



## TEACHING AND LEARNING GUIDE

The Teaching and Learning Guide must be read in conjunction with the course document. It contains advice to assist teachers delivering the course and can be modified as required.

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## COURSE DELIVERY

### DESIGN BRIEFS

The course will develop design and generic capabilities through the housing and interior design briefs which contain challenges and constraints through the application of the Design Principles and Information section of the course including:

- architectural design principles
- environmentally sustainable practices
- information about needs, precedents and influences.

*Students will develop knowledge and skills by undertaking a range of briefs which provide a foundation for completing an individual design folio on a topic of their choice.*

### LEARNING ACTIVITIES

In addition to this document, a CD containing sample briefs, course planning tools and learning resources is available from the Moderator.

### DESIGN DRAWINGS

#### SCALE

All drawings should be in a scale of either 1:20, 1:50 or 1:100 for exam questions and the majority of other drawings.

In the externally assessed folios and some internally assessed briefs, there may need to be a smaller scale for site plans (e.g. 1:200 or 1:500.)

#### ANNOTATIONS

Succinct but relevant annotations are required to identify critical features or decisions within the design process.

#### DESIGN DEVELOPMENT

Design decisions and the problem solving process needs to be clearly communicated through design development drawings. See:

- Wilke, G, 2003, *Building Your Own Home, A Comprehensive Guide for Owner Builders*, Completely Revised Edition, New Holland Publishers, Frenchs Forest (pages 26 – 27 and 74 – 75)
- Wilke, G, and Arden, S, 2001, *Building Your Own Home, A Comprehensive Guide for Owner Builders*, New Holland Publishers, Frenchs Forest (Sections 8 and 23)
- Scanned resources provided on CD which were provided at UTas Professional Learning session in November 2007 (See Learning Activities above).

Design Development should be undertaken in an appropriate scale after the initial “bubble” stage.

## REFERENCES AND RESOURCES

### Books and Journals

#### GENERAL

##### Recommended books for foundation collection :

Apperly, R, et al, 1995, *A Pictorial Guide to Identifying Australian Architecture, Styles and Terms from 1788 to the Present*, Harper Collins Publishers, Sydney

Ching, Francis D.K. 1996, *Architectural Graphics*, Thomas Nelson, Australia

Conran, T, 2003, *The Ultimate House Book for Home Design in the Twenty First Century*, Conran Octopus, London.

HIA, 2006, *Introduction to Kitchen Planning*, Hettich, Australia, 1 Herbert Place, Smithfield, NSW

Hollo, Nick, 2001, *Warm House, Cool House*, Choice Books, Marrickville

Nicholson, J, 1997, *A Home among the Gum Trees, the Story of Australian Houses*, Allen and Unwin, St Leonards

Stapleton, M. & I. 1997, *Australian House Styles*, Flannel Flower Press, Australia

Vulker, J, 1990, *Studying Australian Architecture*, National Education Division of the Royal Australian Institute of Architecture (RAIA), Canberra (out of print)

Wilke, G, 2003, *Building Your Own Home, A comprehensive guide for Owner Builders*, New Holland Publishers, Frenchs Forest

#### Additional Books

Title	Author	ISBN
Gabrielle Poole <i>Space in which the soul can play</i>	Bruce Walker	0958566003
Robert Marino	Rockport	1564964523
Houses Dot Com	Chris Johnson	073474322
Rural Studio	Oppenheimer Dean & Hursley	1568982925
Safe	Antonelli	0870705806
Design Like You Give a Damn	Thames & Hudson	
Zoomorphic	Hugh Aldersey-Williams	1856693406
Experimental Architecture Houses		8489861463
Architectural Drawing	Yee	0471055409
World House Now	Dung Ngo	0500284199
Case Study Houses	Elizabeth Smith	3822846171
Small City Houses	Kleine Stadthaus	3822851434
New Directions in Tropical Asian Architecture	Goad, Pieris, Bingham-Hall	1877015148

## Journals

Architectural Review 100

A10 June 2007

Architecture Australia

AR

*Green Sustainable Architecture & Landscape Design*

Houses *The Residential Architecture Magazine*

Inside Out

Monument *Residential Special 2001*

Sanctuary

## Websites

### Online Architecture Magazines

<http://www.architectureaustralia.com/aa/>

[www.arplus.com/broch/broch.htm](http://www.arplus.com/broch/broch.htm)

[http://www.detail.de/rw\\_3\\_Kaufen\\_En\\_Detail.htm](http://www.detail.de/rw_3_Kaufen_En_Detail.htm) (may need to set to English as this is a German website, Journals and Books in PDF format)

