ARCHDES 201 | DESIGN 4 | TOPIC OUTLINE | SEM 2 2019

The Constructed: An introduction to architectural practice **as a complex and collaborative enterprise**. Offers the opportunity to explore materials, construction, fabrication processes, and detailing**, through making**. Requires students to understand the full range of drawings required to move from design concept to actual construction.

Farah Saad

"MAKING" SPACE

A studio of fabrication, craft & emergence

" Love what you create, create what you love, inspire the world" - Turgut

STONEWALL

RAMALLAH, WEST BANK - 2005. "Art Attack" by Banksy.

GENERAL COURSE INFORMATION

Course :	Design 4 ARCHDES201
Points Value:	30 points
Course Director:	Andrew Douglas andrew.douglas@auckland.ac.nz
Course Co-ordinator:	Farzaneh Haghighi F.Haghighi@auckland.ac.nz
Studio Teacher:	Farah Saad
Contact:	saad.farahs@gmail.com
Location:	Level 2 studio, building 421
Hours:	Tuesday and Friday 1:00-5:00pm

For all further general course information see the ARCHDES201 COURSE OUTLINE in the FILES folder on CANVAS.

STONEWALL

Design 4 carries the theme of 'Architecture and Realization' and introduces the idea that architecture is a material culture. Tectonic and detail strategies will be emphasized as design generators balancing strategies drawn from brief, site and landscape. The course presents labour, craft, technique, design for and through production, material selection, economy... **MAKING** as the means to propose and develop architecture.

Group working: The Design 4 course requires students to engage in collaborative modes of production. As such the course acknowledges that architecture is always a collaborative endeavour, be that between architect and client, consultants, fabricators, other designers and various public bodies and diverse audiences. This course is an opportunity to develop group skills, to leverage peer-to-peer learning and to develop and test collaborative design strategies. Opportunities will be given to address necessary skill development in this area and for reflection on how the group work process has informed the overall project.

Stonewall

verb
delay or obstruct (a request, process, or person) by refusing to answer questions or by being evasive.
noun
an act of delaying or obstructing a person, request, or process.

The remaining volcanic Basalt stonewall of Albert Barracks (1846-1852) located in the University of Auckland can be traced back to the colonial mid-nineteenth century when early plans for the town of Auckland were developed. A high wall enclosed nine hectares of military fortification, roughly octagonal in plan, included barracks, a munitions magazine, a hospital and a commissariat. More than one hundred M□ ori stonemasons and builders were involved in this construction, mainly utilising volcanic Basalt blocks quarried from nearby Mangawhau Mt Eden. The barracks were disbanded in 1870 and the wall was largely demolished afterwards with eighty five metres of the original wall left. The remaining stone itself was returned to Mt Eden to fortify the prison that arose there from 1872.

Walls are key, basic architectural elements that enclose and shelter while separating inside from out. For modernism, glass promised the blurring of this boundary and became widespread globally as figure and actualisation of new configurations of transparency – themselves integral to revisions in walling functions no less than the remarking of territory at levels ranging from personal to national life. Yet, as Wendy Brown observes in *Walled States, Waning Sovereignty* (2010), walls, real physical walls, are reappearing globally not solely for defensive means but for their symbolic and polemic functions. Such barriers separating us/them, inside/outside, friend/enemy, rich/poor are evident everywhere. Consider the growing and intensifying divisions of 'us' and 'others' effected by the 708 km Israeli west bank barrier; the electrified security fences constructed at the border between South Africa and Zimbabwe in 1984, and then Mozambique in 2012; or Saudi Arabia's 1,800 km border fence with Yemen; and started in 2006 much of the United States' border with Mexico – 1000 km - has a steel and concrete barrier.

In the wake of recent troubling events in New Zealand, tens of thousands gathered at parks and public spaces condemning violence

and supporting victims precisely through collective acts of disregard for any divisions. In doing so architecture responded by opening doors, and availed itself of adjacent open parks and public spaces. Flows of people, flowers, notes and donations traversed prior divisions calling up new senses of self and connection, senses that similarly make architecture and its walling instincts newly imaginable. This design studio invites a rethinking of the role of walls in the formation/deformation of communities, the encouraging/hindering of generosity, the generating/dismantling of compassion, and the territorialising/de-re territorialising land.

