FACULTY OF ARCHITECTURE, DESIGN, AND PLANNING

Program	**DEPARTMENT OF ARCHITECTURE**
Degree	**BACHELOR (S1)**

Capaian Pembelajaran Lulusan		
Attitude	1.1	Believing in the oneness of God and able to demonstrate religious attitude
	1.2	Upholding the value of humanity in undertaking the task based on religion, morality and ethics
	1.3	Contributing in improving the quality of community life, nation and state and the advance of civilization based on Pancasila
	1.4	Playing a role as a proud citizen who loves his/her homeland , having a nationalism and responsibility to the country and nation
	1.5	Appreciating the diversity of cultures, point of view, religion and belief as well as opinion or the original findings of others.
	1.6	Working together, having social sensitivity and caring for community and environment
	1.7	Law abiding and disciplined in community and state life
	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.

	1.10	Internalizing spirit of independence, struggle and entrepreneurship.
	1.11	Trying his/her best to achieve perfect results, and
	1.12	Working together to be able to make the most of his/her potential
Knowledge	2.1	understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	able to make the concept of architectural design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture
	3.3	able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
	3.5	able to utilize the capability of design to assist the supervision and / or implementation of environmental development and building construction

General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently
	4.9	Being able to document, store, secure and recover data to ensure validity and prevent plagiarism

	4.10	Being able to develop themselves and compete in national and international level
	4.11	Being able to implement sustainability principles and develop knowledge: and
	4.12	Being able to implement information and communication technology (ICT) in the context of implementation of his/her work.
	4.13	Being able to apply entrepreneurship and understand technology-based entrepreneurship

COURSE LIST OF BACHELOR PROGRAM

No.	Course Code	Course Name	Credit(s)
SEMESTER I			
1	DA184101	Basic Architectural Design 1	6
2	DA184102	Introduction to Architecture	3
3	UG18490x	Religion	2
4	UG184913	Civics	2
5	UG184914	English	2
6	SF184103	Physics	3
		Number of credits	18
SEMESTER II			
1	DA184201	Basic Architectural Design 2	6
2	DA184202	Basic of Building Structure and Construction	3
3	DW184201	Introduction to Built Environment	2
4	UG184911	Pancasila	2
5	UG184912	Indonesian	2
6	KM184151	Mathematics	3
		Number of credits	18
SEMESTER III			
1	DA184301	Architectural Design 1	6
2	DA184302	Architectural Design Pinciples 1	2
3	DA184303	Design Method and Research in Architecture	3
4	DA184304	Stucture and Construction in Architecture	3
5	DA184305	Introduction to Housing and Human Settlements	2
6	DA184306	Architectural Science and Technology	3
		Number of credits	19

SEMESTER IV			
1	DA184401	Architectural Design 2	6
2	DA184402	Architectural Design Pinciples 2	2
3	DA184403	Landscape Architecture	3
4	DA184404	Introduction to Urban Design	2
5	DA184405	Building Services	3
6	DA184406	Architectural Theory	3
		Number of credits	19

SEMESTER V			
1	DA184501	Architectural Design 3	6
2	DA184502	Architectural Design Pinciples 3	2
3	DA184503	Experimental Architecture	3
4	DA184504	Architectural Ecology	3
5	DA184505	Nusantara Architecture	3
6		Elective I	3
		Number of credits	20

SEMESTER VI			
1	DA184601	Architectural Design 4	6
2	DA184602	Architectural Design Pinciples 4	2
3	DA184603	History of Architecture	3
4	DA184604*	Sustainable Design	3
5		Elective II	3
6	UG184916	Technology Communication and Application	3
7	XXxxxxxx**	Enrichment Course	3
		Number of credits	20

SEMESTER VII			
1	DA184701	Architectural Design 5	6
2	DA184702	Architectural Design Pinciples 5	2
3	DA184703	Architecture Design Proposal	4
4	DA184704	Contemporary Architecture	3
5		Elective III	3
6	UG184915	Technopreneur	2
		Number of credits	20

SEMESTER VIII			
1	DA184801	Final Project	8
2	DA184802	Ethics and the Practice of Architecture	2
		Number of credits	10

*) Enrichment Course for other department students

**) Taken in another department

LIST OF ELECTIVE COURSES

SEMESTER V

No.	Course Code	Course Name	Credit
1	DA184506	Digital Architecture	3
2	DA184507	Architecture Engineering 1	3
3	DA184508	Open Space	3
4	DA184509	Architecture and Behavior	3
5	DA184510	Urban Design Theory	3
6	DA184511	Informal Housing	3
7	DA184512	Biophilic Architecture	3
8	DA184513	Climate and Geography of Nusantara Architecture	3
9	DA184514	Tectonics	3

SEMESTER VI

No.	Course Code	Course Name	Credit(s)
1	DA184605	Algorithmic Design	3
2	DA184606	BIM 2	3
3	DA184607	Innovative Landscape	3
4	DA184608	Architecture Engineering 2I	3
5	DA184609	Urban Design Procedure	3
6	DA184610	Formal Housing	3
7	DA184611	Tropical Architecture	3
8	DA184612	Aesthetic of Nusantara Architecture	3
9	DA184613	Stylistics	3

SEMESTER VII

No.	Course Code	Course Name	Credit
1	DA184705	Digital Fabrication	3
2	DA184706	BIM 2	3
3	DA184707	Internship	3
4	DA184708	Inclusive Design	3
5	DA184709	Human Aspects of Urban Form	3
6	DA184710	Slum Upgrading	3
7	DA184711	Forensic Architecture	3
8	DA184712	Stucture and Construction in Nusantara Architecture	3
9	DA184713	Appreciating Architecture	3

S E M E S T E R I

COURSE		
	Course Name	**: Basic Architecture Design I**
	Course Code	**: DA184xxx**
	Credit(s)	: 4
	Semester	: I

DESCRIPTION OF COURSE

Basic Architecture Design Course 1 aims to give students the ability to train sensitivity to represent form and space, to apply design elements and design principles through an attractive aesthetic composition, and to demonstrate design decision making through creative and attractive object.

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

Application

- Applying basic knowledge of design, the principle of composition through the embodiment of the interrelationship of design elements (hierarchical, elegant, contrast, balance, etc.) patterns in images or models.
- Judging skills through the sensitivity of Intuition and good decision-making strategy (by design) when designing.
- Using of graphic language (line shading, value (darkness), texture) to represent three-dimensional objects and environments on two-dimensional media.
- Using of multiple media (ie pencils, colored pencils, pens, markers, computers) and approaches (freehand, digital, oral & written) that can be used in drawing and other visual communications.
- Using of various presentation methods (ie pictures, models, slides, computer drawings, etc.).

