

# How to use this file:

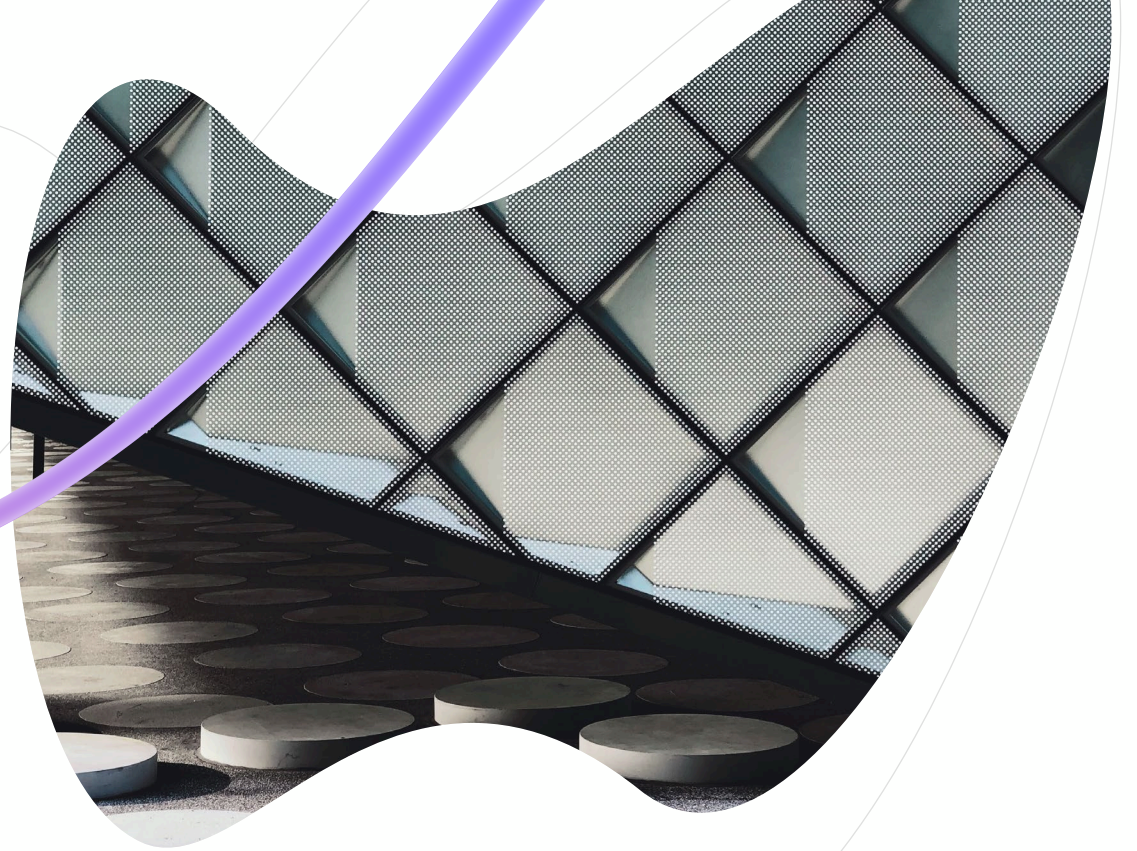
1. **Open** it in your Adobe Reader
2. **Single click** the **square** at the top left of the page (under Ningbo University). **Right click** gives you the option to pop out the player so you can pause.
3. Make sure to **join the discussions** *(it is an active learning after all)* by accessing provided links.



# Module: Digital Architecture

## Week 1

This first week is an introductory session of this module. We will be informed on how this semester's schedule looks like, some grounding rules of the module (for facilitator and students), and a brief introduction of this area of study.





