



# SDES3412 Spatial Design: Visualising Virtual Spaces

Term T1, 2020

## Course Information

Units of Credit: 6

## Course Overview

### Course Description

This course is intended to develop your skills in the design and visualisation of virtual spaces with a focus on their applications in the fields of urban and landscape design, architecture, interior design, and heritage studies. To explore the possibilities of virtual space you will reconstruct and reconfigure virtual heritage environments—the phantom structures of the past—and also design the kinds of fantasy spaces that can only exist in the digital realm. You will develop skills in the design of virtual 3D models and learn to produce flythroughs and photorealistic visualisations using programs such as Vectorworks, Photoshop, and associated rendering software. Assessment is based on your demonstrated ability to design virtual spaces and produce 2D representations that inform, excite and delight. The course is one of two 3000-level courses in the spatial design studio stream. It may also be taken as an elective, subject to availability and the completion of 2000-level courses in the spatial design stream.

### Course Learning Outcomes

On completion of this course, the student should be able to:

1. Demonstrate design of virtual /real-life environments.
2. Apply 2D and 3D skills to visualize virtual / real-life environments.
3. Present the outcomes in the forms of the hand-drawing, physical model and CAD.

### Teaching and Learning in this Course

This courses uses a variety of teaching approaches:

#### Blended/online

- Review - assessment tool
- Moodle - Learning Management System

## Assessment

	TITLE	WEIGHTING	ASSESSMENT TYPE
Assessment Task 1	Vocabulary of Space: De / reconstructed	50%	Design Studio Work
Assessment Task 2	Fantasy World: From the Past to the Future or From the Future to the Past	50%	Design Studio Work

## Resources

### Week01:

Ching, F (2014). *Architecture: Form, Space, and Order*, 4th ed. New York: Wiley

McCarter, R. & Pallasmaa, J. (2012). *Understanding architecture*, London: Phaidon Press Ltd.

Radford, A., Morkoc, S. & Srivastava, A. (2014). *The Elements of Modern Architecture : Understanding Contemporary Buildings*, London: Thames & Hudson Ltd

Jefferis, A., & Madsen, D.A (2001). *Basic Drafting Skills Workbook*. Eborn Books.

Jones, W. (2016). *How to read modern buildings – A crash course in the architecture of modern era*. Bloomsbury Publishing PLC.

<https://www.worldofbooks.com/en-au/books/will-jones/how-to-read-modern-buildings/>

It takes the reader on a guided tour of modern architecture through its most iconic and significant buildings, showing how to read the hallmarks of each architectural style and how to recognize them in the buildings all around.

Hopkins, O. (2014). *Architectural Styles: a Visual Guide*. Laurence King

<https://www.amazon.com.au/Architectural-Styles-Visual-Owen-Hopkins/dp/>

This guide makes extensive use of photographs to identify and explain the characteristic features of nearly 300 buildings. The result is a clear and easy-to-navigate guide to identifying the key styles of western architecture from the classical age to the present day.

#### **Week02:**

VICTORIA State Government (2018), Technical Drawing Specification Resource.

[https://www.vcaa.vic.edu.au/Documents/vce/adviceforteachers/visualcomm/VCE\\_TechnicalDrawingSpecs.pdf](https://www.vcaa.vic.edu.au/Documents/vce/adviceforteachers/visualcomm/VCE_TechnicalDrawingSpecs.pdf)

The content of this resource document offers guidance for technical drawing conventions relevant to the fields of practice that Visual Communication Design students explore. This includes communication, industrial and environmental design. This resource document draws upon conventions from the Australian Standards (AS).

Ching, F (2010). *Design drawing*, 2nd ed. New York: Wiley

Delaney, M. & Gorman A. (2015). *Studio craft & technique for architects*, London: Laurence King Publishing.

Pickup, J. (2016). *Vectorsworks Essentials* - Eighth edition tutorial manual, Vectorsworks.

PJ do Val (2019). *Construction Detailing for Interior Design*. Fairchild Books.

This book offers step-by-step lessons for students learning to draft interior construction details. Its illustrated tutorials feature building code references, definitions of important industry specific terms, helpful tips, and context-setting photographic support, as well as exercises enabling students to put what they have learned into practice to create their own simple interior construction details.

Simitch, A., & Warke, V. (2014). *The Language of Architecture: 26 Principles Every Architect Should Know*. Pockport Publishers. <https://www.amazon.com.au/Language-Architecture-Principles-Architect-Should/dp/>

The book provides students with the basic elements of architectural design, divided into twenty-six easy-to-comprehend chapters. This visual reference includes an introduction to architecture design, historical view of the elements, as well as an overview of how these elements can and have been used across multiple design disciplines.

#### **Week03:**

Ching, F (2002). *Architectural graphics*, 4th ed. New York: Wiley

Di Mari, A. (2014). *Conditional Design: An Introduction to Elemental Architecture*, Amsterdam: BIS Publishers B.V. <https://www.amazon.com.au/Conditional-Design-Introduction-Elemental-Architecture/dp/>

This book will further explore the operative in design in a more detailed, intentional, and functional manner. Spatially, the conditional is the result of the operative. Both terms work together to satisfy a formal manipulation through a set of opportunities for elements such as connections and apertures.

Kilmer, W. & Kilmer, R. (2006). *Construction drawings and details for interior : basic skills*. New York: Wiley. (available as e-book from UNSW library).

