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# GRADUATION PLAN

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*Self-Craft Community - Bandung*

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## PERSONAL INFORMATION

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## GRADUATION STUDIO

Name of the studio	<b>AR3AE015 - Architectural Engineering Graduation Studio</b>
Architecture Teacher	<b>Monique Smit</b>
Research Teacher	<b>Martijn Stellingwerff</b>
Title Graduation Project	<b><i>Self-Craft Community - Symbiotic of local craft techniques and construction knowledge for Kampung regeneration by retrofitting an existing structure in the city centre of Bandung</i></b>
Argumentation Studio	

"As an architect I have always had the ambition to contribute to the built environment and communities in a positive way by creating better and more intelligent buildings which promote self-appropriation and sustainable living. The right balance of technology and design can lead to smart and beneficial buildings for community development."

## PROBLEM STATEMENT

By 2050, 72.8% of the Indonesian population will be living in cities, compared to 55.3% in 2018 (UN, 2018). Urban kampungs, which are very important for Indonesian cities like Bandung since they provide a precious socio-spatial safety net and an informal and flexible environment for the workers of the city, will suffer the most from this intense influx. Kampung Braga, in the city centre of Bandung, displays a strong sense of community surrounded by a barrier of empty colonial buildings which are still yet to be adapted for current need. The dense settlements of the kampung are currently being slowly overtaken by soulless and monumental developments which are detrimental to the local character and social structures. The creative approach of the kampung dwellers combined with local self-build vernacular knowledge, reveals the potential for the Kampung's future buildings to reflect its strong identity in a durable and inspiring manner. The kampung's current constructions, because of financial constraints and poor conditions, are often built by unskilled labour and badly maintained, meaning that they break or get quickly dilapidated. Additionally, because of a lack of proper construction knowledge; limited resources and precious funds are invested in buildings which cannot cope with the needs of the growing population.

Using a combination of craftsmanship knowledge and resources, these kampung structures have the potential to be much more resilient, reflecting a sense of communal ownership, creativity and identity while promoting a sustainable and healthy environment.

## OBJECTIVE

The intention of the graduation project is to improve the existing way of building in the city centre of Bandung. By using the existing vernacular and craftsmanship knowledge and available resources, the self-build tradition will be enhanced while reducing building waste and its environmental impact. The objective is that by using local craft knowledge in a low-tech approach it allows for local skilled and unskilled workers to create safe and durable buildings which reflect the regional character. The research output should lead to the construction of an educational environment or vocational school where the craft knowledge can be taught and applied, incrementally improving the conditions of the urban kampung in a sustainable and creative manner.

## OVERALL DESIGN QUESTION

**How to use a combination of local craftsmanship, unqualified labour and local resources in order to design a safe, durable and creative educational environment in an existing market structure the urban kampung of Braga?**

## OVERALL RESEARCH QUESTION

**How can local craftsmanship be intensified by way of unqualified workers in an urban context in order to retrofit existing structures in a creative and durable manner?**

## THEMATIC RESEARCH QUESTION

**How can vernacular and self-built principles found in Java be applied to the urban kampung of Bandung in order to produce creative, safe and durable constructions ?**

Sub-questions:

1. What is the current state of knowledge about urban kampung construction and quality? And how does that knowledge get transferred?
2. Do self-build workmen already use pre-fabricated elements or techniques in their construction? If not, why?
3. How much importance is given to creativity in the urban kampung?
4. What are the principles of vernacular building techniques which could be applied to current structures?
5. What are the important criterias which arise when choosing construction materials for self-building in Bandung? and construction techniques?
6. What are important architectural aspects in construction in Bandung? And their differences between the formal and informal settlements?
7. How do you create an environment which promotes craftsmanship learning? how much space does it need and what are its requirements?