## Mia Tedjosaputro

I am an expat in our beloved City, Ningbo China. I am an Indonesian architect, did my M Arch in Digital Architecture in 2011 and also hold a PhD degree (2018); both are from University of Nottingham UK. Currently I am also PGCHE student in Falmouth University, UK through a distant learning. It is a British teaching qualification in Higher Education. I will also be updating my own skills and knowledge through this module journey. **Welcome on board!**



**2019-present**

Aksen PM  
China and Indonesia  
Creative director and  
architect

**2014**

University of Nottingham  
Ningbo China  
Graduate Teaching  
Assistant





**2009-2011**

SAA Architects Pte Ltd,  
Singapore  
Architectural Assistant

**2008-2009**

Tierra Design(s) Pte Ltd,  
Singapore  
Architectural Assistant



# Research Interests

**01**

Study of design  
behaviour

**02**

Mixed Reality in  
Architecture

**03**

Bamboo architecture

**04**

Digital Design Cognition

**05**

Design Pedagogy

**06**

Embodied creativity



# 02

Mixed Reality in  
Architecture

+

# 03

Bamboo architecture



# Today session's aims and objectives

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- To provide a clear outline of the Digital Architecture module (schedule, assessments, etc)
- To communicate ground rules
- To expand what to expect from this module
- To jumpstart the discussion with a lecture of three introductory concepts



# Outline

## Of today's session

### 1 ABOUT THE MODULE

AIM AND OBJECTIVES

LEARNING OUTCOMES

(TEMPORARY) SCHEDULE

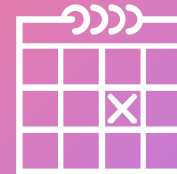
ASSESSMENTS AND FEEDBACKS

STUDENT ENGAGEMENT AND REGISTRATION

GROUND RULES OF THE MODULE

VIRTUAL OFFICE HOURS

WHAT TO EXPECT



# Outline

## Of today's session

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### 2 DIGITAL ARCHITECTURE

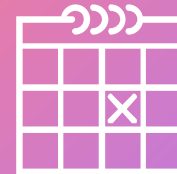
MY RECENT PAPER ON DIGITAL  
ARCHITECTURE PEDAGOGY

WHAT IS DIGITAL ABOUT IT?

3 IMPORTANT CONCEPTS:

- BRAINSTORM WITH INPUT READING
- SHORT LECTURE

READING LIST



## ABOUT THE MODULE

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This **17 weeks** module aims at introducing computational design thinking to NBU students. Requisite knowledge is unnecessary, although some of you might have self-learned related software such as Rhino. This module is designed to encourage your **active learning** so please make sure you spare enough time to engage in discussions, reading materials, etc.

Range of topics cover: theories, important concepts, design precedents, software skills, research skills; so you can top the knowledge with your personal interest. At nearly the end of module, assessments are used to demonstrate your cultivated skills. I will be closely monitoring your engagement, so make sure you **sign in**.



# Aims and objectives of module



#1

To equip students with necessary knowledge through series of lectures, discussions and hands-on activities (if possible).



#2

To critically analysed and apply these theories to student's' own practice.



#3

To apply learned skills in creation of micro architectural project and write a reflective essay critically evaluating the process.

