# universal design CONFERENCE



17 - 18 May 2021 Victoria Pavilion, Melbourne Showgrounds

TITLE:

Community-based studios for enhancing students' awareness of universal design principles

PRESENTED BY:

**Dr Hing-Wah Chau** Academic Teaching Scholar Victoria University

Hosted by



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Like most developed countries, Australia's population is ageing as a result of sustained low fertility and increase in life expectancy. This has led to a proportionally large increase in those aged 65 and over. This studio focuses on design for ageing, including an expansion of an existing residential aged care facility and the development of retirement apartments.

This studio will engage with aged-care design specialists, site stakeholders and practising architects. Students are required to undertake site analysis, prepare group master plans, together with group tasks and individual assignments, leading to final individual architectural design presentations.

Research Themes: age-friendly living environment, building typologies for seniors living, sustainability, health and well-being

Studio Times: Mondays 6:15-9:15pm and Thursdays 3:15-6:15pm

Dr. Hing-wah Chau is the Melbourne Early Career Academic Fellow in Architectural Design and the Senior Tutor of Master Design Studios at the University of Melbourne. He has taught architectural design at the University of Melbourne for the past six years. He has more than ten years of professional practice in Hong Kong as a registered architect, working in an interdisciplinary working environment and involving in different types of projects, ranging from small public structures, public housing, to large infrastructural development.

David Ritter is the Leader of Atelier Ten's Melbourne office and is experienced in delivering cutting-edge environmental design solutions. He has recently designed multi-residential Passiwhaus developments in China and led large-scale urban sustainability master planning projects for bluechip commercial developers and government organizations. As an accomplished environmental engineer, he has designed a number of awardwinning educational, commercial and cultural buildings.



2017 Semester 1 Design for Ageing: The Assisi Centre in Rosanna





The 2016 census reveals an ageing Australia. Older adults aged 65 now represent 16% of the overall population and will project to be 25% in 2042. To address the need of the ageing population, this studio will use the retirement apartment development in Clayton South as the site for investigation. Through the engagement with the developer, Cedar Woods, retirement living design specialists and practising architects, students are required to explore the potential of the site, carry out site analysis, prepare group master plans, examine building typologies, undertake sustainability studies, which lead to their individual final design presentations. Postgraduate students studying the subject 'Innovations in Property'' will be involved in this studio for design brief development, financial feasibility and marketability analysis.

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Studio Leader: Dr. Hing-wah Chau is the Melbourne Early Career Academic Fellow in Architectural Design and the Senior Tutor of Masters Design Studios at the University of Melbourne. He has been teaching architectural design at the University of Melbourne since 2011. He has more than ten years of professional practice in Hong Kong as a registered architect, working in an interdisciplinary working environment and involving in different types of projects, ranging from small public structures, public housing to large infrastructural development.

Technical Tutors: Jyoti Rao (MSD) and David Ritter (Atelier Ten)

Collaborators: Prof. Piyush Tiwari (MSD), Patrick Archer and Gareth Jones (Cedar Woods)



2017 Semester 2 Design for Ageing: Retirement Apartment Development in Clayton South





#### Design for Ageing: Towards an Age-friendly Community in the City of Moreland

#### Introduction:

According to the latest statistics, one in six people in Australia is now aged over 65 and the figures will increase significantly to one in four by 2050. In view of the growing ageing population, it is crucial to provide age-friendly living environment to cater for the needs of older people. The World Health Organization (WHO) published the *Global Age-friendly Cities: A Guide* in 2007. In 2016, the Age-friendly Victoria Declaration was signed by the Victorian Government and the Municipal Association of Victoria (MAV) in Australia showing their commitment to provide age-friendly living environment.

In collaboration with the Moreland City Council, this design studio addresses the following research questions:

1. How age-friendly is the City of Moreland?

2. What would make the City of Moreland more age-friendly?

Through the engagement with different stakeholders, including urban designer and social support manager of the Moreland City Council, practising architects and academics, students are required to assess the agefriendliness of the current situation, explore the potential of the site, carry out site analysis, prepare group master plans, examine building typologies and undertake sustainability studies, leading to their individual schematic design and final presentations.

#### **Research Themes:**

age-friendly community, building typologies for seniors living, multi-generational living environment, social and environmental sustainability, health and wellbeing

#### Studio Leader:

**Dr Hing-Wah Chau** is the Melbourne Early Career Academic Fellow in Architectural Design and the Senior Tutor of Masters Design Studios at the University of Melbourne. He has been teaching architectural design at the University of Melbourne since 2011 and has more than ten years of professional practice in Hong Kong as a registered architect, working in an interdisciplinary working environment and involving in various types of projects, ranging from small public structures, public housing to large infrastructure developments.