Academic Attitude:

- Demonstrate the liveliness of the studio and self-evaluation by learning from the mentor's opinion, learning from colleagues and senior students, and diligent in the work (improving the ability to make alternative works and improve the previous work).

SUBJECTS

1. Introduction to design knowledge (ABC of designs, Aesthetic, Basic Design and Creativity) The importance of feeling and experiencing Spatial Perception.

Introduction to Design Process

2. Three Dimensional Thinking (3D Thinking); Representational Drawing and Orthographic & Paraline Drawing.
3. Method of training Spatial Perception; Tonal Value Drawing & Contour Drawing.
4. Graphic Thinking; Drawing System; Drawing Conventions: Orthographic Projection, Isometry, Perspective, Symbols & Line Notation.
5. Communication Process; Diagramming and Conceptual Sketching; Formal/Spatial Diagram, Partí Diagram, Ideational Drawing, Diagramming Alternatives
6. Creative Thinking; Aesthetics; Design Elements (Visual Arts and Architecture); Lines, Colors, Build Flat and Build Space, Space, Texture.
7. Basic Color Theory; Analogous, Complementary
8. Three Dimensional Design Elements; Positive Elements (Form) and Negative Elements (Space).
9. Aesthetics; Principles of Design (Composition); Balance, Contrast, Movement, Emphasis, Pattern, Proportion, Unity
10. Design Thinking; Design Process & Decision-Making Process; Form Transformation (Inspiration: Nature, Geometry); Analytical-Synthesis; Problem Definition & Information Gathering, Developing Alternatives

PREREQUISITES

-

REFERENCE(S)

Main:

1. Ching, Francis D.K & Juroszek, Steven P (2010). Design Drawing; John Wiley & Sons 2nd Edition
2. Laurer, A. David (2008). Design Basics, Thomson Wadsworth, USA
3. Kostellow, Rowena Reed (2002). Elements of Design, Princeton Architectural Press
4. Ching, Francis D.K. (2007). Architecture: Form, Space and Order; John Wiley & Sons 3rd Edition
5. Cheryl Akner-Koler (1994). Three-Dimensional Visual Analysis, University College of Arts, Crafts and Design
6. Lockard, William Kirby (1982). Design Drawing; Van Nostrand Reinhold Comp. revised edition

Supporting:

1. Farelly, Lorraine (2008). Basics Architecture 01, Representational Techniques; Fairchild Books
2. Pierre von Meiss (1990). Elements of Architecture: From Form to Place; Routledge

3. Lois Fichner-Rathus (2012). Understanding Art; Cengage Learning
4. Jackson, Paul (2011). Folding Techniques for Designers: From Sheet to Form; Laurence King Publishing
5. Vyzoviti, Sophia (2008). Folding Architecture; BIS Publishers
6. Lazzari, Margaret (2011). Exploring Art: A Global, Thematic Approach; Cengage Learning; 4 edition
7. Farelly, Lorraine (2008). Basics Architecture 02, Construction and Materialty; Fairchild Books
8. • Farelly, Lorraine (2010). Basics Architecture 03, Architectural Design; Fairchild Books

COURSE	**Course Name**	**: Basic Integration Course I, Design and Art Studies**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: I

DESCRIPTION OF COURSE

The Basic Integration course 1, Design & Art Studies aims to give students the ability to understand basic knowledge of design (elements & design principles); basic aesthetic knowledge; knowledge of design tools; basic knowledge of drawings and conventions comprehensively.

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise

	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

Knowledge:

- Understanding the various basic knowledge of design (design elements and design principles) including size, lighting, Interrelationship System (hierarchy pattern, contrast, balance).
- Understanding design knowledge; definition of design; level of design knowledge that is learning from colleagues, learning from a senior or a mentor and learning from personal experience.
- Understanding the various drawing systems and conventions (sketches, diagrams, technical drawings, orthogonal projections (2D) - plan, elevation, section, axonometric projection (3D) - perspective).

Academic Attitude:

- Demonstrate the liveliness of the class by sharing studio experience (learning from colleagues) about their personal experiences in designing. As well as diligent and practice in developing ideas (making alternatives works and improving previous work).

SUBJECTS

1. Introduction to design knowledge (ABC of designs, Aesthetic, Basic Design and Creativity) The importance of feeling and experiencing Spatial Perception. Introduction to Design Process

2. Three Dimensional Thinking (3D Thinking); Representational Drawing and Orthographic & Paraline Drawing.
3. Method of training Spatial Perception; Tonal Value Drawing & Contour Drawing.
4. Graphic Thinking; Drawing System; Drawing Conventions: Orthographic Projection, Isometry, Perspective, Symbols & Line Notation.
5. Communication Process; Diagramming and Conceptual Sketching; Formal/Spatial Diagram, Partí Diagram, Ideational Drawing, Diagramming Alternatives
6. Creative Thinking; Aesthetics; Design Elements (Visual Arts and Architecture); Lines, Colors, Build Flat and Build Space, Space, Texture.
7. Basic Color Theory; Analogous, Complementary
8. Three Dimensional Design Elements; Positive Elements (Form) and Negative Elements (Space).
9. Aesthetics; Principles of Design (Composition); Balance, Contrast, Movement, Emphasis, Pattern, Proportion, Unity
10. Design Thinking; Design Process & Decision-Making Process; Form Transformation (Inspiration: Nature, Geometry); Analytical-Synthesis; Problem Definition & Information Gathering, Developing Alternatives

PREREQUISITES

-

REFERENCE(S)

Main:

1. Ching, Francis D.K & Juroszek, Steven P (2010). Design Drawing; John Wiley & Sons 2nd Edition
2. Laurer, A. David (2008). Design Basics, Thomson Wadsworth, USA
3. Kostellow, Rowena Reed (2002). Elements of Design, Princeton Architectural Press
4. Ching, Francis D.K. (2007). Architecture: Form, Space and Order; John Wiley & Sons 3rd Edition
5. Cheryl Akner-Koler (1994). Three-Dimensional Visual Analysis, University College of Arts, Crafts and Design
6. Lockard, William Kirby (1982). Design Drawing; Van Nostrand Reinhold Comp. revised edition

Supporting:

1. Farelly, Lorraine (2008). Basics Architecture 01, Representational Techniques; Fairchild Books
2. Pierre von Meiss (1990). Elements of Architecture: From Form to Place; Routledge
3. Lois Fichner-Rathus (2012). Understanding Art; Cengage Learning
4. Jackson, Paul (2011). Folding Techniques for Designers: From Sheet to Form;