[www.umemagazine.com/](http://www.umemagazine.com/)

### Websites about Architecture

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

<http://archinect.com/gallery/index.php>

<http://www.arch.utas.edu.au/>

[www.architecture.com.au/](http://www.architecture.com.au/) (RAIA - Royal Australian Institute of Architects - Includes sections on: news; events; services; members; careers; education; publications; and links)

[www.archimedia.com.au](http://www.archimedia.com.au)

[www.architecture.org.au/](http://www.architecture.org.au/) (Australian Architecture Association - not-for-profit organisation helping the public to understand, enjoy and discuss architecture, locally and beyond)

<http://www.aaarchitect.com/portfolio-more.htm>

<http://www.architecture.com.au/i-cms?page=1>

<http://www.ab.deakin.edu.au/online/> (a+b gallery - resource of student works)

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

<http://en.red-dot.org/design.html> (design website)

### **Architectural practices**

[www.sixdegrees.com.au/](http://www.sixdegrees.com.au/)

[www.andrewmaynard.com.au/Site/projects.html](http://www.andrewmaynard.com.au/Site/projects.html)

[www.morrisnunn.com.au/v1/index2.html](http://www.morrisnunn.com.au/v1/index2.html)

[www.calatrava.com/](http://www.calatrava.com/)

<http://rpbw.r.ui-pro.com/>

### **Building**

[www.individualbuilders.com.au](http://www.individualbuilders.com.au)

[www.luxuryhome.com.au/](http://www.luxuryhome.com.au/) (renovating and design ideas website)

### **Project Planning**

[http://www.bbc.co.uk/schools/gcsebitesize/dida/managing\\_projects/planningrev12.shtml](http://www.bbc.co.uk/schools/gcsebitesize/dida/managing_projects/planningrev12.shtml)

### **Floor plans**

<http://www.blueprint-homes.com.au/index2.htm>

<http://www.markcon.com.au/> (floor plans with colour rendered elevations)

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

**Computer Aided Design** [www.cben.net/](http://www.cben.net/)

### **One point perspective**

<http://www.olejarz.com/arted/perspective/intro2.html>

## WEBSITES BY CONTENT AREA

### Design and Architectural principles

#### Aesthetic

- Elements and principles of design  
(colour, texture, shape, line, direction, space, mass, balance, proportion)
  - <http://www.colormatters.com/colortheory.html>
  - <http://www.resene.co.nz/> (how to use colour and some colour theory)
  - <http://www.color-wheel-pro.com/color-schemes.html>
  - [www.dulux.com.au](http://www.dulux.com.au) (Dulux Paint Website)
  - [www.wattyl.com.au](http://www.wattyl.com.au) (Wattyl Paint Website)
  - [www.haymespaint.com.au](http://www.haymespaint.com.au) (Haymes Paint website)
  - [www.maisonjardin.com.au/colour.htm](http://www.maisonjardin.com.au/colour.htm) (interior and exterior colour consultants)
  - <http://www.colormatters.com/colortheory.html> (colour theory website)

#### Use of space

- Layout, flow, circulation and zoning
  - [http://www.ikea.com/ms/en\\_AU/local\\_home/richmond\\_store.html](http://www.ikea.com/ms/en_AU/local_home/richmond_store.html) (kitchen planning tool and general furniture sizes)
  - <http://www.homesite.com.au/home-living/tips-and-guides/types-of-lighting> (different types of lighting suggested uses etc.)
- Ergonomics
  - [http://peakphysiotherapy.com/occupational\\_health.htm](http://peakphysiotherapy.com/occupational_health.htm)
  - <http://adelaide.edu.au/hr/ohs/hazmanagmt/workstation.html>

#### Construction materials and techniques

- Functional, environmental and comfort factors of exterior, interior and related construction materials
  - [www.pilkington.com.au](http://www.pilkington.com.au) (a number of options given for different glass types and optimum uses)
  - [www.infolink.com.au](http://www.infolink.com.au)
  - [www.boral.com.au](http://www.boral.com.au)

## Environmental Sustainability

[www.greenhouse.gov.au/yourhome](http://www.greenhouse.gov.au/yourhome)

<http://www.greenhouse.gov.au/gwci/households.html>

<http://www.vicpark.ws/health/index.cfm?link=274> (good graphics of enhanced greenhouse effect)

<http://www.earthday.net/footprint/info.asp> (referred to by Krane J., and Peddie C., 2007 *A Disastrous Impression*, in 'The Mercury' 20 January, 2007)

[www.pilkington.com.au](http://www.pilkington.com.au) (information on new styles of glass, particularly in regard to Energy efficient/ solar passive design)

