THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

CREATIVE ARTS AND INDUSTRIES

SCHOOL/DEPARTMENT: Architecture & Planning

COURSE OUTLINE: ARCHDES700 / Semester 1, 2017

1.0 GENERAL COURSE INFORMATION

Course Code:	ARCHDES700
Course Title:	Advanced Design 1
Points Value:	30 points
Prerequisites:	N/a
Restrictions:	N/a
Course Director:	Prof Andrew Barrie, Room 335, Building 421, a.barrie@auckland.ac.nz
Course Co-ordinator:	Dr Ross Jenner, Room 547, Building 421, r.jenner@auckland.ac.nz
Teaching Staff:	Tom Locke, Warren and Mahoney, Ground Floor, Mason Bros., 139 Pakenham Street West, tom.locke@wam.co.nz Barrington Gohns, Warren and Mahoney, Ground Floor, Mason Bros., 139 Pakenham Street West, Barrington.Gohns@wam.co.nz Divya Purushotham, Warren and Mahoney, Ground Floor, Mason Bros., 139 Pakenham Street West, Divya.Purushotham@wam.co.nz Ji Hye Lim, Warren and Mahoney, Ground Floor, Mason Bros., 139 Pakenham Street West, jihye.lim@wam.co.nz

2.0 CLASS CONTACT HOURS

Monday, Tuesday & Friday, 1pm – 5pm; Level 3 Design Studios, Building 421. Fortnightly on Fridays at Warren and Mahoney, Ground Floor, Mason Bros., 139 Pakenham Street West.

3.0 COURSE PRESCRIPTION

A studio based inquiry into an architectural topic approved by the Head of School of Architecture and Planning intended to facilitate in-depth study that is both tailored to a student's own interest and aligned with the School's research clusters, sharing workshops, discussions, pin-ups and tutorials.

SHARED CITY

Background

Recent years have seen the re-emergence of the sharing economy in cities facilitated by a growing number of technological platforms geared to sharing resources more efficiently. Apps such as uber and airbnb are examples of a disruptive innovation that actively promote this concept of shared ownership and shared space leading to a reduced consumption of existing resources.

Autonomous vehicles are a technology in their infancy which many expect to be adopted en masse over the coming years, resulting in a major disruption to the automobile industry.

The intersection of the adoption of autonomous vehicles with the re-emergence of the sharing economy in cities has the potential to radically reshape cities as we know them today.