Focusing on the University of Auckland precinct, the city's colonial history will be examined in the reconsideration and reinvention of gathering space as a learning space. It asks, what material, social and imaginative amalgams are possible in the age of returning walls, and what creative resistance to, and transformation of, the walling instinct is possible in this leaning environment? Further the project invites consideration of architecture's long association with stonemasonry, and the rich intertwining of stone and companion materials.

The University's teaching spaces are nearing capacity and a range of contemporary, flexible spaces that can accommodate a variety of teaching pedagogies are required. University of Auckland currently looking for replacing buildings B113, B114 according to its 2014 masterplan which is close to the remaining basalt stonewall. This studio explores the potential for a learning space within this area.

The flexible teaching spaces requirements include:

- 2 x Large teaching/learning space (250-300 seats 300 m2)
- 4 x Large flat floor teaching/learning (80 seats at 160 m2)
- 8 x Smaller flat floor seminar rooms (40 to 60 seats at 870 to 120 m2)

In addition to more structured teaching spaces students need a diverse range of spaces to meet and study. The scheme should consider how the different types of learning relate and varying levels of separation required.

Proposals also respond to some of the current challenges such as poor sightlines, level changes that are not accessible and pedestrian linkages through the site as well as considering the historical context and relationship to surrounding heritage buildings.

This site has multiple planning/heritage constraints:

• Buildings are restricted to maximum height of 15m, 3 Storeys within this height is anticipated

• Proposals on this site will need to consider their response to the constraints of the Auckland Unitary Plan (AUP) planning overlay: I207.1. Precinct description: http://www.aucklandcity.govt.nz/unitaryplan/Auckland%20Council%20Decision/Chapter%20I%20Precincts/2.%20City%20Centre/I207%20Learning%20Precinct.pdf

• Several buildings are heritage listed on the site and https://www.aucklandcouncil.govt.nz/arts-culture-heritage/heritage-walks-places/Documents/university-heritage-trail.pdf

The University of Auckland Sector 100

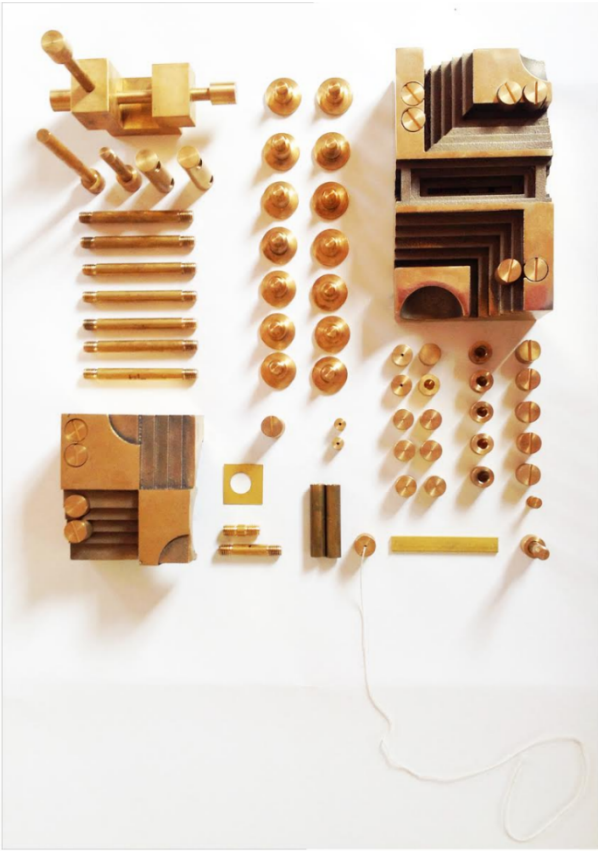
This studio asks students to select a part of their design in consultation with their tutor and make a 1:1 model of it. There will be a possible presentation on the site, with client present, exhibiting the (1:1) models and proposals (including technical drawings).