[www.solardwellings.com.au/](http://www.solardwellings.com.au/) (solar passive homes in Western Australia)

<http://www.ecologicalhomes.greendirectory.com.au/> (The Green Directory is an online resource with easy-to-access to information about eco-friendly products and services across a wide range of areas including power, natural living, building, food, water and more)

[home.goulburn.net.au/~suntech/projects/trigstones.html](http://home.goulburn.net.au/~suntech/projects/trigstones.html) (earth covered homes)

[www.greenhouse.gov.au/](http://www.greenhouse.gov.au/) (solar passive information from the Australian Government)

[www.yourhome.gov.au](http://www.yourhome.gov.au) (suite of consumer and technical guide materials and tools developed to encourage the design, construction or renovation of homes to be comfortable, healthy and more environmentally sustainable)

<http://www.architecture.com.au/i-cms?page=57> (RIAA Your Home – downloadable resource)

<http://www.sustainableliving.com.au/globalwarming>

[www.architectsforpeace.org/](http://www.architectsforpeace.org/) (architects for peace - a forum for architects, urban designers, engineers, planners, landscape architects and environmentalists)

[www.2050.org.au/](http://www.2050.org.au/) (2050 - young future leaders of the built environment. 2050 is a national not-for-profit organisation that represents the young future leaders of the built environment that are working towards a sustainable future)

[www.architectureforhumanity.org/](http://www.architectureforhumanity.org/) (architecture for humanity web site. Architecture for Humanity is a charitable organization founded in 1999 to promote architectural and design solutions to global, social and humanitarian crises)

## Investigation of needs, precedents and influences

### Analysis of site, user and community needs to integrate and respond to:

- **Users current and projected needs**

Practical, psychological and sociological needs during lifecycle

Demographic trends and housing needs for future

<http://www.abs.gov.au/websitedbs/d3310114.nsf/Home/census>

#### **ABS Quick Stats search by postcode**

Search by postcode for person characteristics, family characteristics, dwelling characteristics.

<http://www.abs.gov.au/websitedbs/c311215.nsf/22b99697d1e47ad8ca2568e30008e1bc/e4999c9c6353d213ca2568a2001f9f94!OpenDocument>

#### **Themes – States: Tasmania**

Tasmanian statistical information, including statistical releases and links to non-ABS sources. A wide range of economic and social statistics are covered.

<http://www.dcac.tas.gov.au/>

#### **Demographic Change Advisory Council - Tasmania**

The Demographic Change Advisory Council is the key advisory body on demographic change issues that are likely to affect the Tasmanian community.

<http://www.taspop.tasbis.com/>

#### **Tasmania's Population**

This site is maintained by Associate Professor Natalie Jackson and is an initiative of the Demographic Analytical Services Unit in the School of Sociology and Social Work, University of Tasmania.

<http://www.ahuri.edu.au>

#### **Australian Housing and Urban Research Institute**

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

<http://www.abs.gov.au/websitedbs/D3310116.NSF/75e27b9a1682fb15ca2567f2000d26ec/ea4b6f2ef6edb06aca2567eb00151481!OpenDocument>

#### **Education Services - Statpak Online Subject Areas - Geography**

- **Precedents**

Historical, exemplary contemporary architectural responses

Tasmanian information including Heritage

<http://www.tas.gov.au/tasmaniaonline/>

Art Deco Society Information about the style, design. Useful when talking about different styles of Housing in Australia. [www.artdeco.org.au/welcome.html](http://www.artdeco.org.au/welcome.html)

<http://www.architecture.com.au/i-cms?page=57> (RIAA Your Home – downloadable resource)

- **Social and economic influences**

Housing affordability

High, medium and low density housing

Cultural values in relation to housing

Provision of housing for groups with specific needs

E.g. homeless, people with disability

Master Builders Association of the ACT, 2001, Housing for Life Designed for Everybody, Paragon Printers, ACT

Available in PDF form from website [www.mba.org.au](http://www.mba.org.au)

Universal Design is one of the elements of the Queensland Department of Housing's Smart Housing. Available as PDF. Universal Housing

[http://www.build.qld.gov.au/smart\\_housing/publications/ud\\_booklet/index.asp](http://www.build.qld.gov.au/smart_housing/publications/ud_booklet/index.asp)

GLA Best Practice Guide to wheelchair accessible housing (PDF - Wheelchair accessible housing and Lifetime Homes)

<http://www.habintegdec.org.uk/pages/housing.html>

## Further Education

<http://fcms.its.utas.edu.au/scieng/arch/>

[www.archdesign.unisa.edu.au/](http://www.archdesign.unisa.edu.au/) (The Louis Laybourne Smith School of Architecture & Design)

[www.fbe.unsw.edu.au](http://www.fbe.unsw.edu.au) (Uni of NSW Faculty of the Built Environment)

[www.whitehouse-design.edu.au/](http://www.whitehouse-design.edu.au/) (Interior Design School in Sydney)

[www.collegeinteriordecor.com.au](http://www.collegeinteriordecor.com.au) (Australian College of Interior Décor)

## Video and Free to Air Resources

### General

Clickview Learning Management tool <http://www.clickview.com.au/videolibrary/>

A list is provided on the Housing and Design CD of relevant videos. For updates and current listing refer to website.

