

# Contemporary Digital Practice

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Critical Research in Digital Architecture

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# Contemporary Digital Practice

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**Credit Points** 12.5

## Overview

This subject focuses on impacts of digital technologies on professional practice and services. It explores issues such as emerging forms of professional practice, status of professional knowledge and skills, use and value of digital information in design, and digital fabrication and assembly of contemporary buildings. The subject involves guest lectures by practicing designers and case studies of real projects.

On completion of the subject students should have developed:

- Knowledge of how digital technology is used in architectural practice.
- Critical awareness of the impact of digital technology on architectural practice.

## Assessment

Class participation (15%); gathering of case study data and production of a journal due at the end of semester (30%); essay to the equivalent of at least 3000 words due at the end of semester (55%). A case study description up to 500 words and an essay proposal up to 500 words must be submitted by the end of week 4.

## Generic Skills

On completion of the subject students should have developed the following:

- Critical evaluation of policies and practices
- Skills in seeking, evaluating and retrieving information.
- Comprehension of complex concepts and the ability to express them lucidly in writing.
- Identification of emergent trends in practice

## SCHEDULE

Friday, 9-12:00

01	07 Mar	Introduction	
02	14 Mar	Digital Design Environments	
03	21 Mar	<i>Easter break</i>	
04	28 Mar	<i>Easter break</i>	
05	04 Apr	Integrated Practice - BIM	Case study & essay proposal due
06	11 Apr		
07	18 Apr	Globalised Design, Documentation & Construction	
08	25 Apr	<i>Anzac Day</i>	
09	02 May	Practice case study: Architecture	
10	09 May	Case studies discussion; Emergent Practices	
11	16 May	Practice case study: Visualisation	Case study draft due
12	23 May	Summation	
13	30 May	Final essay consultation	

## ASSESSMENT

- Class participation (15%)
- Gathering of case study data and production of a journal due at the end of semester (30%);
- Essay to the equivalent of at least 3000 words due at the end of semester (55%).

A case study description up to 500 words and an essay proposal up to 500 words must be submitted by 4 April 2008.

### Case Study

Select one project in Australia or elsewhere in which digital technologies have been used in innovative and integral way from design through to its realisation as a building. Document flow of information and decisions, representations used and insights generated at various stages, and organizational structures required in such projects. Case study information may be drawn from journals, magazines, books, and direct contact with the design practice responsible for the project. There will be intermediate presentations of case study material during the semester. The final submission should comprise annotated text and graphic material (including drawings, sketches, and diagrams) as appropriate with properly referenced bibliography.

### Essay

Your essay should reflect on the materials presented in the seminars, readings, and your case study material, and may revolve around one or more themes such as

- emerging forms of professional practice
- changing status of professional knowledge and skills
- use and value of digital information in design
- digital fabrication and assembly of contemporary buildings
- networked practices
- design languages
- design outcomes
- design representations

The final essay should comprise annotated text and graphic material (including drawings, sketches, and diagrams) as appropriate based on independent research of suggested reading materials and case study data including a properly referenced bibliography.

## REFERENCES

### OVERVIEW

- Day, Alan. *Digital building* / Alan Day. Published Oxford ; Boston : Laxton's, 1997.
- *Architecture in the digital age : design and manufacturing* / edited by Branko Kolarevic. New York, NY : Spon Press, c2003.
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- Matsushima, Shiro (2004) Technology-mediated process: case study--MIT Stata Center, Fabrication: Examining the Digital Practice of Architecture [Proceedings of the 23rd Annual Conference of the Association for Computer Aided Design in Architecture and the 2004 Conference of the AIA Technology in Architectural Practice Knowledge Community / ISBN 0-9696665-2-7] Cambridge (Ontario) 8-14 November, 2004, 202-219.
- Dennis R Shelden . *Tectonics, economics and the reconfiguration of practice: the case for process change by digital means*, AD, Special Issue: Programming Cultures . Issue Edited by Mike Silver. John Wiley & Sons, Ltd, Volume 76, Issue 4 , 2006, Pages 82 – 87.

### *DIGITAL TOOLS*

- Digital design and manufacturing : CAD/CAM applications in architecture and design / by Daniel Schodek ... [et al.]. Hoboken : John Wiley & Sons, c2005.
- Mitchell, William J. (William John), 1944- Digital design media / William J. Mitchell and Malcolm McCullough. New York : Van Nostrand Reinhold, c1995.
- Michael Weinstock, Nikolaos Stathopoulos. Advanced simulation in design. Architectural Design., Special Issue: Techniques and Technologies in Morphogenetic Design . Issue Edited by Michael Hensel, Achim Menges, Michael Weinstock, Volume 76, Issue 2 , 2006, Pages 54 – 59.

### *INTEGRATED PRACTICE*

- Birx, Glenn. BIM Evokes Revolutionary Changes to Architecture Practice at Ayers/Saint/Gross. AIArchitect, (<http://www.aia.org/aiarchitect/thisweek05/tw1209/tw1209changeisnow.cfm>), December 2005.
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- Elvin, George. Communication and Building Information Modelling. In Integrated practice in architecture : mastering design-build, fast-track, and building information modeling / George Elvin. Hoboken, N.J. : Wiley ; Chichester : John Wiley, 2007, 115-145.

### *GLOBALIZATION*

- Schroepfer, Thomas. Globalization and Building Practice 1: An Analytical Frame work and Four Character Studies. Harvard Design School, Design and Technology Report Series, Cambridge, MA.
- Del Villar, David and Pollalis, Spiro. Understanding Outsourcing Architectural Services. Harvard Design School, Design and Technology Report Series 2007-1, Cambridge, MA., 2007.
- Tombesi, P., Dave, B. and Scriver, P. (2003) Routine Production or Symbolic Analysis? India and the Globalization of Architectural Services. The Journal of Architecture, Vol. 8, Spring 2003, pages: 63-94.

### *EMERGENT FORMS OF PRACTICES*

- Contemporary techniques in architecture / [guest-edited by] Ali Rahim. New York ; Chichester : Wiley, 2002.
- Collective intelligence in design / guest-edited by Christopher Hight and Chris Perry. Chichester, England : Wiley-Academy, 2006.
- The Interoperation. Sterling, Bruce. Technology Review; Nov 2007, Vol. 110 Issue 6, p69-79, 11p.
- Aaron Sprecher, Chandler Ahrens, Eran Neuman. Critical Practice: Protocol for a Fused Technology. Architectural Design. Special Issue: Collective Intelligence in Design . Issue Edited by Christopher Hight, Chris Perry. Volume 76, Issue 5 , Pages 30 – 35, 2006.