TOPIC STRUCTURE AND CONTENT

“MAKING” SPACE

A flexible learning environment for the creatives & the makers

A STUDIO OF FABRICATION, CRAFT & EMERGENCE



Saad, Farah. Brass Components. 2014. A Practice of Negotiation: Bespoke, CRAFT and Digital Fabrication.

“Making is the most powerful way that we solve problems, express ideas and shape our world. What and how we make defines who we are, and communicates who we want to be.” – Daniel Charny

“Details, when they are successful, are not mere decoration. They do not distract or entertain; they lead to an understanding of the whole of which they are an inherent part.” – Peter Zumthor

Studio Specific Brief

Flexible learning environment for the creatives and the makers

With the recent closure of the specialist Architecture and Planning library at the University of Auckland it is becoming apparent that discipline specific spaces and resources are becoming extinct in today's learning environments. This is driven by; politics, changes in institutional funding, evolving teaching pedagogies to accommodate student ambitions with entrepreneurial focus and technology. [1] *As tomorrow's global citizens enter higher education with words like "make," "hack," and "prototype" embedded in their vocabulary, they are fuelling a powerful movement toward "learning by creating".*[2]

This studio focuses on the reimagination of traditionally siloed disciplinary spaces. It invites students to design a flexible learning environment for the creatives and the makers while considering the following:

- How can the walls/boundaries between disciplines soften to form a multi-disciplinary learning space for creatives and makers?
- Who are the creatives/makers?
- How can architectural walls encourage/discourage cross-pollination between disciplines?
- What kind of spaces/boundaries are required to allow for partnership, innovation, incubation and entrepreneurship?

As a group a revised brief for the learning centres additional spaces and design strategy/s will be defined.

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[1] https://www.fastcompany.com/3042566/the-next-hot-trend-on-campus-creating-innovation

[2] Ibid

The Design Process

Iterative Making & Emergence

This paper focuses on two generative design processes; learning-through-making and design as an emergent outcome – process of reflection-in-action. Steven Johnson's paradigm of emergence discusses how things occur in the world. Emergence is the ability of low-level components to self-organize into a higher-level system of sophistication and intelligence. [3]

"Architectural design does not end as the tools of fabrication are put into action. On the contrary, making is a discipline that can instigate rather than merely solve ideas – in other words a design process." – Bob Shiel

"Reflection on past reflection in action may indirectly shape our future action" – Donald Schon

" They are bottom-up systems, not top down. They get their smarts from below. In a more technical language, they are complex adaptive systems that display emergent behaviour. In these systems, agents residing on one scale start to produce behaviour that lies one scale above them: ants create colonies; urbanities create neighbourhoods; simple pattern recognition software learns how to recommend new books. The movement from low level rules to higher sophistication is what we call emergence" – Steven Johnson

Students who are interested in fabrication and craft are provided with an opportunity to select a material and creative process/es to master during the semester. Through the act of making, the implications of material and fabrication processes will become evident. In turn, informing future design decisions and outcomes.

[3] Steven Johnson, Emergence: the connected lives of ants, brains, cities and software (London: Penguin, 2002), 18.

The Output

Lamb, Max. Spoon Study. 2008. Mixed Media. http://maxlamb.org/043-spoon-study/`

Individually:

Students will be asked to design and fabricate a **1:1 component individually** that stems from a creative discipline and has a relationship to the human body through a drawing practice, fabrication process/es and material of choice. Through an iterative design process, a mastery of craft and material will be reflective in a refined 1:1 component.

1:1 component provides students with an opportunity to learn-through-making, reflect-in-action, develop emergent outcomes and explore their definition/strategy of multi-disciplinary wall/boundaries.