Laurence King Publishing
5. Vyzoviti, Sophia (2008). Folding Architecture; BIS Publishers
6. Lazzari, Margaret (2011). Exploring Art: A Global, Thematic Approach; Cengage Learning; 4 edition
7. Farelly, Lorraine (2008). Basics Architecture 02, Construction and Materialty; Fairchild Books
8. Farelly, Lorraine (2010). Basics Architecture 03, Architectural Design; Fairchild Books

COURSE		
	Course Name	**: Introduction to Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: I

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. R Conway and Roenisch, 1987, Understanding Architecture, Routledge of Keegan, London
2. O' Goerman, James F, 1980, The ABC of Architecture, University of Peninnsylvania Press, Philadelphia.
3. Snyder, James, & A.J. Catanese (ed), 1979, Introduction to Architecture, McGraw-Hill, New York.
4. Jeremy M ( ); ISMS, Understanding Architecture .
5. Vitruvius:;The ten book of Afrchitecture

COURSE		
	Course Name	**: Religion**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: I

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills		

COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

COURSE		
	Course Name	**: Civics**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: I

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills		

COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

COURSE		
	Course Name	**: English**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: I

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills		

COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

COURSE		
	Course Name	**: Physics**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: I

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.12	Working together to be able to make the most of his/her potential
Knowledge		
Specific Skills	3	Understanding theoretical concept of classic and modern physics
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility

	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Douglas C. Giancoli, 'Physics for Scientists and Engineers , Pearson Education, 4th ed, London, 2014
2. Tim Dosen, "Diktat Fisika I", "Soal-soal Fisika I", Fisika FMIPA-ITS
3. Tim Dosen, "Diktat Fisika II", "Soal-soal Fisika II", Fisika FMIPA-ITS
4. Yehuda Salu; 'Physics for Architects', Inficity Publishing, 2007
5. Tipler, PA,(ted. L Prasetio dan R.W.Adi), "Fisika : untuk Sains dan Teknik, Jilid 1", Erlangga, Jakarta, 1998

S E M E S T E R II

COURSE	Course Name	: Basic Architecture Design II
	Course Code	: DA184xxx
	Credit(s)	: 4
	Semester	: II

DESCRIPTION OF COURSE

Basic Architecture Design II is a course in the form of Studio learning, which emphasizes the process of design studies in the form of stages of understanding from program to design by using the approach of design theory to understand the problem (problem seeking) and problem solving

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis

	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Demonstrate a responsible attitude towards the work in the field of architecture design related to the process of understanding the problem and solving the design problems independently
2. Understanding theoretical concepts, architectural principles especially related to the theory of understanding and solving problems related to design and aesthetic value, as well as presentation techniques conceptual architectural design
3. Being able to arrange the concept and architecture design related to the topic of system and conservation of environment independently and communicate thinking and design result in the form of graphic, writing, and communicative model with manual technique and also presents some alternative alternative design solution and make decision of choice based on scientific consideration of architecture
4. Being able to apply logical, critical, systematic, and innovative thinking, demonstrate independent, quality, and measurable performance, and examine the implications of the development or implementation of technological knowledge
5. Being able to maintain and develop the network, responsible for achieving the results of group work and supervision and evaluation of the completion of work, and able to conduct the process of self-evaluation of the working group
6. Being able to take responsibility for the achievement of group work and to supervise and evaluate the completion of work assigned to workers who are under the responsibility
7. Being able to conduct self-evaluation process to work group which is under its responsibility, and able to manage learning independently

SUBJECTS

1. THEORY: Design theory, problem seeking – problem solving, Aesthetic
2. FRAMEWORK/PROSES: Pattern Based Design process (framework)
3. CONTEXT: Design concept through environmental survey analysis for flat/contour ground related to respect to site dan urban resillience
4. PROGRAM/PROJECT: Observation Building
5. METHOD: Precedent (typology, transformation)
6. BUILDING SYSTEM: Single story

PREREQUISITES

-

REFERENCE(S)

1. Brenda, V., Robert, V. (1991) Green Architecture, Design for Sustainable. Future. London: Thames & Hudson.
2. Kubba, S. (2017) Handbook of Green Building Design and Construction: LEED, BREEAM, And Green Globes. Cambridge: Elsevier.
3. Minke, G. (2013) Building with Earth: Design and Technology of a Sustainable Architecture. Basel: Birkhauser.
4. Plowright, P. (2014). Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge.
5. Schröpfer, T. (2016) Dense + Green: Innovative Building Types for Sustainable Urban Architecture. Basel: Birkhauser

COURSE		
	Course Name	**: Basic Integration Course II**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: II

DESCRIPTION OF COURSE
Integration Course Basic Architecture Design 2 is the Course in the form of classroom that is integrated with the Studio Course Basic Architecture Design 2, the emphasis is made on the design studies process stages of understanding from program to design by using the approach of design theory to understand the problem (problem seeking) and problem solving.

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis

	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Demonstrate a responsible attitude towards the work in the field of architecture design related to the process of understanding the problem and solving the design problems independently
2. Understanding theoretical concepts, architectural principles especially related to the theory of understanding and solving problems related to design and aesthetic value, as well as presentation techniques conceptual architectural design
3. Being able to arrange the concept and design of architecture related to the topic of the system and conservation of environment independently and communicate the thoughts and design results in the form of graphic, writing, and communicative models with manual techniques and digital and presents some alternative design solutions and make a choice of decisions based on scientific considerations of architecture
4. Being able to apply logical, critical, systematic, and innovative thinking, demonstrate independent, quality, and measurable performance, and examine the implications of the development or implementation of technological knowledge
5. Being able to maintain and develop the network, responsible for achieving the results of group work and supervision and evaluation of the completion of work, and able to conduct the process of self-evaluation of the working group
6. Being able to take responsibility for the achievement of group work and to supervise and evaluate the completion of work assigned to workers who are under their responsibility
7. Being aable to conduct self-evaluation process to work group which is under its responsibility, and able to manage learning independently

SUBJECTS

1. THEORY: Design theory, problem seeking – problem solving, Aesthetic
2. FRAMEWORK/PROSES: Pattern Based Design process (framework)
3. CONTEXT: Design concept through environmental survey analysis for flat/contour ground related to respect to site dan urban resillience
4. PROGRAM/PROJECT: Observation Building
5. METHOD: Precedent (typology, transformation)
6. BUILDING SYSTEM: Single story

PREREQUISITES
-

REFERENCE(S)
1. Brenda, V., Robert, V. (1991) Green Architecture, Design for Sustainable. Future. London: Thames & Hudson. 2. Kubba, S. (2017) Handbook of Green Building Design and Construction: LEED, BREEAM, And Green Globes. Cambridge: Elsevier. 3. Minke, G. (2013) Building with Earth: Design and Technology of a Sustainable Architecture. Basel: Birkhauser. 4. Plowright, P. (2014). Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge. 5. Schröpfer, T. (2016) Dense + Green: Innovative Building Types for Sustainable Urban Architecture. Basel: Birkhauser.

