

Engineering Studies

Course of Study

Resource List

Prepared for the Curriculum Council

by

CURRICULUM MATERIALS INFORMATION SERVICES
2005



ENGINEERING STUDIES COURSE OF STUDY

RESOURCES

This list of resources was prepared by officers from the Early Years, K-10 Academic Standards and Support Directorate in the Department of Education and Training. The list is presented in two parts:

Part One: Books, CDs, Videos, computer software

Part Two: Websites

Further details of each item can be found online on the CMIS Resource Bank, which is an online database. Links to this have been made from an Engineering Studies Course of Study webpage at www.eddept.wa.edu.au/cmris/eval/curriculum/courses/engineering/

In this database all of the Engineering Studies resources have also been linked to specific content or outcomes and can be accessed under these headings. The webpage also contains a list of Suppliers and Key Websites for quick access.

Note: A number of suitable **Out of Print** titles are included because they are commonly available in schools.

PART ONE

A guide to engineering mechanics

Holden, Ray.

Marrickville, N.S.W. : Science Press, 1991

0-85583-175-8

Advanced technical drawing [videorecording] / written & presented by Stuart Arden.

Frenchs Forest, N.S.W. : Classroom Video, [200-?]

An introduction to mechanical engineering / Jonathan Wickert.

Wickert, Jonathan

Belmont, Calif. : Thomson, 2004.

0-534-39132-X

AutoCADLT 2000i : getting started.

[San Rafael, Calif.] : Autodesk, 2000.

Design and marketing of a new product [videorecording] : case study of a new car model, the Toyota Camry / script & director Sandra Fulloon.

Frenchs Forest, N.S.W. : Classroom Video, [200-?]

Designing toys [videorecording] / writer/director, Andrew Greig.

Warriewood, N.S.W. : Classroom Video, [200-?]

Electronics [videorecording] : industry applications / [produced by Grant Davies].

Warriewood, N.S.W. : Classroom Video, 2002.

Electronics [videorecording] : transport : the electronic future / production, Kate Conway ; direction, Grant Davies.

[London] : Pumpkin Learning, 2001.

ENGINEERING STUDIES COURSE OF STUDY

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Engineering : an industry study for secondary schools / D.A. Schlyder.

Schlyder, D.
Toowoomba : PCS Publications, 2001.
1-87613-516-6

Engineering against earthquakes [videorecording] / producer/director Siobhan Sinnerton [U.S.] : Discovery Communications, 2001.

Engineering design process / Yousef Haik.

Haik, Yousef.
South Melbourne : Thomson Brooks/Cole, 2003.
0-534-38014-X

Engineering drawing / A.W. Boundy.

Boundy, A.W.
Roseville, N.S.W. : McGraw-Hill Australia, 2002.
0-07-471043-5

Engineering fundamentals : an introduction to engineering / Saeed Moaveni.

Moaveni, Saeed.
Toronto : Thomson, 2005.
0-534-42459-7

Engineering science / W Bolton

Bolton, W
Oxford, : Newnes, 2001
0-7506-5259-4

Engineering studies : a student's workbook / by John Rochford.

Rochford, John.
Gosford, N.S.W. : K.J.S., 1999.

Engineering studies : the definitive guide. Volume 1, the preliminary course / Paul L. Copeland.

Copeland, Paul L.
Allawah, N.S.W. : Anno Domini, 2000.
0-646-39459-2

Engineering studies : the definitive guide. Volume 2, the HSC course / Paul L. Copeland.

Copeland, Paul L.
Allawah, N.S.W. : Anno Domini, 2001.
0-9578770-0-5

Engineering studies communication : a student's workbook / by John Rochford.

Rochford, John.
Gosford, N.S.W. : K.J.S., 1999.

Engineering studies. Stage 6 [electronic resource] : household appliances preliminary course, application module.

[Australia] : OxIDE, 2000.

Excel senior high school engineering studies / Peter Metcalfe, Roger Metcalfe.

Metcalfe, Peter.
Glebe, N.S.W. : Pascal, 2004.
1-7412-5051-X

ENGINEERING STUDIES COURSE OF STUDY

RESOURCES

Licensed aircraft maintenance engineer : careers, licenses & ratings.