2018 Semester 1 Design for Ageing: Towards an Age-friendly Community in the City of Moreland



#### **DELIBERATION IN GUANGZHOU**

#### Design for Ageing for the Local Community

This postgraduate design studio with travel component for architectural students is in collaboration with the South China University of Technology, one of the top eight architectural schools in China

Two-week Travel: 17-28 September 2018

This studio is suitable for students with:

- · An openness to experimentation
- Strong conceptual three-dimensional thinking
- · A high level of communication skills
- · An interest in understanding a different professional context

Studio Leader: Dr Hing-Wah Chau Studio Class: Wednesdays 6:15-9:15pm in MSD 138





2018 Semester 2 Deliberation in Guangzhou: Design for Ageing for the Local Community



#### **Design for Ageing in Sweden**

This travelling design studio draws students' awareness of the needs of older adults and the global demographic changes of ageing population, which requires improved inclusiveness in our built environment. In addition to the intensive work to be undertaken during the two-week travel in Sweden, students will participate in design studios before and after the travel for site analysis, precedent case studies, schematic design towards final review. This studio is in collaboration with the Centre for Healthcare Architecture at Chalmers University of Technology in Sweden, which is a leading research institution in healthcare and aged care architecture.

Two-week Travel: 15-26 April 2019

This studio is suitable for students with:

- · An openness to experimentation
- · Strong conceptual three-dimensional thinking
- · A high level of communication skills
- · An interest in understanding a different professional context

Studio Leaders: Dr Hing-Wah Chau and A/Prof. Clare Newton Studio Class: Mondays 3:15-6:15pm in Redmond Barry Building room 1007



2019 Semester 1 Design for Ageing in Sweden







Design studio

### Timeline

- Site Visit
- Site Analysis
- Precedent Study
- Master Plan
- Schematic Design
- Sustainability
- Detailed Design

#### Assessment

Task 1: 5% Task 2: 5% Task 3: 5% Task 4: 10% Task 5: 5% Task 6: 50% Class Engagement: 10% Reflective A5 Journal: 10%

Reflective journal has to be submitted to the dropbox folder every two weeks (Weeks 2, 4, 6, 8, 10, 12)

	Date (Mon)	Content	Date (Thur)	Content
1	26 Feb	Introduction	1 Mar	Moreland Council
2	5 Mar	Precedent Case Study	8 Mar	Case Study Presentation
3	12 Mar	Inclusive Workshop	15 Mar	Inclusive Workshop
4	19 Mar	Site Analysis	22 Mar	Site Analysis Presentation
5	26 Mar	Master Plan	29 Mar	Group Master Plan Presentation
Non	-teaching perio	d (30 Mar - 8 Apr)	1	
6	9 Apr	Schematic Design	12 Apr	Schematic Design
7	16 Apr	Schematic Design	19 Apr	Mid-semester Review
8	23 Apr	Sustainability Workshop	26 Apr	Sustainability Workshop
9	30 Apr	Sustainability Workshop	3 Мау	Sustainability Workshop
10	7 May	Detailed Design	10 May	Detailed Design
11	14 May	Detailed Design	17 May	Detailed Design
12	21 May	Detailed Design	24 May	Detailed Design
swo	OT Vac (28 May	– 1 Jun)		
	4 Jun	Final Submission (9am-1pm, MSD 124-5)	5 Jun (Tue)	Final Presentation (2-8pm)

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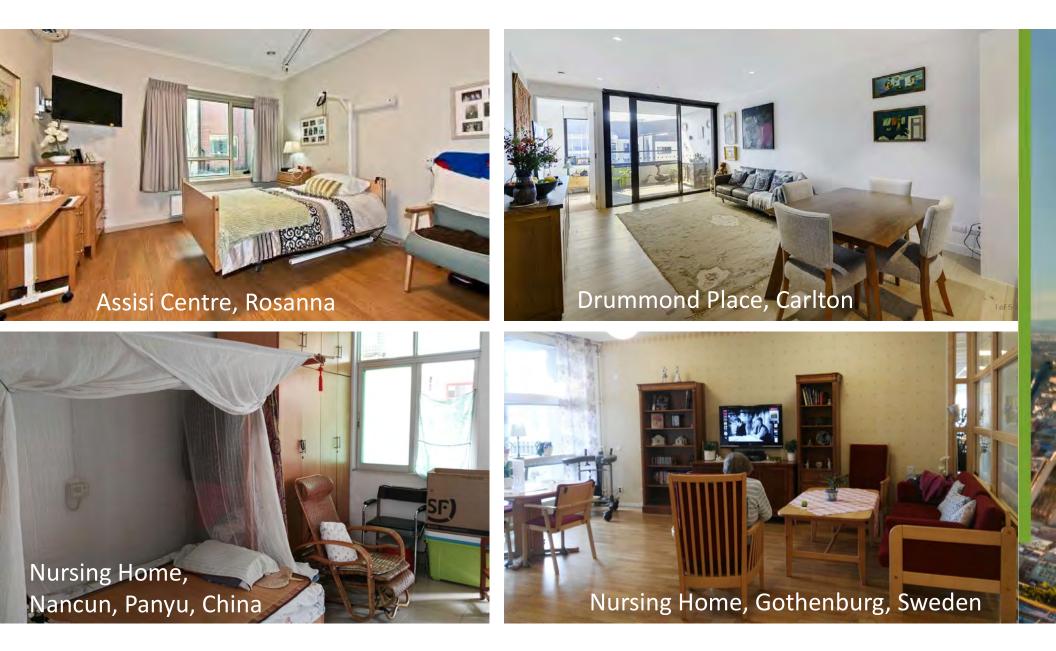