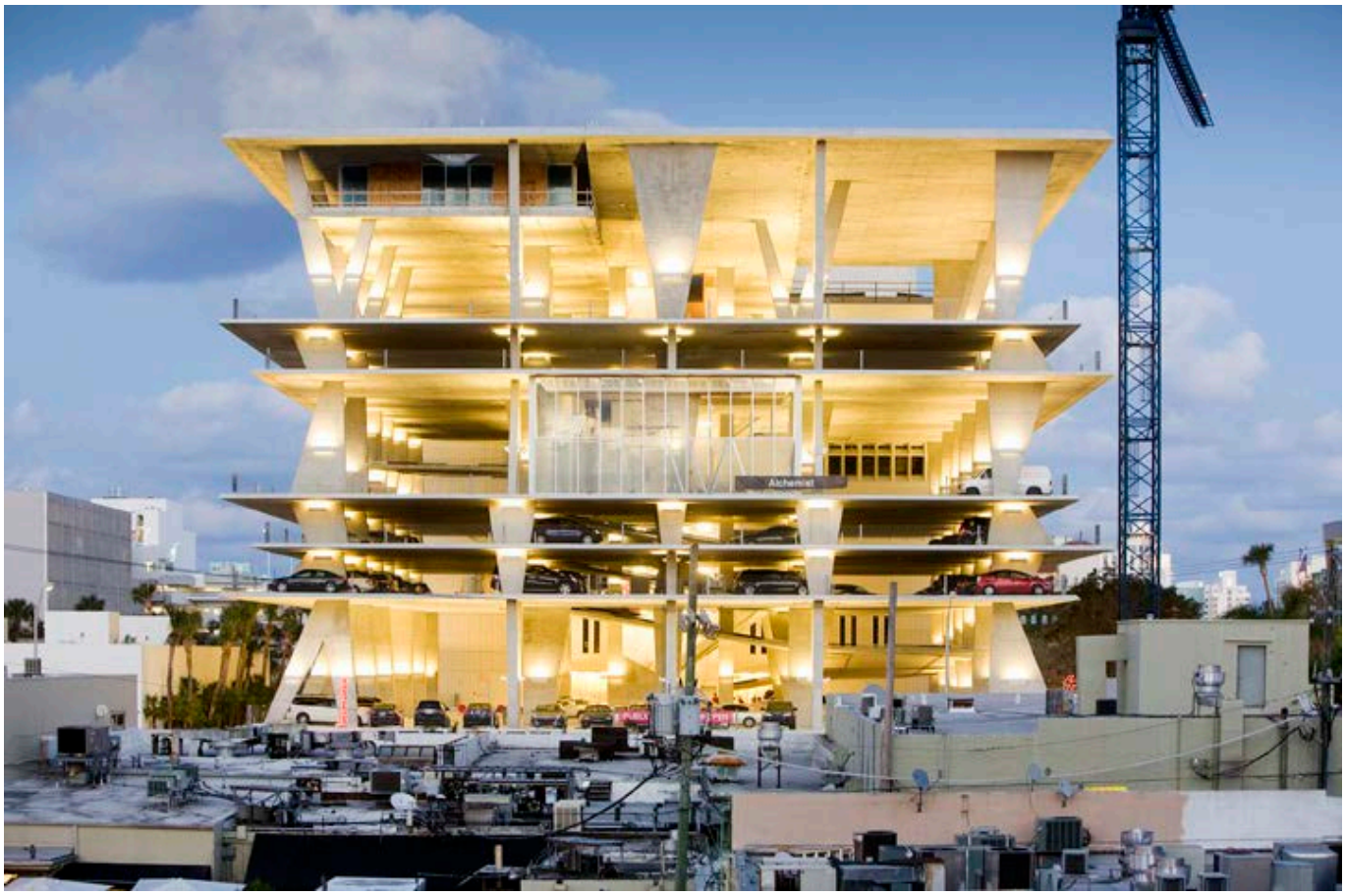

Fig 1 – 1111 Lincoln Road, Herzog and de Meuron, Miami, Fl, USA. An example of hybridised car-park space in an urban environment.

Auckland Context

Currently in Auckland, as in many global cities, approximately 1/3 of the space in the city is devoted to the private motor vehicle in the form of roads and carparks, driveways and garages. Typically a private car in Auckland is stationary 96% of the time.

Auckland is a city which (according to published Auckland council statistics) adds 825 new residents every week adding additional strain on the existing housing and infrastructure supply.

Paper Objectives and Methodology

This paper seeks to investigate and examine a possible future in which large areas of the Auckland urban environment currently devoted to the private motor vehicle could be repurposed to provide the housing and infrastructure required to support Auckland's growth.

Specifically, the paper will look for research driven investigations into the repurposing of a section of the Auckland Council downtown parking building in the Auckland CBD.

Students will be expected to undertake site analysis, data collection and research into disruptive innovations as the starting point for a digital design process. Using parametric softwares, such as Maya and Grasshopper with Rhino, students will be asked to look at multiple spatial and formal iterations on their selected site with a view to developing an architectural proposition that could address the cities growing infrastructure needs.

It is intended a programme for the site will evolve out of research into Auckland's current growth patterns and the infrastructure demands these create. A hybrid programme is anticipated that will address a selection of related needs such as affordable housing, water treatment, schools, fleet car parking and charging, short term accommodation, medical centres, urban recreation and aged care.

As well as the development of graphic media to describe your project (plans, sections, elevations, visualisations etc), students will be encouraged to develop a large scale prototype of a component or detail of their projects using digital design to production techniques (3D printing, CNC).

Fig 2 - Leeza Soho, Zaha hadid architects, Beijing, China. An example of an architecture driven through a parametric design process.