Canberra : CASA, 2001

Materials for Engineering / W Bolton

Bolton, W

Oxford, : Newnes, 2000

0-7506-4855-4

Materials technology / Robert Snedden.

Snedden, Robert.

Oxford : Heinemann Library, 2001.

0-431-12103-6

Solutions manual to accompany Graphics 2000. Book two / A.W. Boundy, I.L. Hass.

Boundy, A.W.

Sydney : McGraw-Hill, 1984.

0-07-470298-X

Structures and materials / Kathryn Whyman.

Whyman, Kathryn.

London : Watts, 2004.

0-7496-5549-6

Studies in senior design & technology / Neville Warner ... [and others] ; [illustrated by Wendy

Arthur and Kevin Kirkman].

Milton, Qld. : Jacaranda, 1995.

0-7016-3281-X

Technical graphics [videorecording] / producer, John Davis.

Warriewood, N.S.W. : Classroom Video, [2003].

The science and engineering of materials / Donald R. Askeland, Pradeep P. Phule.

Askeland, Donald R.

Southbank, Vic. : Thomson, 2006 [i.e. 2005]

0-534-55396-6

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In this database all of the Engineering Studies resources have also been linked to specific content or outcomes and can be accessed under these headings. The webpage also contains a list of Suppliers and Key Websites for quick access.

PART TWO

A sightseers guide to engineering [website].

<http://www.engineeringsightseers.com/default.asp>

Barton, A.C.T. : Engineers Australia, 2002-

All Chrome Shop [website] : multicoloured plated finishes.

<http://www.allchromeshop.com.au/index.htm>

[Sydney] : All Chrome Shop, [2005?]-

Alliance for Innovative Manufacturing at Stanford [website].

<http://manufacturing.stanford.edu/>

Stanford, Calif. : Stanford University, 2003.

Amusement park physics [website] : what are the forces behind the fun

<http://www.learner.org/exhibits/parkphysics>

Washington, DC : Annenberg/CPB, 1997-

Architect Studio 3D [website].

<http://www.architectstudio3d.org/AS3d/index.html>

Oak Park, Ill. : Frank Lloyd Wright Preservation Trust, 2005-

ASEE Engineering K12 Center [website] : where to go for K-12 engineering education.

<http://www.engineeringk12.org/default.htm>

Washington, D.C. : American Society for Engineering Education, 2004-

Australasian Institute of Metal Finishing [website].

<http://www.aimf.org.au/index.htm>

North Melbourne : Australasian Institute of Metal Finishing, [2005?]-

Australia innovates [website] : an on-line guide to innovation in Australia's industries.

http://projects.powerhousemuseum.com/australia_innovates/

Sydney : Powerhouse Museum, 2001.

Bad Human factors designs [website]

<http://www.baddesigns.com/>

[United States] : M.J.Darnell

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Be a spacecraft engineer [website].

<http://stardust.jpl.nasa.gov/classroom/jason/index2.html>

[Washington, D.C.] : NASA, [2005-].

Big Buildings

<http://www.pbs.org/wgbh/buildingbig/>

Boston, Mass. : WGBH Educational Foundation, 2000-

Bridge engineering home page [website] / SC Solutions.

<http://www.scsolutions.com/bridge.html>

Sunnyvale, Calif. : SC Solutions, 2002-

Bridge types [website].

<http://www.nationalconcretebridge.org/bridgetypes.html>

Skokie, Ill. : National Concrete Bridge Council, 1999-

Build a bridge [website].

<http://www.pbs.org/wgbh/nova/bridge/>

Boston : Nova Online, 1997.

Building big [website] : bridges, domes, skyscrapers, dams, tunnels

<http://www.pbs.org/wgbh/buildingbig/>

Boston, Mass. : WGBH Educational Foundation, 2000-

Building big [website] : bridges.