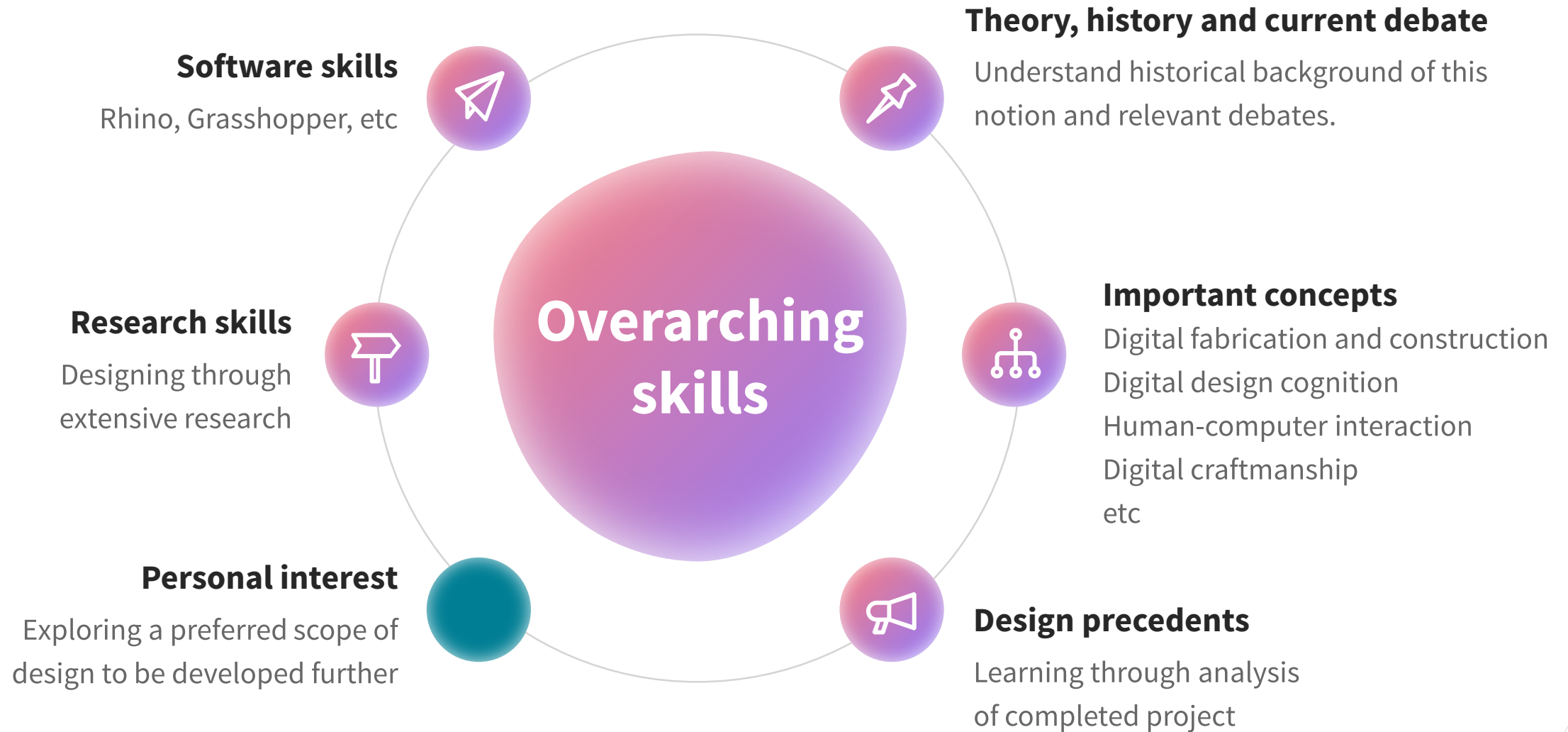


# Learning Outcomes



*At the end of Semester 2, students should be able to do the following:*

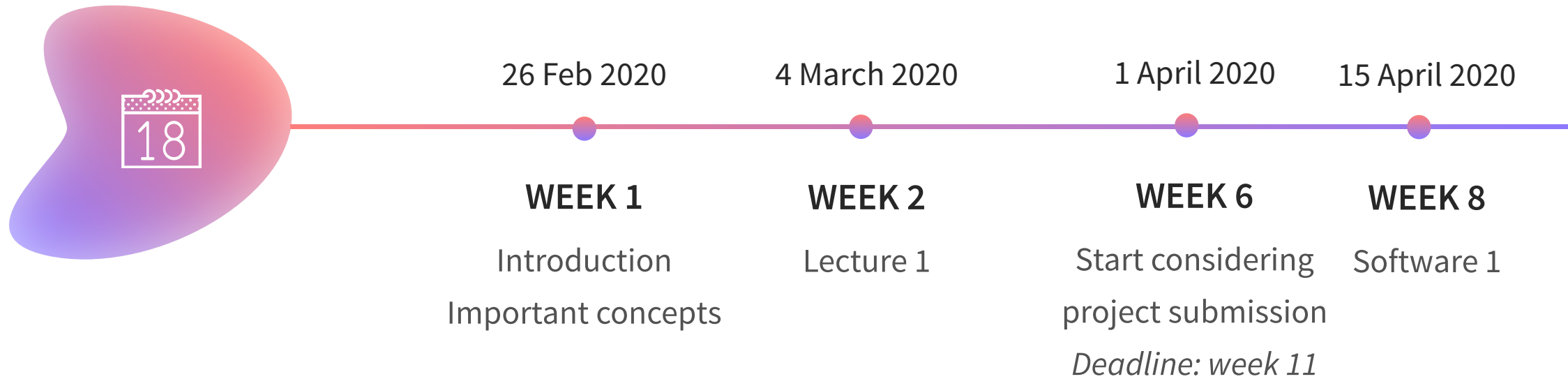
1. Have improved knowledge of historical perspective and current development in the fields.
2. Understand related important concepts and terminology.
3. Be able to critically analyse case studies.
4. Have developed relevant software skills.
5. Know strategies for effective research related to micro architecture project.
6. Effectively reflect, appraise, and evaluate peers' forum posts.
7. Have practised generating a novel three dimensional model for micro architecture.
8. Have gained awareness of digital design cognition.





# Module timeline

14









# List of topics

Week 1-5

## Derived from overarching skills

Note: tentative schedule. Please pay attention to announcements via Wechat group chat. To be confirmed in weekly basis due to the current pandemic situation. Making/ constructing session might be added if possible.



Week 1

Introduction of module and three important concepts



Week 2

Historical background and current debate



Week 3

Digital design practice and research groups



Week 4

Theory, philosophy and methodology