Component Options *(pick 1)*:

- Small Piece of furniture (Stool, chair, small table)
- Eating Utensils (cup, cutlery, plate, bowl) *Pick 2*
- Light (table or floor lamp)
- Garment
- Jewellery (ring, bracelet, necklace, earrings) *Pick 2*

Group Work Structure:

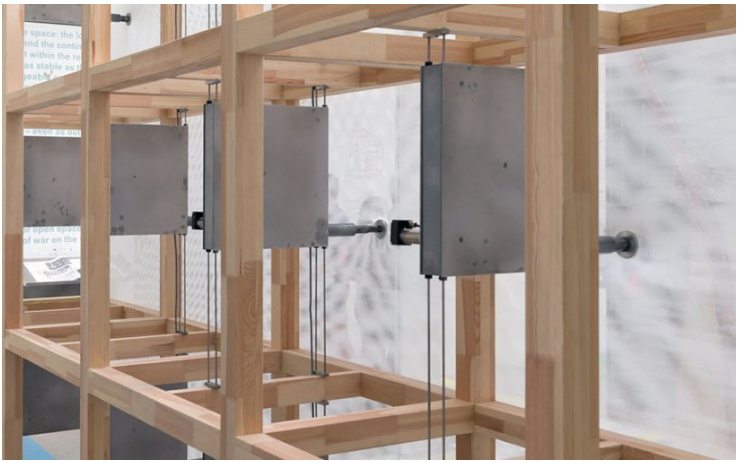
Students will form into small groups of (2-3) before forming into a large studio group that operates like an office with sub-teams (5) on one large architectural proposal. The work completed individually and in smaller groups will act like a catalogue of components for any sub-team to utilise in the design proposal.

Sub team categories:

- Urban design, site strategy, the in-between
- Learning spaces building proposal
- Spatial design, experience, furniture & detail

"In a peer network, no one is officially in charge. It doesn't have a command hierarchy. It doesn't have a boss. So, all the decisions are somehow made collectively. The control of the system is in the hands of everyone who is a part of it."
- Steven Johnson

Within these group structures students are asked to keep meeting minutes and action lists to submit at the end of the semester. During Tuesday studio sessions a resourcing meeting will take place - delegating tasks and checking in with each other and on Friday studio sessions the work will be reviewed collectively.



Venice Biennale Fundamentals Exhibition. Wall Room.
https://www.designboom.com/architecture/rem-koolhaas-elements-of-architecture-venice-architecture-biennale-06-05-2014/

SPECIAL NOTE: This paper requires students to fabricate components at 1:1 which will incur additional costs. When bulk material is required among several students the cost will be split. This studio group will have access to designated time slots at the Elam Casting Workshops on Tuesday and Friday from 1-5pm.

- All lectures are 1-2pm in Design Theatre 423-348

Week	Date	Event
Week 1 **RESEARCH** **+ MATERIAL**	Mon 22.7	12:00 All architecture meeting, rm 311 1:00 D4 staff presentations and studio ba AD2 Studio classes commence
	Tue 23.6	Guest Lecture: Dr Nikolina Bobic on 'the politics of walls' (1-2.30) First Studio Meeting – Introductions + Briefing Task 1 Assigned (Individual): _Group Brainstorming session: Who are the creatives and the makers? What is a Wall?
	Fri 26.7	_Material + 1:1 Component + Fabrication Process + Drawing style selection discussions Workshop: Elam Ceramics Induction (TBC) **Presentation of Task 1** (Quick Fire Crit - TBC): _Define wall strategy – text, models + drawings in selected style _Present 1:1 material sample + initial interpretation _Present research on selected creative + making discipline along with initial concepts for 1:1 component
Week 2 **CONCEPT** **+ DETAIL**	Tue 30.7	Guest Lecture: Dr Sean Sturm on 'History of UoA' (1-2pm) **Task 2 Assigned:** _1.1 peer discussions