<http://www.pbs.org/wgbh/buildingbig/bridge/index.html>

Boston, Mass. : WGBH Educational Foundation, 2000-

Building big [website] : the labs

<http://www.pbs.org/wgbh/buildingbig/lab/index.html>

Boston, Mass. : WGBH Educational Foundation, 2000-

Built [website]

<http://www.abc.net.au/built>

[Australia] : Austalian Broadcasting Corp., 2004-

Capture your dragster in 3-D! [website]

<http://www.science-of-speed.com/default.asp>

Pittsburg, Kan. : Technological Literacy Group, 2002-

Civil engineering [website].

<http://www.civil.eng.curtin.edu.au/index.cfm>

Bentley, W.A. : Curtin University of Technology, 2005-

Coaster force [website]

<http://www.coasterforce.com/info/physics.php>

United Kingdom : Coaster Force 2001-

Connell Wagner [website].

<http://www.conwag.com/welcome.htm>

South Melbourne : Connell Wagner, 2004-

Coomes Consulting [website] : knowledge, creativity, performance.

<http://web.coomes.com.au/default.aspx>

Melbourne : Coomes Consulting, 2001-

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CSIRO Education [website] : Commonwealth Scientific & Industrial Research Organisation.

<http://www.csiro.au/index.asp?type=educationIndex>

Campbell, A.C.T. : CSIRO, 1997-

CSIRO exploration and mining [website].

<http://www.em.csiro.au/>

Kenmore, Qld. : CSIRO Australia, [200-?]-

CSIRO Manufacturing & Infrastructure Technology [website].

<http://www.cmit.csiro.au/>

Clayton, Vic. : CSIRO Australia, 2002-

CSIRO solve [website] : a CSIRO review of scientific innovations for Australian industry.

<http://www.solve.csiro.au/0505/index.htm>

Clayton, Vic. : CSIRO Australia, 2004-

CSIROonline [website] : Commonwealth Scientific & Industrial Research Organisation.

<http://www.csiro.au/>

Clayton South, Vic. : CSIRO Australia, 1997-

Dampier Salt Limited [website].

<http://www.dampiersalt.com.au/tnpn002785/prod/dsl/dslhome.nsf>

Dampier, W.A. : Dampier Salt, 2005-

DATTA [website] : Design and Technology Teachers Association, Western Australia

<http://members.iinet.net.au/~datta>

Subiaco, W.A. : DATTA, 2004

Discover engineering online [website] / [built by] Eastman Chemical Co.

<http://www.discoverengineering.org/home.asp>

Kingsport, Tenn. : Eastman Chemical Co., 1999- .

Doodles, drafts and designs [website] : industrial drawings from the Smithsonian.

<http://www.sil.si.edu/exhibitions/doodles/index.htm>

Washington, D.C. : Smithsonian Institution, 2004-

Education resources [website] : case studies/Design Council UK

<http://www.designcouncil.info/educationresources/studies/index.html>

London : Design Council, 2003-

Educational Web Adventures [website].

<http://www.eduweb.com/>

eFunda [website] : engineering fundamentals.

<http://www.efunda.com/home.cfm>

Sunnyvale, Calif. : eFunda, 1999-

Engineer live [website] : for engineers...by engineers.

<http://www.engineerlive.com/>

London : Setform Limited, 2004-

Engineering & technology [website].

<http://www.eduweb.com/portfolio/engineertechadv.php>

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Engineering design challenges [website] / NASA.

<http://eto.nasa.gov/>

Huntsville, Ala. : NASA Marshall Space Flight Center, 2004-

Engineering links [website] / Faculty of Engineering, UTS.

<http://www.eng.uts.edu.au/links/>

Sydney : Faculty of Engineering, University of Technology, Sydney, 2001-

Engineering our future [website] : a resource for teaching engineering, science and technology

<http://www.eng.newcastle.edu.au/eof/>

Callaghan, N.S.W. : Faculty of Engineering, University of Newcastle, 2005-

Engineers Australia, Western Australian Division [website].

[http://www.wa.engineersaustralia.org.au /](http://www.wa.engineersaustralia.org.au/)

West Perth : Engineers Australia - Western Australia Division, 2004-

Extreme Engineering [website]

<http://dsc.discovery.com/convergence/engineering/engineering.html>

[United States]: Discovery Channel, 2003-

Force Engineering [website].