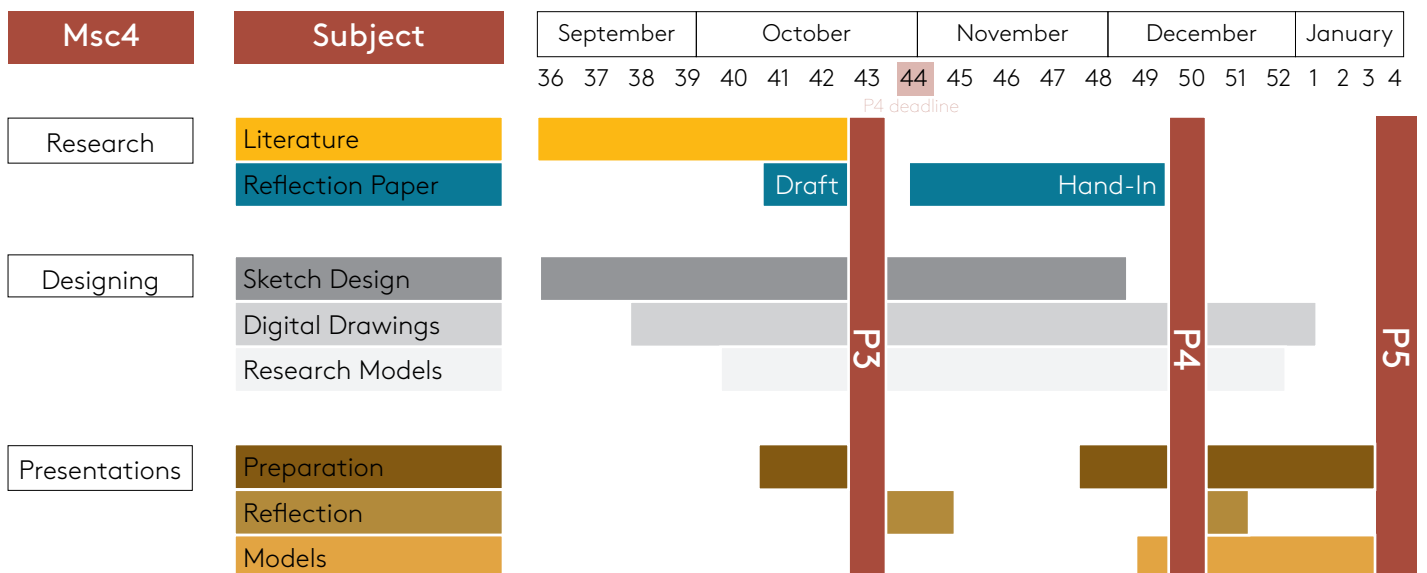
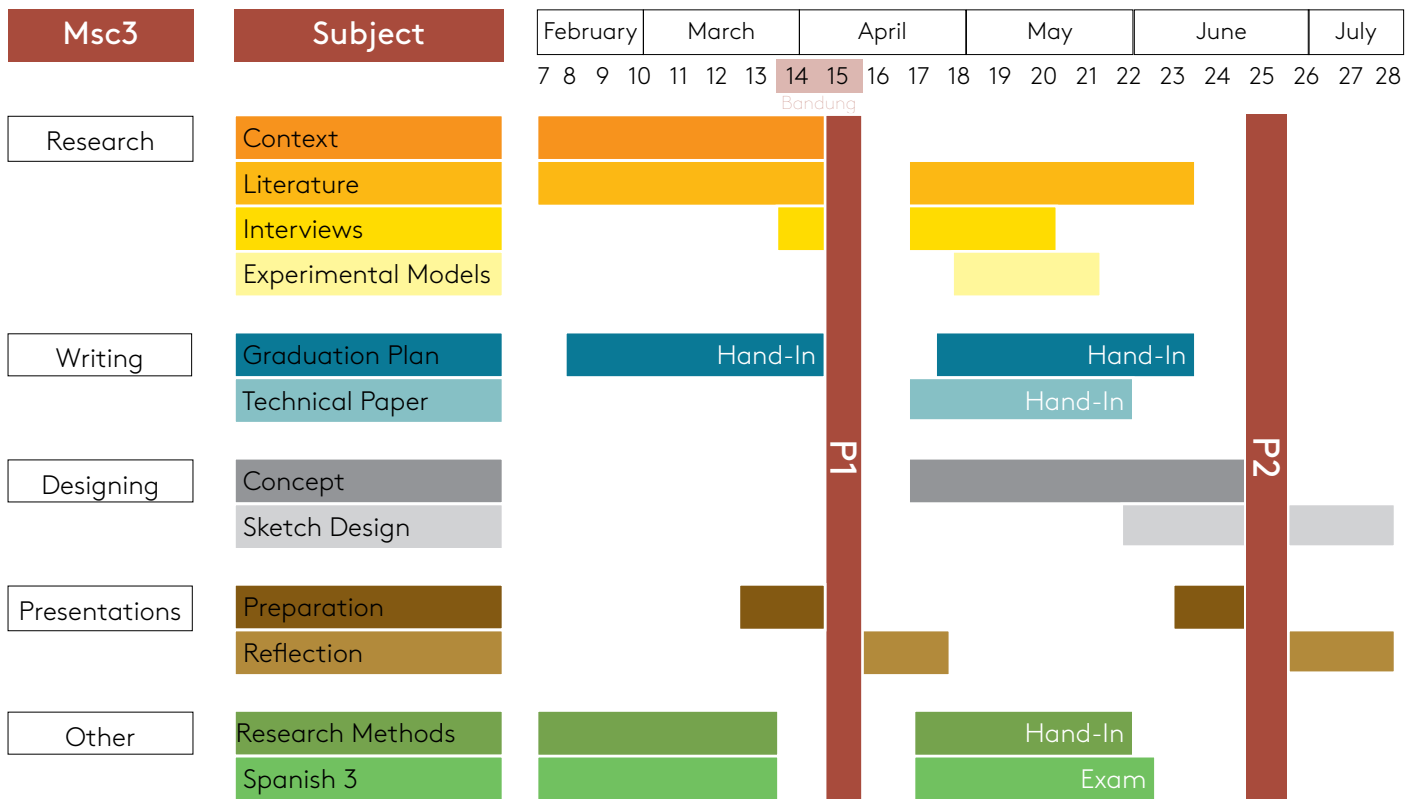
## METHODOLOGIES