	Fri 2.8	Workshop: Elam Casting Induction (TBC **Presentation of Task 2:** (Quick Fire Crit - TBC) _Present x3 details/prototypes of 1:1 component _Present	
Week 3 **SITE** **+** **MASSING & PLAN**	Tue 6.8	Guest Lecture: Dr Ross Jenner on 'Stone' **Task 3 Assigned:** _Kaupapa Document _Site Visit – Initial impressions _Collaborative threshold tasks _Redefine Walls strategy for learning cen concepts _Continue 1:1 component development individually	**Form small groups of 2-3**
	Fri 9.8	Workshop: Elam Concrete Casting (TBC) **Presentation of Task 3:** (Quick Fire Crit - TBC) Format TBA	
Week 4 **SECTIONS** **+ PLAN** **+ DETAIL**	Tue 13.8	Guest Lecture: Tristram Collett on 'Client requirement' (Property Services, UoA) Guest Workshop/Presentation: Dr Mohammed Alansari on "Flexible learning spaces" (2.30 – 4 TBC) **Task 4 Assigned:** **_Work in small groups to develop concepts for flexible learning spaces**	
	Fri 16.8	**Presentation of Task 4:** (Quick Fire Crit - TBC) Format TBA	
Week 5 **DEVELOPED DESIGN** **+VISUALISATION** **+ITERATIONS**	Tue 20.8	Guest Lecture: Dr. Kathy Waghorn (tbc) on 'Groupwork' _1:1 group discussion _Plan of action for mid semester crit _Flexible learning space concepts	

		developed	
	Fri 23.8	_1:1 group discussion _Round table discussions _Production of models, drawings and details	
Week 6 **CRIT**	Tue 27.8	Mid-Semester crit, rm 311	
	Fri 30.8	_Mid Semester Crit Debrief _Groups formed _Learning centre brief workshop _Kaupapa document revised Mid Semester break tasks assigned	**Form Large Groups – 1 large studio group (5 members in eac sub team)**
		MID-SEMESTER BREAK Site massing model prepared + group strategy's and concepts	
Week 7 **DEVELOPED DESIGN + ITERATIONS**	Tue 17.9	_ Developed conceptual design pinup & review _Group discussions – 1:1 Component refinement _Resource planning meetings + plan of action	
	Fri 20.9	_Group discussions – 1:1 _Developed design models & drawings (plans, sections, elevations, details) _1:1 individual component manufacture and review	
Week 8 **DEVELOPED DESIGN + ITERATIONS**	Tue 24.9	_Resource planning meetings _round table discussions _1:1 group discussions _1:1 individual component manufacture and review	
	Fri 27.9	Cross-crit, rm 311	
Week 9 **DEVELOPED DESIGN + ITERATIONS**	Tue 1.10	_1:1 individual component manufacture and review _1:1 discussions about group 1:1 details and exhibition design _Developed design	**1:1 component should be complete at this point**
	Fri 4.10	_1:1 Component Crit _1:1 debrief on final amendments	

Week 10 **DEVELOPED DESIGN + ITERATIONS + FABRICATION**	Tue 8.10	_Group discussions – 1:1 _Developed design models & drawings (plans, sections, elevations, details)
	Fri 11.10	_Quick Fire Crit with Guest Critic (TBC) on concept and clarity
Week 11 **VISUALISATION + FABRICATION**	Tue 15.10	_Resource planning meetings _Developed design models & drawings (plans, sections, elevations, details) _Group discussions – Presentation
	Fri 18.10	_Developed design models & drawings (plans, sections, elevations, details) _Group discussions – Presentation
Week 12 **FINAL CRIT**	SUN 20.10 MON 21.10	Pin up Sunday 20 Oct, time TBA Final Crit: 9am, Mon, 21 Oct

RESOURCES

In Canvas you can find relevant maps and reports (archaeological studies, UoA masterplan, etc).

Carlo Scarpa Architecture In Details
MIT Press 1998

Translations from Drawing to Building and Other Essays
Evans, Robin
London: Architectural Association 1997

Construction Materials Manual
Hegger, Manfred 2006
Basel, Munich: Birkhauser; Edition Detail 2006

Design Through Making
Sheil, Bob
Chichester: Wiley, 2005

Emergence : The Connected Lives of Ants, Brains, Cities and Software.
Johnson, Steven.
London: Penguin, 2002.