Design for Ageing: Retirement Apartment Development in Clayton South Studio Leader: Dr Hing-Wah Chau





Problem driven Project oriented







Group Work











Travelling Studio to Guangzhou





Travelling Studio to Sweden



Students walking the eastfacing colonnade. This could be a beautiful courtyard for residents if thought out well enough.

Section of the front facade of the 1990s new wing, housing the nursing home.

Clinical looking hallway in the nursing home. I took particular note of the need for hand rails along all walls.

I appreciated this call for personalization on one of the residents' door placards. Decidedly the artist was a grandchild.

### A student's observation during the site visit at Assisi Centre, Rosanna

	health
Residential aged care services built environment audit tool Online version 1.2 August 2012	
	Department of Health

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**Final Presentation** 





Exhibition at the 17<sup>th</sup> Alzheimer's Australia Biennial National Dementia Conference, Melbourne





Site visit in Clayton South





Visit the Drummond Place Retirement Apartment In Carlton



evaluation of older people's living environments

Alan Lewis, Judith Torrington, Sarah Barnes Robin Darton, Jacquetta Holder, Kevin McKee Ann Netten, Alison Orrell

EVOLVE is a tool for evaluating the design of housing for older people. It is used to assess how well a building contributes to both physical support of older people and their personal wellbeing.

The tool was developed and refined in a three year research programme funded by The Engineering and Physical Sciences Research Council. The project team was from The University of Sheffield and PSSRU at The University of Kent in partnership with The Department of Health Housing Learning and Improvement Network (LIN) and EAC (Elderly Accommodation Counsel).



E00 Project E01 Living unit E02 Communal Facilities E03 Circulation E04 Staff and services E05 Site and location







Inclusive Design Workshop 1

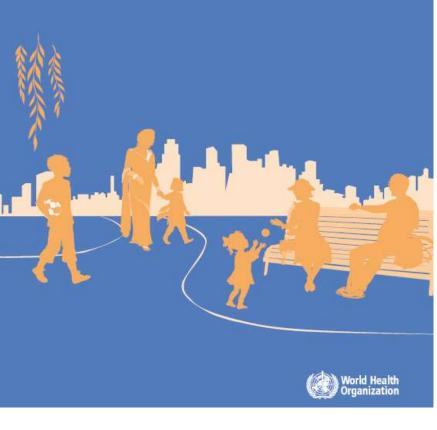




Site visit in Moreland

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## Global Age-friendly Cities: A Guide



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Eight aspects of an age-friendly city





Exhibition at the Brunswick Town Hall





Industry partners at the studio class

Nealth.vic Search site or services & business	rvices			
Hospitals & health services 👻 Primary & community health 👻 Public health 👻 Mental health 👻 Alcohol & drugs 🚽	Ageir			
Home 🔿 Hospitals & health services 🔗 Patient care 🔗 Older people in hospital 🤉 Hospital Environment Audit Tool (HEAT)				
Hospital Environment Audit Tool (HEAT)	So			
The Hospital Environment Audit Tool (HEAT) is an evidence-based tool for staff to audit their hospital environment. It provides practical strategies to optimise the environment in order to best meet the needs of older people and increase their participation in their care.				
The HEAT encourages the user to consider the ways the environment, including the model of care and policy framework, affects an older person's mobility, independence and wellbeing during a hospital stay, and provides practical strategies that can be implemented to optimise the environment.	Old			
The HEAT is divided into five sections:	Depa Serv			
Patient bedside orientation				
<ul> <li>On the ward – limited resources</li> </ul>				
On the ward				
<ul> <li>Facility audits</li> </ul>				
Policy and procedure				





Hospital visit in Guangzhou





Studio class in Gothenburg, Sweden





Visit to nursing home in Gothenburg, Sweden

## **Areas of Improvement**



- The use of virtual reality (VR)
- More collaboration with students in other disciplines: (urban planning, urban design, landscape design, product design, engineering)

## Summary of community-based design studios

- Problem-based, active and participatory learning
- Group work collaboration
- Engagement with stakeholders (local/ overseas)
- Awareness of universal design principles
- Importance of inclusive built environment



## Acknowledgement

- Faculty support from the University of Melbourne
- Assisi Centre
- Cedar Woods
- Australian Unity
- Moreland City Council
- South China University of Technology
- Chalmers University of Technology