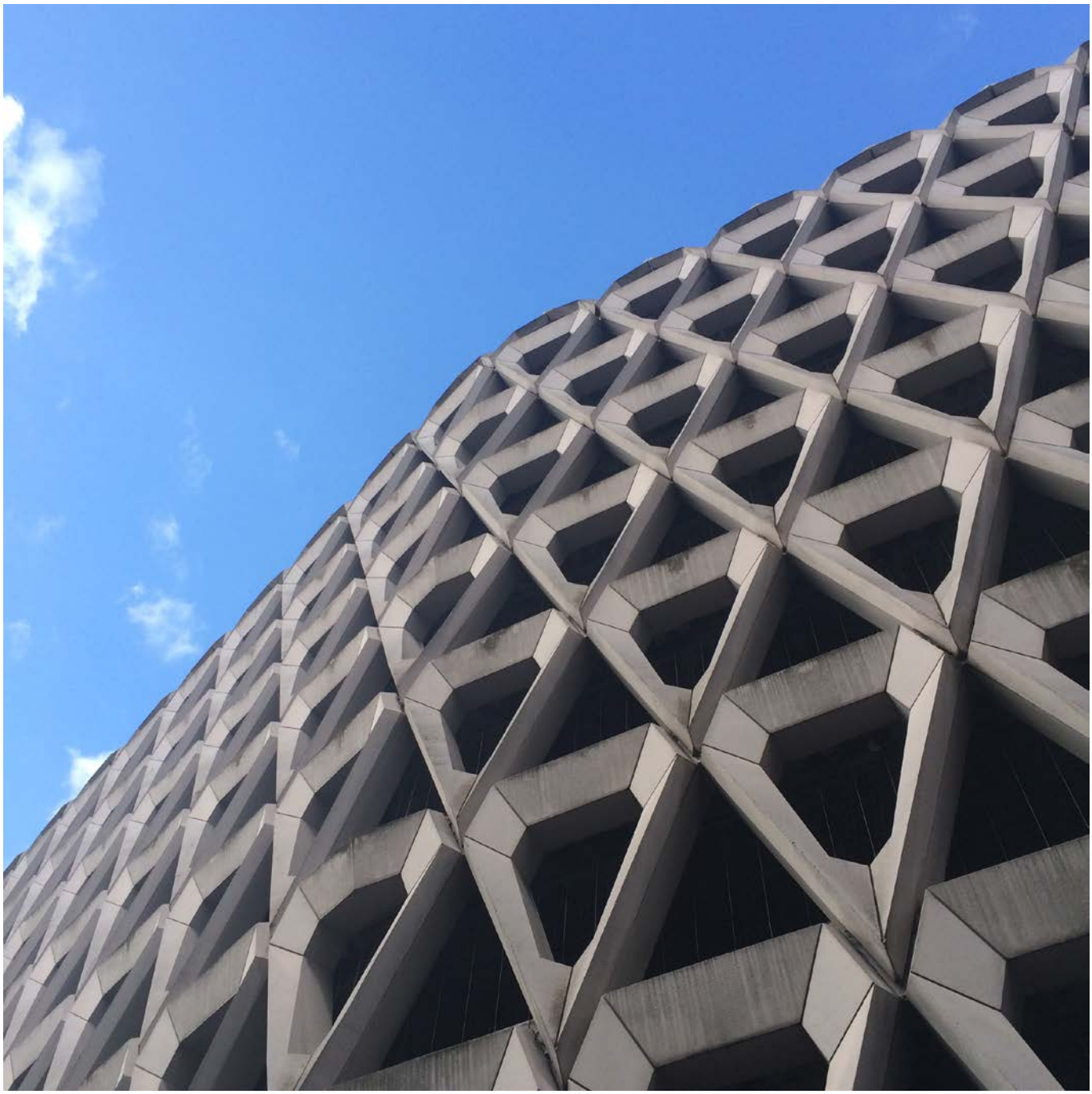

Fig 3 - Welbeck Street car park, Michael Blampied and Partners, London, UK. An example of a redundant car-parking building presenting an opportunity for adaptive reuse.