COURSE		
	Course Name	**: Structure Fundamental**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: II

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		
1. R.Sumadi :" Konstruksi bangunan".		
2. Frick Heinz; " ilmu Konstrukswi Bangunan 1 "		

3. Wakita/Linde ;" The Profesional practice of architectural working drawings".
4. Sheafer :"Elementary Structures for Architects and Builders".
5. Riswanto (….) ;" Konstruksi Bangunan; diktat Jurusan Arsitektur ".
6. Soegihardjo: " Konstruksi Bangunan ".

COURSE		
	Course Name	**: Introduction to Built Environment**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: II

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page

	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Wendy R.McClure & Tom J. Bartuska;" The Built Environment : A Colaborative Inquiry into Design and Planning ; John Wiley& Sons,Inc.; New Jersey, 2007.
2. Victor Papanek; Design for Real World : Human ecology and Social Change; Thames& Hudson. ;
3. Bentley Alcock Murrain McGlynn Smith; Responsive environmets- A manual for designers ; The Architectural Press Lt; 1985
4. Ian L. Mcharg – terjemahan S.Gunadi; " Merancang Bersama Alam - judul asli : Design with Nature ;
5. Nia K.Pontoh&Iwan Kustiawan; " Pengantar Perencanaan Perkotaan ; Penerbit ITB

COURSE		
	Course Name	**: Pancasila**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: II

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills		

COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

COURSE		
	Course Name	**: Bahasa Indonesia**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: II

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills		

COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

COURSE		
	Course Name	**: Mathematics**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: II

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES
SUBJECTS
PREREQUISITES
-
REFERENCE(S)
1. Tim Dosen Jurusan Matematika ITS, Buku Ajar Kalkulus I , Edisi ke-4 Jurusan Matematika ITS, 2012 2. Anton, H. dkk, Calculus, 10-th edition, John Wiley & Sons, New York, 2012 3. Purcell, J, E, Rigdon, S., E., Calculus, 9-th edition, Prentice-Hall, New Jersey, 2006 4. James Stewart , Calculus, ed.7, Brooks/cole-Cengage Learning, Canada,2012

S E M E S T E R III

COURSE		
	Course Name	**: Architecture Design I**
	Course Code	**: DA184xxx**
	Credit(s)	: 6
	Semester	: III

DESCRIPTION OF COURSE

The Architecture Design I course emphasize on arschitectural response to the user and client needs issues in social studies context and how architecture is able to answer latest community social needs. Social scope intended is in dwelling scope, as a container of activity of a family or a group of community. The design output will emphasize on how architecture functions as space and form creation in fulfilling the needs of dwelling.

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise

	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to create a design product based on user/client needs
2. Being able to communicate verbally and visually well, in relation to interview with user/client
3. Being able to understand response-to-site design method (regionalism, contextualism) by considering physiological aspect (site and user respect)
4. Being able to apply building services (MEP, building envelope) and materials on design product in dwelling scope
5. Being able to develop design programming by using architectural principles in building and interior design based on theoretical study or precedents (western, non-western, Indonesian architecture)
6. Being able to conceptually integrate building structural system in architectural design
7. Being able to communicate design thinking and products in form of communicative graphics, papers, and models manually or digitally

SUBJECTS

1. User and client needs
2. Regionalism, contextualism
3. Physiological aspects in design
4. Building structural system in dwelling scope
5. MEP, building envelope, and materials for dwelling

6. Theoretical study and precedents in dwelling design (western, non-western, Indonesian architecture)
7. Architectural communication (graphic, drawings, model, etc)

PREREQUISITES

-

REFERENCE(S)

1. T.White, Edward, Site Analysis, (1983)
2. Walker, Theodore D., Rancangan Tapak & Pembuatan Detail Konstruksi (Site design and construction detail), John Wiley & Sons,inc, NY, 2002
3. Lang, Jon, Creating Architectural Theory. The Role of the Behavioral Sciences in Environmental Design, 1987
4. Chandler, R,Clancy, Goody, J. Wooding Geofrey, Building Type Basics for Housing, John Wiley & Sons, USA, 2005
5. Quentin, Pickard. The Architect Hand Book, Blackwell, 2002
6. Philip D. Plowright, Revealing Architecture Design : Methods, Framework and Tools, 2014

COURSE	Course Name	: Integration I
	Course Code	: DA184xxx
	Credit(s)	: 2
	Semester	: III

DESCRIPTION OF COURSE
The Architecture Design I course emphasize on arschitectural response to the user and client needs issues in social studies context and how architecture is able to answer latest community social needs. Social scope intended is in dwelling scope, as a container of activity of a family or a group of community. The design output will emphasize on how architecture functions as space and form creation in fulfilling the needs of dwelling.

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise

	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to create a design product based on user/client needs
2. Being able to communicate verbally and visually well, in relation to interview with user/client
3. Being able to understand response-to-site design method (regionalism, contextualism) by considering physiological aspect (site and user respect)
4. Being able to apply building services (MEP, building envelope) and materials on design product in dwelling scope
5. Being able to develop design programming by using architectural principles in building and interior design based on theoretical study or precedents (western, non-western, Indonesian architecture)
6. Being able to conceptually integrate building structural system in architectural design
7. Being able to communicate design thinking and products in form of communicative graphics, papers, and models manually or digitally

SUBJECTS

1. User and client needs
2. Regionalism, contextualism
3. Physiological aspects in design
4. Building structural system in dwelling scope
5. MEP, building envelope, and materials for dwelling

6. Theoretical study and precedents in dwelling design (western, non-western, Indonesian architecture)
7. Architectural communication (graphic, drawings, model, etc)

PREREQUISITES

-

REFERENCE(S)

1. T.White, Edward, Site Analysis, (1983)
2. Walker, Theodore D., Rancangan Tapak & Pembuatan Detail Konstruksi (Site design and construction detail), John Wiley & Sons,inc, NY, 2002
3. Lang, Jon, Creating Architectural Theory. The Role of the Behavioral Sciences in Environmental Design, 1987
4. Chandler, R,Clancy, Goody, J. Wooding Geofrey, Building Type Basics for Housing, John Wiley & Sons, USA, 2005
5. Quentin, Pickard. The Architect Hand Book, Blackwell, 2002
6. Philip D. Plowright, Revealing Architecture Design : Methods, Framework and Tools, 2014