<http://www.force.co.uk>

Shepshed, England : Force Engineering, [2003]-

GE imagination at work [website].

<http://cwcnd.geimaginationatwork.com/@v=061704@/indexFlash.html>

[United States] : General Electric Co., 2004-

GE transportation [website] : aircraft engines.

<http://www.geae.com/>

Fairfield, Conn. : General Electric Co., 1997-

Great Structures of the World [website].

<http://www.tic.ab.ca/~qranson/>

[Canada?], 1999-

How baggage handling works [website] / by Karim Nice.

<http://travel.howstuffworks.com/baggage-handling>

Cary, N.C. : HowStuffWorks.com, 2005-

How bridges work [website] / by Michael Morrissey.

<http://science.howstuffworks.com/bridge.htm>

Cary, N.C. : HowStuffWorks.com, 2004-

How gas turbine engines work [website] / by Marshall Brain.

<http://science.howstuffworks.com/turbine>

Cary, N.C. : HowStuffWorks.com, 2004-

How rotary engines work [website] / by Karim Nice.

<http://www.howstuffworks.com/rotary-engine>

Cary, N.C. : HowStuffWorks.com, 2004-

How stuff works [website] / by Marshall Brain.

<http://www.howstuffworks.com/>

Raleigh, N.C. : BYG, 1998-

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RESOURCES

INTAD[website] : Industrial Technology and Design Teachers' Association.

<http://www.intad.asn.au>

North Tamborine, Qld. : The Association, [2003?]-

Invention at play [website].

<http://www.inventionatplay.org/>

Washington, D.C. : Lemelson Center for the Study of Invention and Innovation, 2005-

IPS Radio and Space Services [website] : the Australian Space Weather Agency.

<http://www.ips.gov.au/>

Sydney : IPS Radio and Space Services, 2001-

JETS [website] : opening the world of engineering to junior high and high school students, parents.

<http://www.jets.org/>

Alexandria, Va. : JETS, [2005-].

KDN [website] : Kids design network.

<http://www.dupagechildrensmuseum.org/kdn2/>

Naperville, Ill. : DuPage Children's Museum, 2005-

Main Roads Western Australia [website].

<http://www.mainroads.wa.gov.au/>

East Perth : Main Roads Western Australia, 1996- .

Materials Science & Engineering Career Resource Center [website].

<http://www.crc4mse.org/Index.html>

[United States] : Materials Science & Engineering Career Resource Center, 2005-

Mr C's CO2 racing resources [website]

<http://co2.technologyeducator.com/welcome.htm>

Wood Dale, Ill. : M. Cousineau, 1999

<http://www.eweek.org/>

Alexandria, Va. : National Engineers Week, [2003?]-

National science digital library [website] : educational resources for science, technology, engineering etc.

<http://nsdl.org>

Boulder, Colo. : NSDL, 2003- .

NewBayBridge.org [website] : the new east span: history in the making.

<http://www.newbaybridge.com/>

Emeryville, Calif. : California Alliance for Jobs, 2004-

Nicholas Janberg's structurae [website] : international database and gallery of structures.

<http://www.structurae.de/>

Denmark : Nicholas Janberg Internet Content Services, 1998-

Nickel Institute [website] : knowledge for a brighter future.

<http://www.nidi.org>

Toronto : Nickel Institute, 1997-

NSW HSC Online [website].

<http://hsc.csu.edu.au/>

Sydney : NSW HSC Online, 2000-

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NSW HSC online. Engineering studies [website].

http://hsc.csu.edu.au/engineering_studies/

Ryde, N.S.W. : NSW Department of Education & Training, [2002?]-

Power Superconductor Applications Corporation [website].

<http://www.powersuper.com>

New Castle, Pa. Power Superconductors Corp.

Process control education web site [website]

<http://www.pc-education.mcmaster.ca/>

Hamilton, Ont. : McMaster Advanced Control Consortium, 1999-

R-12 engineering resources [website] / Technology School of the Future.

<http://www.tsof.edu.au/resources/control/engineering/>

Hindmarsh, S. Aust. : Department of Education and Children's Services, 2004-

Rolls-Royce [website] : education : information for schools.