4.0 TEACHING AIMS

The aims of this course are to:
Advanced Design 1 is the integrated design project for the MArch(Prof). Students are required to address a challenging and conceptually complex architectural design and to achieve a fully resolved design project, together with developed design studies sufficient to explain the proposed building's construction, structure, materials and natural environmental performance. A report is required to elucidate the design.
Emphasis will fall upon the development of strategic responses to differing, changing or extreme environmental conditions. Focus on site, thermal, natural environment, material and ecological issues.

5.0 LEARNING OUTCOMES

General ARCHDES700 Course Outcomes
On successful completion of this course, students should be able to:

- Theory: Show evidence of development of critical thinking and conceptual consistency throughout the design process.
- Architectonics: Demonstrate abilities to advance conceptual thinking and design propositions through identifying and addressing issues of materiality, structure and construction.
- Performance: Show abilities to advance conceptual thinking and design propositions through interrogating and addressing in depth the natural environmental, contextual, and programmatic factors underlying the project.
- Form and Space: Demonstrate skill in the development of three dimensional architectural form and space, both exterior and interior.
- Media: Display skill in the communication and development of conceptual, preliminary and developed design propositions through the strategic use of architectural media.

Specific Topic Outcomes
This studio topic will engage the general course outcomes in the following ways:

- Theory: To engage with the implications of disruptive innovations on architecture and the urban environment. To develop an understanding of the infrastructure implications of Auckland's urban growth and demonstrate future possibilities or opportunities resultant from this.
- Architectonics: To demonstrate abilities to translate conceptual thinking and formal investigations into an approach to materiality and structural expression. To develop the skills to translate 3D digital models into coherent, large scale physical models.
- Performance: To develop competence with parametric software allowing investigation of multi-various architectural responses.
- Form and space: To demonstrate skill in the integration of digital investigations into form and space with the physical constraints of an actual site.
- Media: To demonstrate skill in the development of parametric 3D models. To demonstrate skilful use of different means of architectural representation to best describe the proposal.

6.0 COURSE STRUCTURE AND CONTENT

Week	Date	Topic
Week 1		Introduction. Initial site research and parametric investigation into form and space.
Week 2		Initial site research and parametric investigation into form and space Pin-up at W+M – initial conceptual work. 8xA3 sheets + conceptual models.
Week 3		Site selection. Site integration of conceptual work.
Week 4		Site integration of conceptual work.

	Pin-up at W+M – developed conceptual work analysing site and integrating conceptual work. 8xA3 sheets + conceptual models.
Week 5	Site modelling and programme development. Integration of conceptual work with programme on site.
Week 6	Mid-semester crits.
	MID-SEMESTER BREAK
Week 7	Site modelling and programme development Integration of conceptual work with programme on site.
Week 8	Site modelling and programme development Integration of conceptual work with programme on site. Pin-up at W+M – initial building concept
Week 9	Site modelling and programme development Integration of conceptual work with programme on site.
Week 10	Prototyping, Renders, drawings, animations Pin-up at W+M – draft presentation
Week 11	Prototyping, Renders, drawings, animations
Week 12	Final presentations

7.0 LEARNING RESOURCES

7.1 Required Reading

7.2 Recommended or Supplementary Reading

http://www.manifestoproject.it/bruce-mau/

Deleuze, G., & Patton, P. (2004). “Difference and Repetition”.

Robert Corser “Fabricating Architecture: Selected Readings in Digital Design and Manufacturing”.

Branko Kolarevic. “Parametric Evolution.” In Inside Smart Geometry: Expanding the Architectural Possibilities of Computational Design.

7.3 Other Materials or Software

How driverless cars will change cities
https://www.youtube.com/watch?v=XEebyt6G5kM

7.4 Use of Canvas

7.5 Other Assistance / Student Support Available

OML tutorial schedule

8.0 INCLUSIVE LEARNING

Students are urged to discuss privately any impairment-related requirements face-to-face and/or in written form with the course convenor/lecturer and/or tutor.

9.0 OTHER INFORMATION

It is expected that students enrolling in this course will have base skills in 3D modelling and digital design.
All studio sessions will have a sign-up sheet and it is expected that all students enrolling in this paper will meet with at least one of the tutors once a week.