Week 5

Parametric Design

# List of topics

Week 6-10

## Derived from overarching skills

Note: tentative schedule. Please pay attention to announcements via Wechat group chat. To be confirmed in weekly basis due to the current pandemic situation. Making/ constructing session might be added if possible.



Week 6

Digital fabrication and construction

*Note: start considering your project submission*



Week 7

Digital design cognition

Research in digital design



Week 8

Software 1: Rhino



Week 9

Software 2: Grasshopper



Week 10

Reading week

# List of topics

Week 11-17

## Derived from overarching skills

Note: tentative schedule. Please pay attention to announcements via Wechat group chat. To be confirmed in weekly basis due to the current pandemic situation. Making/ constructing session might be added if possible.



Week 11

Digital Tectonics and Morphology  
Submission 1



Week 12

AI and machine learning



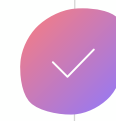
Week 13

Digital craftsmanship  
Submission 2



Week 14

Smart buildings



Week 15

Human-computer interaction



Week 16

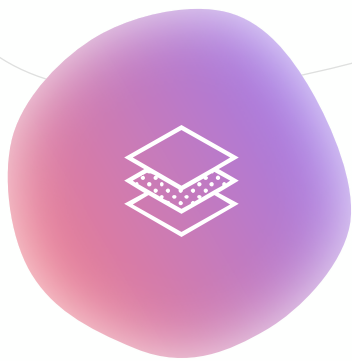
My research project in mixed reality, tbc.



Week 17

Teacher and students feedback, reflections.