- **Literature Research:** This methodology will provide a good knowledge base for future research. The literature research will look at two main themes. The first being the vernacular construction techniques of Java and Indonesia and their past applications in self-building. The second will be concentrated on building techniques for low-tech, affordable and durable construction. The combination of both these themes should provide a good base from which solutions can be formulated. This was commenced before the fieldtrip.
- **Field Research:** This will be one of the most valuable methodologies in order to get a complete idea of the craft culture and shops which are currently present in the area. The fieldwork will also help me understand the hierarchies that are present between skilled and un-skilled workers as well as the common self-build techniques.
- **Interviews:** This method is derivative from the field research since most of the interviews which I held were with local craftsmen and unqualified workers as well as residents of the kampung in order to fully understand the current challenges and situation and ultimately provide better solutions.
- **Model making and experimenting:** In order to create a complete and correct construction booklet, I will need to test the material options and construction techniques and try and simulate the local circumstances of Bandung as closely as possible in order to obtain durable and applicable solutions.

## RELEVANCE

As around the world more and more people flood rapidly into cities; urban sprawl and a shortage of adequate building is a global challenge. With globalization transforming cities into similar prototypes of each other, it is important to look to local cultural and informal structures in order to construct and maintain healthy, resilient and sustainable buildings. With research at its core, the project attempts to reflect how local knowledge and craftsmanship can raise awareness of environmental issues while improving the lives of the community. Craftmanship and vernacular principles doesn't have to only relate to objects of decoration, adornment or rituals but can also become intrinsically linked with a socially empowering and sustainable building approach.

# PLANNING



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