COURSE	Course Name	: Design Method and Research in Architecture
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: III

DESCRIPTION OF COURSE

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

1. Critical thinking
2. Design & research
3. Precedents
4. Pattern-based frameworks
5. Force-based frameworks
6. Concept-based frameworks

PREREQUISITES

-

REFERENCE(S)

1. Revealing Architectural Design: Methods, Frameworks & Tools – Plowright, Philip D., 2014
2. A Practical Guide to Critical Thinking – Hunter, David A., 2009
3. Architectural Research Method - Linda Groat & David Wang, 2012
4. Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis_Clark Roger, 1996
5. Design Methods Basics_Kari Jormakka_2014

COURSE	Course Name	: Structure and Construction in Architecture
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: III

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Cowan, Henry J. "Architectural Structures, An introduction to Struktural Mechanics' Pitman, 1979.
2. Garrison, Philliph, "Basic Structures for Engineers & Architects", Oxford, London, 2005.
3. Sandaker, Bjorn Normann. The Structural Basic of Architecture. New York. 1992.
4. Schodeck, Daniel L, "Structures,"(terjemahan), PT Eresco, Bandung, 1995.
5. TY Lin "Structural Concept and System for Arhitects and Engineers," John Wiley & Sons, New York, 1993

COURSE	Course Name	: Introduction to Housing and Human Settlements
	Course Code	: DA184xxx
	Credit(s)	: 2
	Semester	: III

DESCRIPTION OF COURSE

Introduction to Housing and Settlement aims to give students the ability to understand and explain theories in housing and settlements in relation to the human, cultural, environmental and economic aspects in urban areas as well as the challenges of housing in the 21st century, innovatively and creatively.

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution

	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently
	4.9	Being able to document, store, secure and recover data to ensure validity and prevent plagiarism
	4.12	Being able to implement information and communication technology (ICT) in the context of implementation of his/her work.

COURSE LEARNING OUTCOMES

1. Being able to explain the importance of learning housing and settlement in relation to architecture
2. Being able to explain housing theories in relation to human, cultural, and environmental context
3. Being able to explain phenomena of slum and squatters in urban areas and housing for low income people
4. Being able to explain informal housing in relation to rural-urban development
5. Being able to explain formal housing in relation to urban development
6. Being able to explain housing development in 21st century

SUBJECTS

1. Housing and human, cultural, and environmental aspects
2. Housing in relation to human, cultural, and environmental aspects
3. Slum and squatter in urban area
4. Informal housing and housing as a process
5. Formal housing and urban development
6. Housing challenge in 21st century

PREREQUISITES

-

REFERENCE(S)

1. Avi Friedman(20012), Fundamental of Sustainable Dwellings, Island Press, Washington DC
2. Barbara Miller Lane(2007), Housing and Dwelling : Perspective on Modern Dimestic Architecture, Routledge, New York
3. Henny Colen (2008), The Meaning of Dwelling Features, Netherlan
4. Barbara Ward (1994) The Home of Man, Penguin Books England, London
5. Normqa L. Newmark (1977),Self, Space and Shelter : an Introduction to

Housing
6. Amos Rapoport (1977) Human Aspects of Urban Form, Pergamon Pres
7. John F. Turner (1972) Freedom to Build, McMillan Ltd, New York
8. Charles Abrams (1969),Housing in the Modern World

COURSE	Course Name	: Architectural Science and Technology
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: III

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently
COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		

-
REFERENCE(S)
1. Szokolay, S. (2004), Introduction to Architectural Science; Basis for Sustainable Design, Oxford: Architectural Press

S E M E S T E R IV

COURSE		
	Course Name	**: Architecture Design II**
	Course Code	**: DA184xxx**
	Credit(s)	: 6
	Semester	: IV

DESCRIPTION OF COURSE		
The course of Architecture Design II aims to give students the ability to design research-based objects of architecture related to the topic of material technology, structure and utility in designing creatively and innovatively.		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
;General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis;
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution;
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility;
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently.

COURSE LEARNING OUTCOMES

1. Demonstrate a responsible attitude towards work in the field of Architecture Design related to material technology topics, structures and utilities in designing independently.
2. Mastering theoretical concepts, architectural principles especially related to technology, and presentation techniques of architectural conceptual design.
3. Being able to arrange architectural concepts and designs related to material technology topics, structures and utilities in designing independently and communicating the thoughts and design results in graphic form, writing, and communicative models with both manual and digital techniques and presents some alternative design solutions and make decision choices based on architectural scientific considerations.
4. Being able to apply logical, critical, systematic, and innovative thinking, demonstrate independent, quality, and measurable performance, and examine the implications of developing or implementing the science of technology.
5. Being able to prepare scientific descriptions and make appropriate decisions in the context of problem solving in the field of Architecture Design related to material technology topics, structures and utilities in the design.
6. Being able to maintain and develop the network, responsible for achieving the results of group work and supervision and evaluation of the completion of work, and able to conduct the process of self-evaluation of the working group

SUBJECTS

1. THEORY: Issue exploration with theory of Technology of building material, structure and services.
2. FRAMEWORK/PROSES: Force Based Design process (framework)
3. CONTEXT: Design concept through the kind of technology tha used on it.
4. PROGRAM/PROJECT: Educational Building focused on using technology in building material, structure and services.
5. METHOD: Rationalist approach: design research for tehcnological studies and performance form for tehcnological studies
6. BUILDNG SYSTEM: multi-storey (3-5) building system with Smart Integrated Technology

PREREQUISITES

- Architecture Design 1
- Structure of Architecture

REFERENCE(S)

1. Francis DK Ching, Building Structures Illustrated, Willey, 2014
2. Adrea Deplazes, Construction Architecture : Material Processes, A Handbook, Birkhauser, 2008
3. Thomas Schropfer, Material Design, Birkhauser Architecture, 2010
4. D Schodek, Structures, 7th Edition, Prentice Hall, 2013
5. Dabby, Ramsey & Aswani Bedi, Structure for Architect, John Willey & Son, 2012
6. Emmitt, Stephen, Architectural Technology, Blackwell Science, 2002
7. TY Lin "Structural Concept and System for Arhitects and Engineers," John Wiley & Sons, New York, 1993

COURSE		
	Course Name	**: Integration II**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: IV

DESCRIPTION OF COURSE
Integration course II aims to give students the ability to demonstrate research-based knowledge on architectural objects related to material technology topics, structures and utilities in designing creatively and innovatively.