To get a PDF listing of all resources in Clickview, go to Tools menu and select third option "Create PDF of Resources"

Examples include:

- Architectural & Interior Design - Inside an architect's office
- Architecture and Design
- Applying the Elements and Principles of Design.

PodCasts – ABC Radio National

<http://www.abc.net.au/rn/podcast/default.htm>

Design and Architecture

[http://www.abc.net.au/rn/podcast/podcast\\_subject.htm#sub\\_heal](http://www.abc.net.au/rn/podcast/podcast_subject.htm#sub_heal)

Free to Air Video

Future Focus - Great Expectations, SBS, 13/4/2007 - 60 minutes duration

Grand Designs – SBS Series, 2007

Desperate Housing - ABC, 2007 Housing Affordability, Difference of Opinion

Walks with an Architect, ABC, 09/07/06, 16/07/06, 23/07/06, 30/07/06, 06/08/06, 13/08/06.

### Environmental Sustainability

"The Home Front" - on Four Corners, 8.30 pm Monday 25 June 2007, ABC  
<http://www.abc.net.au/4corners/content/2007/s1957959.htm>

Eco House Challenge (SBS series) <http://www21.sbs.com.au/ecohousechallenge/>

Carbon Cops (ABC series) <http://www.abc.net.au/tv/carboncops/> 644 CAR

Inventors 2020, ABC program, 2007

## PY10 CAPABILITIES – DOMAIN SPECIFIC & GENERIC SKILLS AND KNOWLEDGE

	Inter-related areas	Learning	PY10 Capabilities
Generic capabilities	<b>Research, analysis and synthesis</b>	<ul style="list-style-type: none"> <li>• Critical information literacy skills</li> <li>• Sourcing information from primary sources eg client, expert, practitioner</li> <li>• Locating local and Australian sources (and international sources where appropriate)</li> <li>• Referencing of sources</li> </ul>	<p><b>Learning and thinking skills</b></p> <ul style="list-style-type: none"> <li>• Accessing, acquiring, analysing, synthesising and evaluating information through a variety of sources</li> <li>• Critical reflection</li> </ul> <p><b>Self management</b></p> <ul style="list-style-type: none"> <li>• Sense of inquiry</li> <li>• Research</li> <li>• Seeking deep understanding</li> <li>• Making connections</li> <li>• Acting on reflection and revisions</li> </ul>
	<b>Communication</b>	<p><b>Verbal</b> (Text and Spoken)</p> <ul style="list-style-type: none"> <li>• Evidence of research</li> <li>• Communicating to an audience (small and class group)</li> </ul> <p><b>Visual</b></p> <ul style="list-style-type: none"> <li>• Documentation of research and design process</li> <li>• Architectural conventions for developmental and final plans</li> <li>• 2D and 3D modelling / perspective images</li> </ul> <p><b>Numerical</b></p> <ul style="list-style-type: none"> <li>• Measurement, area, scale, proportion, ratio, gradients, solar geometry and graphically represented data.</li> </ul> <p><b>ICT</b></p> <ul style="list-style-type: none"> <li>• Photo imaging, scanning, word processing, layout and formatting, PowerPoint presentations, email, internet searches</li> </ul>	<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Communicating ideas and information in a variety of forms</li> <li>• Visual literacy</li> <li>• Numeracy</li> </ul>
	<b>Self Management for individual and collaborative projects</b>	<p><b>Individual</b></p> <ul style="list-style-type: none"> <li>• Project management for larger ( eg larger design projects and folio)</li> <li>• Planning and organising tools (eg timelines, gant charts)</li> <li>• Goal setting and action planning</li> <li>• Critical reflection</li> </ul> <p><b>Collaborative</b></p> <ul style="list-style-type: none"> <li>• As above</li> <li>• Roles, responsibility and leadership</li> <li>• Problem Solving, negotiation, conflict resolution</li> </ul>	<p><b>Self management</b></p> <ul style="list-style-type: none"> <li>• Creating and pursuing goals</li> <li>• Planning/organising</li> <li>• Taking responsibility</li> <li>• Understanding of self</li> <li>• Monitoring progress</li> </ul> <p><b>Interpersonal skills</b></p> <ul style="list-style-type: none"> <li>• Working collaboratively</li> <li>• Active Listening</li> <li>• Leadership</li> <li>• Negotiation</li> </ul>