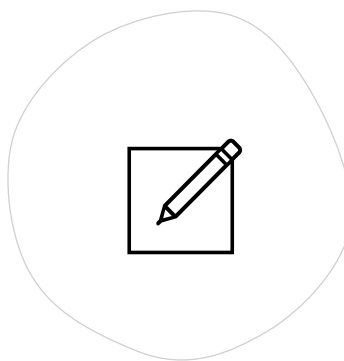
# Assessment and feedback



## Submission 1: Project submission

Week 11

40%



## Submission 2: Essay

Week 13

40%



## Online forum post counts

Week 1-17

20%










# Student engagement and registration




This is how I mark your attendance, spare time to engage in meaningful discussions. Make sure to sign off with in this format:


**Name+Student ID**






What do you think?  
0 Responses

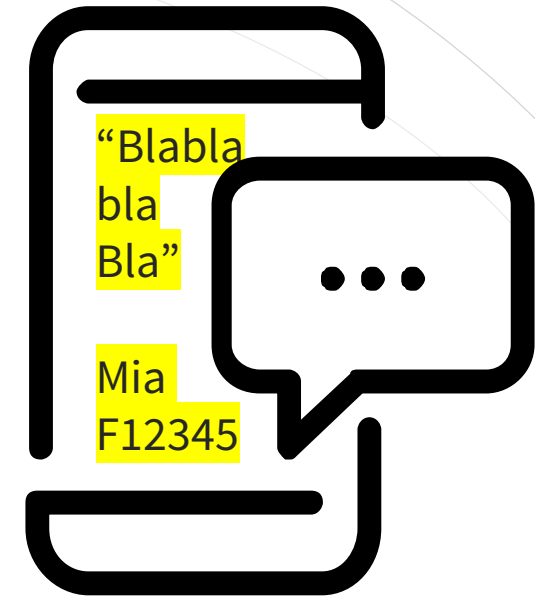
 Upvote
  Funny
  Love
  Surprised
  Angry
  Sad

0 Comments   Mia Tedjosaputro    Login ▾

 Recommend
  Tweet
  Share
 Sort by Newest ▾



LOG IN WITH
 



 OR SIGN UP WITH DISQUS 



**Forum post counts.** You have to be involved in every single discussion post.

Forum links will be attached in respective slides. Or head to here: <https://miatedjosaputro.com/category/nbu/digital-architecture/>

# Ground rules

**Any disabilities** have to be declared before the beginning of Week 2 class.

If you have to **miss a class** (*or unable to engage in forum in online environment*) due to extenuating circumstances let me know before the class. Evidence is suggested.

**Respect your peers** whilst engaging in (online or offline) discussions, or any online or offline correspondence. Keep it concise.

I am here to facilitate your learning, you are in charge of your own learning.  
if you have any learning problems however, kindly notify me.

# (Virtual) office hour

During this online learning environment, I will be happy to received your concern anytime in the day. Preferred method of communication:

## Email



**MIA@MIATEDJOSAPUTRO.COM**

FOR PERSONAL CONCERN  
PLEASE SIGN OFF WITH  
YOUR NAME+MODULE+STUDENT ID

## Group chat



ON WECHAT, IF YOUR CONCERN  
MIGHT BENEFIT YOUR PEERS



# Teaching materials

There is a size limit of what I can upload per attachment. You will notice that I split the slides to **smaller chunks**. Please read and listen to them (*there will be a “play” icon on top of page if there is an audio attachment*) **in sequence**. Note the Week number.

**Download from this link :**

<https://miatedjosaputro.com/category/nbu/digital-architecture/>



# Preferred academic writing style:

## **Harvard** referencing style

Download the guide from this link or use Google Scholar to generate reference list  
<https://miatedjosaputro.com/2020/02/25/week-1-about-module/>

### IN-TEXT CITATION

Author (Year) or (Author, Year)

Example:

"After that I lived like a young rajah in all the capitals of Europe..." (Fitzgerald, 2004).

or

Fitzgerald (2004) posits that he lived like a young rajah in the capitals of Europe..

### REFERENCE LIST

Author (Year).

Example:

Fitzgerald, F. (2004). *The great Gatsby*. New York: Scribner.

## What to expect from this module

Apart from the listed aims and objective,

1. You will exercise your **independent learning** skills.
2. You will be **more critical** on analysing case studies, theories, methods, etc.
3. You will be able to exercise the notion of “**design by research**”.
4. You will be able to do your own **further learning** and research based on the provided materials.





Break