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules,

		procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page;
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page;
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis;
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Demonstrate a responsible attitude towards work in the field of Architecture Design related to material technology topics, structures and utilities in designing independently
2. Mastering theoretical concepts, architectural principles especially related to technology, and presentation techniques of architectural conceptual design.
3. Being able to demonstrate research-based knowledge related to material technology topics, structures and utilities in self-design and communicate design thoughts and designs in graphic, written, and communicative models with both manual and digital techniques and presents several alternative design solutions and decision making options based on architectural scientific considerations.
4. Being able to apply logical, critical, systematic, and innovative thinking, demonstrate independent, quality, and measurable performance, and examine the implications of developing or implementing the science of technology.
5. Being able to prepare scientific descriptions and make appropriate decisions in the context of problem solving in the field of Architecture Design related to material technology topics, structures and utilities in the design.

SUBJECTS

1. THEORY: Issue exploration with theory of Technology of building material, structure and services.
2. FRAMEWORK/PROSES: Force Based Design process (framework)
3. CONTEXT: Design concept through the kind of technology tha used on it.
4. PROGRAM/PROJECT: Educational Building focused on using technology in building material, structure and services.
5. METHOD: Rationalist approach: design research for tehcnological studies and performance form for tehcnological studies
6. BUILDNG SYSTEM: multi-storey (3-5) builing system with Smart Integrated Technology and wide span at the contor and flat area.

PREREQUISITES

1. AD 1
2. Structure of Architecture
3. Integration 1

REFERENCE(S)

1. Francis DK Ching, Building Structures Illustrated, Willey, 2014
2. Adrea Deplazes, Construction Architecture : Material Processes, A Handbook, Birkhauser, 2008
3. Thomas Schropfer, Material Design, Birkhauser Architecture, 2010
4. D Schodek, Structures, 7th Edition, Prentice Hall, 2013
5. Dabby, Ramsey & Aswani Bedi, Structure for Architect, John Willey & Son, 2012
6. Emmitt, Stephen, Architectural Technology, Blackwell Science, 2002
7. TY Lin "Structural Concept and System for Arhitects and Engineers," John Wiley & Sons, New York, 1993

COURSE		
	Course Name	**: Landscape Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: IV

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
Specific Skills	3.1	Able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	Able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page;
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page;
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis;

	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

1. The human habitat, climate , land, water, vegetation
2. Landscape Character
3. Topography
4. Site Planning
5. Site Development
6. Site Planting , Site Volume / Space
7. Visible Landscape
8. Circulation
9. Structure in the Landscape
10. Community Planning

PREREQUISITES

-

REFERENCE(S)

1. Simmonds, John Ormsbee (2006), Landscape Architecture.
2. Landscape Architecture: A Manual of Land Planning and Design by John Ormsbee Simonds
3. LaGro Jr, James.A (2008), Site Analysis. A Contextual Approach to sustainable Land Planning and Site Design
4. Van Ufelen (2011) Façade Greenery Contemporary Landscaping, Braun Publishing
5. 1000X Landscape Architecture (2010).Braun Publishing

COURSE		
	Course Name	**: Introduction to Urban Design**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: IV

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form

		of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Lynch, Kevin (1960), Image of The City. Van Nostrand Reinhold
2. Shirvani, Hamid (1997), Urban Design Process
3. Catanese, Anthony J & Snyder, James C , Introduction to Urban Planning, New York, McGraw-Hill Book Company, 1979.
4. Pemerintah RI (2007), UU RI No 26 tahun 2007 Tentang Penataan Ruang (Urban Planning Law), Departemen PU, Jakarta.
5. Rainer, George PE, Understanding Infrastructure, A Guide for Architects and Planner, John Willey & Sons Inc, 1990.
6. Spreiregen, P.D., Urban Design; The Architecture of Towns and Cities, New York, McGraw-Hill Book Company, 1965.

COURSE		
	Course Name	**: Building Services**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: IV

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently
COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

1. Nadel, B. A. (2004), Building Security, Handbook for Architectural Planning and Design, New York: McGraw Hill.
2. Hall, F. dan Greeno, R. (2001), Building Services Handbook, Oxford:

Butterworth Heinemann.
3. DPU, Dirjen Cipta dan LPMB (.....) Peraturan Bangunan Nasional, Dirjen Cipta Karya, Jakarta
4. Lechner, N. (2001), Heating, Cooling, Lighting: Design Methods for Architects, Canada: John Wiley & Sons, Inc.
5. • Juwana J.S. (2002), Sistem Bangunan Tinggi; Untuk Arsitek dan Praktisi Bangunan, Jakarta: Penerbit Erlangga.

COURSE		
	Course Name	**: Architectural Theory**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: IV

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements

		the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Salingaros, Nikos A. and Michael W. Mehaffy, A Theory of Architecture, UMBAU-VERLAG Harald Püschel, 2006
2. Antoniades, Anthony C., Poetics of Architecture: Theory of Design, Van Nostrand Reinhold, 1990
3. Mitias, Michael H., Philosophy and Architecture, Rodopi, 1994
4. Salvan, George S., Architectural Theories of Design, Goodwill Trading Co. Inc., 1999
5. Snodgrass, Adrian and Richard Coyne, Interpretation in Architecture: Design as Way of Thinking, Routledge, 2013

S E M E S T E R V

COURSE		
	Course Name	**: Architecture Design III**
	Course Code	**: DA184xxx**
	Credit(s)	: 6
	Semester	: V

DESCRIPTION OF COURSE		
The Architecture Design III Course focuces on research-based design of an architectural object related to the topic of system and environmental conservation by regionalism and contextualism method.		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	Able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	Able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture
	3.3	Able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	Able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and

		scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page;
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Show responsible attitude towards work in Architecture Design related to the natural environment system and conservation topic independently
2. Being able to apply the theoretical concepts, principles of architectural especially related to ecology, and the presentation techniques of architectural conceptual design
3. Being able to plan the concept and architecture design the natural environment system and conservation topic independently and communicate thinking and design result in communicative graphic, writing, and model with manual technique and digital and also present some alternative design solution and make decision based on scientific consideration of architecture
4. Being able to apply logical, critical, systematic, and innovative thinking, show independent performance, quality, and measurable, and examine the implications of developing or implementing the science of technology
5. Being able to develop scientific descriptions and make decisions appropriately in the context of problem solving in the field of Architecture Design related to the natural environment system and conservation topic
6. Being able to maintain and develop network, to take responsibility for the achievement result of group work and do supervision and evaluation of work completion, and also to conduct process of self evaluation towards work group