The Pedagogy & Practice of 'Placing Space", Ronit Eisenbach & Rebecca Krefting

Regionalism: Collected Writings on Place, Identity, Modernity and Tradition, ed. Vincent Canizaro, ISBN-10: 1568986165

Rem Koolhaus – Elements (Venice Biennale):

https://cdn.sanity.io/files/5azy6oei/production/74aa44bacab37d8256ea37b882d2a550dfe30a8d.pdf

Learning Centres:
https://www.fastcompany.com/3042566/the-next-hot-trend-on-campus-creating-innovation

REQUIRED PRODUCTION

Ongoing:

A4 size max ongoing journal documentation. Students to bind in a creative manner to reflect on craft (no plastic ring biding allowed)

Weekly meeting minutes to be bound and submitted both physically & digitally from formation of small groups to end of semester.

Mid Semester:

Group:

- Text outlining concept/strategy
- Learning centre brief development
- Concepts shown through models & drawings (Site, plan, section, elevation, detail) Scales + Quantities TBA
- Journal to date (non-bound)
- Meeting minutes

Individual:

- 1:1 prototype of component or x3 1.1 details of component
- Reflective document on material and fabrication process to date

Final:

Group:

- Text outlining concept/strategy
- Drawings – (Site plan, plan, section, elevation, detail, perspective) scale tbc

- Collaborative Site Model scale tbc
- 1:50 models (number to be specified)
- 1:20 Section models showing details
- 1:1 detail per group Urban + Building Form (Interiors group to design exhibition/event to showcase proposal + 1:1 components)
- Professional presentation book of final design – each group compiled
- Meeting Minutes bound

Individual:

- 1:1 component refined
- Booklet outlining design + fabrication process of component
- Individual A4 journals beautifully bound

1:1 Component: Demonstrate the ability to fabricate a 1:1 component that has a function and relationship to the human body. Demonstrate the ability to understand material and workshop fabrication knowledge and skill.

This studio asks students to select a part of their design in consultation with their tutor and make a 1:1 model of it. There will be a possible presentation on the site, with client present, exhibiting the (1:1) models and proposals (including technical drawings).

ASSESSMENT & FEEDBACK

This course is assessed as 100% coursework. Conversational feedback is given throughout the semester. Written feedback, with indicative grading, is given at a date around the mid-point of the semester. All further information regarding assessment is available in the ARCHDES 200 Design 3 Course Outline (on Canvas).

LEARNING OUTCOMES

General Course Outcomes & Specific Outcomes for this Brief

On successful completion of this course students should be able to:

- Theory: Demonstrate an understanding of constraint as a driver of architectural opportunity. Constraints encountered may include client, brief, budget, site, authorities, time, collaborative work practices. Students should also be able to show evidence of conceptual consistency in the face of these encounters.

Theory: Demonstrate the ability to draw on a broad range of text to define and form a critique on walls/boundaries across disciplines in learning environments historically and in contemporary settings. By the end of the semester, students will be able to take a critical and creative standpoint towards their design.

- Architectonics: Demonstrate abilities to develop the tectonic characteristics of the project through the making of material, structural and constructional propositions.
  Architectonics: Demonstrate ability to detail and construct components at 1:1 scale with care and mastery of a skill. Demonstrate an understanding of material and fabrication implications on design process and outcomes.

- Performance: Show evidence of an understanding of architecture as a collaborative enterprise – both in its design and in situ – and event bearing relationships to site and context in time.
  Performance: Demonstrate how the architectural proposal is adaptive over time and how it may engage with the public. Show integration of detailed material and fabrication interrogation into models and drawings.

- Form and space: Show evidence of conceptual and developed design skills in terms of three dimensional formal/spatial composition.
  Form and space: Show an understanding of how the architectural proposal is an emergent outcome that is influenced by material and fabrication understanding, implications and reflection-in-action. Develop critical reflection mechanisms to generate formal spatial propositions that are to scale and result from a careful interrogation of site and brief.

- Media: Demonstrate engagement with 'working drawings' as media that does work that tests ideas. Examples include collaborative drawings, templates, working models, building information models.
  Media: Demonstrate knowledge of different techniques, tools and materials to produce architectural prototypes, models & mock ups. Display understanding and skill in the various fabrication workshops. Demonstrate a mastery of a drawing technique/s. Demonstrate the ability to select appropriate mediums (analogue or digital) to edit and curate drawings, presentation documents and your journal.