<http://www.rolls-royce.com/education/schools/default.jsp>

London : Rolls-Royce, 2004-

Seven wonders of the modern world [website].

http://www.asce.org/history/seven_wonders.cfm

Reston, Va. : American Society of Civil Engineers, 1996-

Shimz [website] : Shimizu Corporation.

<http://www.shimz.co.jp/english/index.html>

Tokyo : Shimizu Corp., 2002-

Skyscraper picture collection [website] : a collection of skyscraper pictures of cities and their tallest buildings.

<http://www.skyscraperpicture.com/index1.htm>

Maastricht, Netherlands : P. Beckers, 1999-

Snowy Hydro [website] : renewable energy.

<http://www.snowyhydro.com.au/>

Cooma, N.S.W. : Snowy Hydro, 2003-

Solahart [website].

<http://www.solahart.com.au/>

Welshpool, W.A. : Solahart, [200-?]-

Steel for the world [website].

<http://www.sidmar.be/>

Gent, Belgium : Sidmar, 2005-

Swan 4 kids [website].

<http://www.cwr.uwa.edu.au/cwr/outreach/swan4kids/>

Nedlands, W.A. : University of Western Australia, 2005-

Teach engineering [website] : resources for K-12.

<http://www.teachengineering.com/index.php>

Boulder, Colo. : TeachEngineering, 2005-

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RESOURCES

Technology education [website].

http://cms.curriculum.edu.au/technology/newcms/view_page.asp?page_id=3290&men_id=626

Melbourne : Curriculum Corp., 2004-

Technology in Australia 1788 - 1988 [website] : a condensed history of Australian technological invention.

<http://www.austehc.unimelb.edu.au/tia/>

[Melbourne] : Australian Academy of Technological Science and Engineering, 2000.

The Australian Academy of Technological Science and Engineering [website] : ATSE Focus.

<http://www.atse.org.au/publications/focus/focus-lay.htm>

Melbourne : Australian Academy of Technological Science and Engineering, [2000?]

The big dig [website].

<http://www.masspike.com/bigdig/index.html>

Boston, Mass. : Massachusetts Turnpike Authority, 2004-

The blobz guide to electric circuits [website].

<http://www.andythelwell.com/blobz/>

Stafford, U.K. : Staffordshire University, 2003-

The Design Process Project [website]

<http://www.eng.fsu.edu/~haik/design>

Tallahassee Fl.: Florida A&M University, 2001-

The Engineering Centre [website].

<http://www.engineersaustralia.org.au/>

Barton, A.C.T. : Engineers Australia, 2001-

The great buildings collection [website].

<http://www.greatbuildings.com/>

Eugene, Or. : Artifice, 1997-

The Great Wall [website] / Jun Shan.

<http://chineseculture.about.com/culture/chineseculture/library/weekly/aa021798.htm>

[United States] : About.com, 1998-

The Super Pit [website] : Kalgoorlie Consolidated Gold Mines.

<http://www1.superpit.com.au/default.asp>

Kalgoorlie, W.A. : KCGM, 2005-

The Virtual Museum of the City of San Francisco [website].

<http://www.sfmuseum.org/>

San Francisco, Calif. : San Francisco Museum, 2004-

Thompson & Brett Consulting Engineers [website].

<http://www.thompsonbrett.com.au/>

Rosny, Tas. : Thompson & Brett, [2005?]-

Virtual laboratory [website] : a virtual engineering-science laboratory course / Michael Karweit.

<http://www.jhu.edu/~virtlab/virtlab.html>

Baltimore, Md. : Johns Hopkins University, 2000-

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What is an engineer? [website].

<http://www.ecm.uwa.edu.au/for/prosp/engineer>

[Nedlands, W.A.] : Univesity of Western Australia, 2004-

Wood & Grieve Engineers [website].

<http://www.wge.com.au/>

East Perth : Wood & Grieve Engineers, [2005?]-

Young Engineers Australia [website].

<http://www.youngengineers.com.au/index.html>

[Sydney?] : Young Engineers Australia, 2003-