<b>Design Principles and Information</b>	<b>Environmental Sustainability</b>	<ul style="list-style-type: none"> <li>• Sources of energy for housing</li> <li>• Active and passive energy sources for housing</li> <li>• Passive solar design for cool temperate and hot humid tropical climates</li> <li>• Embodied energy of building materials</li> <li>• Impact of choice housing materials, services, construction and design techniques on sustainability of energy consumption levels and the environment</li> <li>• Sustainable urban planning principles</li> </ul>	<p><b>Learning and thinking skills</b></p> <ul style="list-style-type: none"> <li>• Problem-solving</li> <li>• Decision-making</li> <li>• Systems thinking and design</li> <li>• Applying logical, critical and innovative thinking to a range of problems and ideas</li> </ul> <p><b>Self management</b></p> <ul style="list-style-type: none"> <li>• Taking responsibility</li> </ul>
	<b>Design and Architectural principles</b>	<p><b>Aesthetic</b></p> <ul style="list-style-type: none"> <li>• Elements and principles (colour, texture, shape, line, space, mass, balance, contrast, harmony, proportion)</li> </ul> <p><b>Use of space</b></p> <ul style="list-style-type: none"> <li>• Layout, flow, circulation and zoning</li> <li>• Ergonomics</li> </ul> <p><b>Construction materials and techniques</b></p> <ul style="list-style-type: none"> <li>• Functional, environmental and comfort factors of exterior, interior and related construction materials</li> <li>• Construction methods</li> </ul>	<p><b>Learning and thinking skills</b></p> <ul style="list-style-type: none"> <li>• Creativity</li> <li>• Applying logical, critical and innovative thinking to a range of problems and ideas</li> </ul> <p><b>Self management</b></p> <ul style="list-style-type: none"> <li>• Transferring knowledge and skills</li> </ul>
	<b>Investigation of needs, precedents and influences</b>	<p><b>Analysis of site, user and community needs to integrate and respond to:</b></p> <ul style="list-style-type: none"> <li>• <b>Users current and projected needs</b> Demographic trends and housing needs for future Practical, psychological and sociological needs during lifecycle</li> <li>• <b>Precedents</b> Historical, exemplary contemporary architectural responses</li> <li>• <b>Social and economic influences</b> Housing affordability High, medium and low density housing Cultural values in relation to housing Provision of housing for groups with specific needs eg homeless, people with disability</li> </ul>	<p><b>Interpersonal skills</b></p> <ul style="list-style-type: none"> <li>• Demonstrating empathy and respect</li> <li>• Understanding and accepting diversity</li> </ul> <p><b>Learning and thinking skills</b></p> <ul style="list-style-type: none"> <li>• Understanding and appreciating alternative views</li> <li>• Social responsibility</li> <li>• Active citizenship</li> </ul>

<b>Design Practice</b>	<p><b>Design Process</b></p> <p>Externally assessed</p>	<ul style="list-style-type: none"> <li>• Brief development (going beyond “clients“ immediate stated needs)</li> <li>• Identification of relevant design principles and information (see previous three sections)</li> <li>• Formulation of aims</li> <li>• Generation of ideas to address problem and integrate design information using 2D or 3D testing and analysis</li> <li>• Ideation (visual brainstorming) indicating catalytic/critical threads in process</li> <li>• Ongoing reflection on problem, brief and aims</li> </ul>	<p><b>Self management</b></p> <ul style="list-style-type: none"> <li>• Making connections</li> <li>• Monitoring progress</li> <li>• Sense of inquiry</li> <li>• Willingness to accept challenges</li> <li>• Acting on reflection and revisions</li> </ul>
	<p><b>Design Product</b></p> <p>Externally assessed</p>	<p>Respond to the brief and aims which would usually include</p> <ul style="list-style-type: none"> <li>• Functional requirements</li> <li>• Aesthetic qualities/expression</li> <li>• Environmental considerations</li> </ul> <p>Discussion/analysis of areas of brief not able to be resolved</p>	<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• Literacy</li> <li>• Numeracy</li> <li>• ICT</li> <li>• Visual and cultural literacies as appropriate to context</li> <li>• Communicating ideas and information in a variety of forms</li> <li>• Communicating ideas and information effectively</li> </ul>