SUBJECTS

1. THEORY: Issue exploration through Ecology, Green design, and Sustainability Theories
2. FRAMEWORK/PROCESS: Force-based design process
3. CONTEXT: Design concept with environmental survey analysis for

flat/contour ground related to concept in respect with site and urban resillience
4. PROGRAM/PROJECT: Commercial Building with focus on Energy-concious buildings (Conserving Energy)
5. METHODS: Design methods which respond to site (regionalism; contextualism): Physiological Aspect (Site and Users Respect)
6. SISTEM BANGUNAN: multi-storey (5-10) with conceptual approach of working with climate technology dan minimizing new resources
7. COMMUNICATION AND EXHIBITION

PREREQUISITES

-

REFERENCE(S)

1. Brenda, V., Robert, V. (1991) Green Architecture, Design for Sustainable. Future. London: Thames & Hudson.
2. Kubba, S. (2017) Handbook of Green Building Design and Construction: LEED, BREEAM, And Green Globes. Cambridge: Elsevier.
3. Minke, G. (2013) Building with Earth: Design and Technology of a Sustainable Architecture. Basel: Birkhauser.
4. Plowright, P. (2014). Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge.
5. Schröpfer, T. (2016) Dense + Green: Innovative Building Types for Sustainable Urban Architecture. Basel: Birkhauser.

COURSE		
	Course Name	**: Integration III**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: V

DESCRIPTION OF COURSE		
The Integration III course aims to give students knowledge in research-based design to be applied on architectural research related to environmental system and conservation topics in integrated manner.		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page

	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to understand theoretical concept, architecture principles especially ecology-related design, and presentation techniques for architectural conceptual design.
2. Being able to develop architectural concept and design related to environmental system and conservation topics independently
3. Being able to apply logical, critical, systematic, and innovative thinking, to demonstrate independent, quality, and measurable performance, as well as to examine implications of development or implementation of technological knowledge
4. Being able to demonstrate independent, quality, and measurable performance
5. Being able to prepare scientific descriptions and to make appropriate decision in the context of problem solving in architectural desing related to environmental system and conservation topics.

SUBJECTS

Functional Aspects:

a. Definition and Program-Activity
b. Commercial building formal aspects

Contextual Aspects:

a. Site character and city regulation
b. Landscape

Design Aspects

Design Approach and Methods:

a. Response to Site: Critical Regionalism and Contextualism
b. Response to Site, Respect to Users dan Environmental Psychology

Building System:

a. Structure and MEEP

Communication in Design

PREREQUISITES
-

REFERENCE(S)
1. A Lagro, James Jr (2008) A Contextual Approach To Sustainable Planning & Site Design. John Wiley & Sons, Inc., Hoboken, New Jersey 2. Brenda, V., Robert, V. (1991) Green Architecture, Design for Sustainable. Future. London: Thames & Hudson. 3. Kubba, S. (2017) Handbook of Green Building Design and Construction: LEED, BREEAM, And Green Globes. Cambridge: Elsevier. 4. Minke, G. (2013) Building with Earth: Design and Technology of a Sustainable Architecture. Basel: Birkhauser. 5. Plowright, P. (2014). Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge. 6. Schröpfer, T. (2016) Dense + Green: Innovative Building Types for Sustainable Urban Architecture. Basel: Birkhauser. 7. Charleson, Andrew W (2005) Structure as Architecture. Elsevier Linacre House, Jordan Hill, Oxford OX2 8DP 30 Corporate Drive, Burlington MA 8. • Bolmer, Jeffrey & T Swisher, Michael (2013). Diagramming The Big Idea. Methods for Architectural Composition. Routledge, New York.

COURSE		
	Course Name	**: Architectural Ecology**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE
Architecture Ecology Course is a partial course that aims to provide an understanding of the interrelationships between architectural environments with human users and with the wider environment, related to architectural technology (Green Architecture), and apply the understanding in the given task

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution

	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Demonstrate responsible attitude towards work in the field of Architecture Design on ecological and environmental topics independently
2. Understanding theoretical concepts, architectural principles related to architectural ecology, and presentation techniques of architectural conceptual design
3. Able to develop architectural concepts and designs on ecological topics and green architecture independently and communicate thoughts and designs in graphic, written, and communicative models with both manual and digital techniques and present some alternative design solutions and make informed decision based on architectural scientific considerations
4. Be able to present several alternative design solutions and make informed choices based on architectural ecological considerations
5. Be able to apply logical, critical, systematic, and innovative thinking, related to the concept of ecological architecture in tropical climate by showing independent, quality, and measurable performance, and assessing the implications of development or implementation of science technology
6. Able to demonstrate independent, qualified, and measurable performance so as to make informed decisions in the context of problem solving in the area of expertise, based on the results of information and data analysis
7. Able to maintain and develop the network, responsible for achieving the results of group work and supervision and evaluation of the completion of work, and able to conduct the process of self-evaluation of the working group

SUBJECTS

1. Basic ecological architecture
2. Environmentally conscious architecture
3. Architecture as a built environment in the environment
4. Environmental and Architectural Ethics
5. Application of architectural ecology and linkage with Green Architecture
6. Application of the principles of Architectural Technology in Architectural Ecology
7. Application of architectural ecological understanding related to Open Building & Post-Occupational Evaluation
8. Application of respect for user understanding related to Green Architecture

PREREQUISITES

-

REFERENCE(S)

1. Graham, Peter, 2003, Building Ecology: First Principles For A Sustainable Built Environment, Blackwell Sience, Sidney, Australia
2. Keraf, A. Sonny, 2006, Etika Lingkungan, Penerbit Buku Kompas, Jakarta.
3. Zeiher, Laura C, 1996, Ecology of Architecture, Watsun-Guptill Publications, New York, N.Y. z
4. Frick,Heinz; Mulyani, Tri Hesti, 2006, Seri Eko Arsitektur 2 : Arsitektur Ekologis, Penerbit Kanisius, Soegijapranata University Press
5. Frick,Heinz; Suskiyanto, FX. Bambang, 2006, Seri Eko Arsitektur 1 : Dasar – Dasar Eko Arsitektur , Penerbit Kanisius, Soegijapranata University Press
6. Klaus, Daniel, ..., The Technology of Ecological Building, ...
7. Brenda, V., Robert, V. (1991) Green Architecture, Design for Sustainable. Future. London: Thames & Hudson.