Jeffer, A, & Madsen, D.A. (2004). *Drafting and Design*, Cengage Learning. <https://www.amazon.com/Architectural-Drafting-Design-Alan-Jefferis/dp/1401867154>

This full-color fifth edition is designed for beginning, intermediate, and advanced architectural drafters and CAD operators alike. *Architectural Drafting and Design*,

#### **Week04:**

Di Mari, A. & Yoo, N. (2013). *Operative Design : A Catalogue of Spatial Verbs*, Amsterdam: BIS Publishers B.V.

<https://www.amazon.com.au/Operative-Design-Catalogue-Spatial-Verbs/dp/>

The core idea for this book is the use of operative verbs as tools for designing space. These operative verbs abstract the idea of spatial formation to its most basic terms, allowing for an objective approach to create the foundation for subjective spatial design.

Lawson, B. (2001). *The language of space*, Oxford: [Taylor & Francis Ltd](#)

Uniwin, S. (2014). *Analysing architecture*, London: Taylor & Francis Ltd.

Blanciak, F., & Francois, B. (2008). *Siteless: 1001 Building Forms*. The MIT Press.

<https://www.amazon.com.au/SITELESS-Building-Forms-Francois-Blanciak/dp/>

*SITELESS* presents an open-ended compendium of visual ideas for the architectural imagination to draw from. The forms, drawn freehand (to avoid software-specific shapes) but from a constant viewing angle, are presented twelve to a page, with no scale, order, or end to the series.

#### **Week05:**

Balmer, J. & Swisher, M.T. (2012). *Diagramming the big idea: methods for architectural composition*, London: Routledge.

Werner, M. (2011). *Model making*. New York: Princeton Architectural Press.

How to Prepare for a Poster Presentation (18 minutes) . <https://www.youtube.com/watch?v=ecYzamRNvjo>

#### **Week06:**

Ching, F (2002). *Architectural graphics*, 4th ed. New York: Wiley

#### **Week07:**

Bachelard, G. (2015). *The poetics of space*, London: Penguin Books Ltd.

<https://www.amazon.com.au/Poetics-Space-Gaston-Bachelard/dp/>

It examines the places in which we place our conscious and unconscious thoughts and guides us through a stream of cerebral meditations on poetry, art, and the blooming of consciousness itself.

Bingham, N. (2007). *Fantasy architecture*. London: Hayward Gallery.

Baker, D., & Chitty, G. (1999). *Managing Historic Sites & Buildings: Reconciling Presentation & Preservation*.

Routledge. <https://www.amazon.com.au/Managing-Historic-Sites-Buildings-Presentation/dp/>

This book looks at the choices and the tensions that exist in conservation and interpretation of the heritage. Preservation and presentation are central activities, arguably means and ends in the conservation of the historic environment.

Nelson, M. (2019). *Fantasy World-Building: a Guide to Developing Mythic Worlds & Legendary Creatures*. Dover Publication.

<https://www.amazon.com.au/Fantasy-World-Building-Developing-Legendary-Instruction-ebook/dp/>

The book discusses how to find ideas and borrow from history to add the strength of realism to a fantasy world.

Pickup, J. (2016). *Vectorsworks Essentials* - Eighth edition tutorial manual, Vectorsworks.

#### **Week08:**

Ching, F (2014). *Architecture: Form, Space, and Order*, 4th ed. New York: Wiley

Davies, B. (2004). *Converting Old Buildings Into New Homes*. Crowood Pr.

<https://www.amazon.com.au/Converting-Old-Buildings-Into-Homes/dp/>

This book examines every aspect of converting types of redundant property including surveys, legislation and regulations, professional help and advice, and budgeting and insurance.

Stone, S. (2019). *UnDoing Buildings: Adaptive Reuse and Cultural Memory*. Routledge.

<https://www.amazon.com.au/UnDoing-Buildings-Adaptive-Cultural-Memory/dp/>

This book argues that remodelling is a healthy and environmentally friendly approach. Issues of heritage, conservation, sustainability and smartness are at the forefront of many discussions about architecture today and adaptive reuse offers the opportunity to reinforce the particular character of an area using up-to-date digital and construction techniques for a contemporary population.

#### **Week09:**

Werner, M. (2011). *Model making*. New York: Princeton Architectural Press.

Ellefson, R. (2017). *Creating Places*. Evermore Press. <https://www.amazon.com.au/Creating-Places-World-Building-Book-ebook/dp/>

This book is a detailed how-to guide on inventing the heart of every imaginary world - places. It includes chapters on inventing planets, moons, continents, mountains, forests, deserts, bodies of water, sovereign powers, settlements, and interesting locales.

5 tips on how to prepare a design presentation

<https://99designs.com.au/blog/tips/5-tips-on-how-to-prepare-a-design-presentation/>

#### **Week10:**

Steil, L. (ed). (2014). *The architectural capriccio*. Burlington, VT: Ashgate.

How to present design work to non-designers. <https://uxdesign.cc/how-to-present-design-work-to-non-designers-d0cb60ebe21>

How to present your design project in only 5 minutes! <https://www.youtube.com/watch?v=g0HO1FCpzmC>

How To present design work to clients like a pro! [https://www.youtube.com/watch?v=rOGAJwm3n\\_M](https://www.youtube.com/watch?v=rOGAJwm3n_M)