This paper is being coordinated and run by architects and graduates currently working full time at Warren and Mahoney. We will make a tutoring schedule available, and all attempts to provide consistency with the team will be made, however there may be times where one or other of the tutors will not be available at their usual times due to other work commitments.

It is anticipated that we will run fortnightly pin-up sessions for this paper at our offices in the Wynyard quarter. This is an opportunity for students to get an insight into what an architectural practice looks and feels like as well as what it feels like to present work in this environment. It is expected that all students will make their own way to our office and participate in these sessions.

10.0 ASSESSMENT

10.1 Method of Assessment

100% coursework
All student work is assessed by the named staff member(s) offering each course topic, who are appointed as examiners. Provisional grades are confirmed at an examiners' review of the work of all students in that particular design course, in order to ensure parity of grading standards across course topics. All marks are indicative until confirmed in the Design Grading Moderation Review. All work presented for Advanced Design 1 is also reviewed by external assessors.

10.2 Assessment Criteria

Detailed information on assignment format and assessment criteria are provided below. The grading of work is based on the NICAI Grade Descriptors printed on the Faculty website: https://cdn.auckland.ac.nz/assets/creative/for/current-students/course-planning-enrolment/Planning-and-enrolment-assets/NICAI%20grade%20descriptors.pdf.

In addition to the criteria set out in the School handbook, assessment will be based on the following:

- Theory: Quality and consistency of conceptual and critical thought throughout the design process.
- Architectonics: Quality of design development through the creative engagement with issues of materiality, structure and construction.
- Performance: Depth of understanding of, and extent of design development demonstrated through creative engagement with, relevant natural environmental, contextual and programmatic factors underlying the project.
- Form and Space: Level of skill demonstrated in the development of three dimensional architectural form and space, both exterior and interior.
- Media: Quality of presentation, clarity of communication, appropriateness of media strategy and level of skill displayed through the work presented at all stages of the design process.
- Quality of engagement in studio – singularly, in group discussions and in formal crits. Attendance in studio and for the duration of crit days is mandatory – students are expected to support and learn from their colleagues.

Specific topics will weight the factors presented above according their identified emphases.

10.3 Academic Integrity

The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's own work, reflecting his or her learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the world-wide web. A student's assessed work may be reviewed against electronic source material using computerised detection mechanisms. Upon reasonable request, students may be required to provide an electronic version of their work for computerised review.

10.4 Attendance and Participation

Attendance in class as well as engagement with course activities and readings supports academic success. Therefore it is strongly recommended that students make every effort to attend class and complete all the necessary in-class requirements.

10.5 Output Requirements

Abstract: All AD1 students are required to furnish a Design Report. This will take the form of a 350-400 word abstract. An abstract is a condensed piece of writing that highlights the major aspects of your design project: the content, context, scope and outcomes of the design research. The abstract should be a finely crafted piece of text accompanied by a single image of your project. A template will be given and all abstracts must be submitted in the template both in print and in digital format (venue TBC). Draft to be submitted for mid-semester crits. Workshops on writing will be held in Week 4. All final Design reports are due on Thursday May 25th so that they can be published and circulated to your critics well ahead of crit week.

All students will be asked to keep a record of their research/ investigations and design development that can be finally presented in an A3 or A4 booklet form along-side their final project. We strongly recommend that all students record their work as it progresses by taking screenshots, scanning and saving out imagery from their process.

Mid semester crit: Large Scale Cross sections and perspective views, working models, concept and design development material.
Final Presentation: Site Plan, Plans, Sections, Visualisations, Large Scale physical model or prototype (1:5 scale or greater), concept and design development material in A3 or A4 booklet form.

11.0 STUDENT FEEDBACK

Students will be asked to complete an evaluation of the course at the end of the semester, usually on the morning of final presentation.

12.0 UNIVERSITY POLICIES AND GUIDELINES

This course is based on the university policies and guidelines. For further information, see the University and Faculty websites. On the Faculty website, the 'Quick Reference Guide for New Students' provides useful information on such things as key dates, where to go for help and advice, personal support and academic policies and procedures.

Students must note the following warning that applies to all material provided for this course. This includes printed material and electronic material, and material posted on Canvas. If you are not sure about the requirements, ask for clarification from the course coordinator.