanities and Social Science offer these subjects to Trainees: Working Environment, Communications at Work and Social Development. These subjects require a total of 4 hours of class time per week for each group. It is a feature of the training that much of the classroom teaching is immediately applicable to work situations, and teachers and employers maintain a liaison throughout the training period.
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