COURSE		
	Course Name	**: Nusantara Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	Able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	Able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture
	3.3	Able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	Able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page;
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Laboratorium Perkembangan Arsitektur ITS, Prijotomo Benahi Arsitektur Nusantara, 2017
2. Lefaivre, Liane and Alexander Tzonis, Critical regionalism: architecture and identity in a globalized world, Prestel 2003
3. Lyons, Brian Mackay-, Local Architecture: Building Place, Craft, and Community, Chronicle Books, 2014
4. Abel, Chris and Norman Foster, Architecture and Identity, Routledge, 2012
5. Jencks, Charles, The Language of Post-modern Architecture, Academy Editions, 1991

COURSE		
	Course Name	**: Sustainable Design**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE

In general, the Sustainable Design concept is introduced as a response to the environmental destruction issues or environmental degradation framework. This course aims to provide an understanding of the importance of the sustainability concept in engineering design and construction, the study of principles, strategies, and elements in its implementation, as well as systems of measurement and sustainability assessment on the various scopes of engineering design.

LEARNING OUTCOMES

Attitude	1.12	Working together to be able to make the most of his/her potential
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
Specific Skills	3.3	Able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	Able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis;
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. explain the concept of Sustainable Design as a response to environmental issues, logically and systematically written and discussed in groups.
2. able to explain principles, elements, and strategies to support the implementation of product engineering design and sustainable environment which show logical and systematic thinking in written method.
3. able to analyze sustainability measurement in engineering design cases with measurement and assessment systems according to context in both written and oral methods

SUBJECTS

1. Definition and scope of Sustainability Engineering and Construction Design
2. Life Cycle Issue in The Sustainability Concept
3. Three Subjects for Supporting Sustainability (Environmental, Economy and Social), The Principles, Elements and Strategies
4. Implementation / Sustainable Design Practices in the Process and Product Level
5. Method and System of Sustainability Measurement and Assessment

PREREQUISITES

-

REFERENCE(S)

1. Bergman, D. (2012). Sustanable Design – A Critical Guide. New York: Princeton Architectural Press.
2. Bovill, C. (2015). Sustainability in Architecture and Urban Design. New York: Taylor & Francis.
3. Johnson, A., Gibson, A. (2014). Sustainability in Engineering Design an Undergraduate Text. London: Elsevier Ltd.
4. Vezzoli, C., Manzini, E. (2008). Design for Environmental Sustainability. London: Springer Verlag.
5. Yates, J.K., Castro-Lacouture, D. (2016). Sustainability in Engineering Design and Construction Operation. UK: Taylor & Francis Group.

S E M E S T E R VI

COURSE		
	Course Name	**: Architecture Design IV**
	Course Code	**: DA184xxx**
	Credit(s)	: 6
	Semester	: VI

DESCRIPTION OF COURSE
The Architecture Design IV course aims to give students ability in research-based design of an architectural object related to socio-cultural aspects topics, creatively and innovatively.

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to analyze design problems
2. Being able to explain definition/dictum/theories/empirical data used as a ground for design thinking
3. Being able to apply narrative method in form of text and graphic diagram
4. Being able to present design proposition in graphic
5. Being able to anlyze context and to develop activity programming in design object
6. Being able to present design concept in conceptual graphic and model
7. Being able to apply building structure principles on design object in graphic
8. Being able to apply building services concept on design object in graphic
9. Being able to apply architectural elements on design object in graphic
10. Being able to present integration of technical aspect principles on design object and to present in graphic and conceptual drawings and model
11. Being able to present pre-design drawings: site plan, floor plan, section, elevation, details, structure system and building service plan, and interior
12. Being able to present a comprehensive design that meets the standard for pre-design drawings

SUBJECTS

1. Theory & Method of Identifying problems
2. Design as Argumentation; Deontic-Factual; Architectural Observation.
3. Narrative in Architectural Design
4. Context in Architecture; Programming in Architecture
5. Building Structure Principles
6. Building System Principles
7. Architectural Elements; Materiality
8. Drawing Techniques; Drawing standard

PREREQUISITES
Architecture Design III with minimum score D

REFERENCE(S)
1. Collin Davies, Thinking About Architecture: An Introduction to Architectural Theory. Laurence King Publishing, 2011. 2. Nigel Coates, Narrative Architecture. John Wiley & Sons Ltd, 2012. 3. Ian Bentley & Georgia B. Watson, Identity by Design. Elsevier, 2007. 4. Peter Cook, Drawing: The Motive Force of Architecture. John Wiley & Sons Ltd, 5. Sophia Psarra, Architecture & Narrative: The Formation of Space and Cultural Meaning. Routledge, 2009.

COURSE		
	Course Name	**: Integration IV**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: VI

DESCRIPTION OF COURSE
The Integration IV course aims to give students ability to understand design concept and method, as well as technical aspects in a building comprehensively.

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page

	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to exhibit a responsible attitude in conceptual design work independently
2. Being able to understand architecture theoretical concept and Architecture Design comprehensively including meanings in architecture as well as presentation technique for architecture conceptual design
3. Being able to develop architecture design concept which integrate technical aspects of building
4. Being able to apply logical, critical, systematic, and innovative thinking and to show measurable independent performance in terms of making appropriate decision in architecture design problems context

SUBJECTS

1. Design thinking
2. Programming in architecture and building function
3. Site, environment, and user analysis
4. Narrative method in architecture design
5. Mid-rise building structure

PREREQUISITES

Should be taken with Architecture Design IV at the same semester

REFERENCE(S)

1. Ballmond, Cecil (2007) Informal. Prestel.
2. Bentley, Ian & Watson, Georgia B. (2007) Identity by Design. Elsevier.
3. Coates, Nigel. (2012) Narrative Architecture. John Wiley & Sons Ltd.
4. Edward T. White, Diagramming Information for Architectural Design.

COURSE		
	Course Name	**: Experimental Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.8	Internalizing values, norms and academic ethics;
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page

	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

1. THEORY: Experimental Architecture, Utopian Architecture, Metabolism, Spirit of Experimentation, Deconstructivism, Conceptual Ardhitecture
2. HISTORY: Experimental Architecture, The Sirit of the 60s
3. METHOD: Qualitative and/or Quantitative Research, Design by Research
4. DESIGN THINKING: Lateral Thinking
5. REPRESENTATION: Experimental Representation

PREREQUISITES

-

REFERENCE(S)

1. Cook, Peter; Experimental Architecure; PIE Books; 1970
2. Sadler, Simon; Archigram Architecture Without Architecture; The MIT Press; London, 2005
3. Becker, Fletcher; The Drawing Center: Lebbeus Woods, New York, 2013
4. Plowright, P. (2014). Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge.
5. Brookes, Alan J & Poole, Dominique; Innovation in Architecture, Spon Press, 2005
6. Alison, Jane; Future City; Experimentat and Utopia in Architecture; Thames and Hudson, 2006
7. Bono, Edward D; Lateral Thinking; Harper & Row, 1970
8. Groat, Wang; Architecture Research Method, Wiley, 2013

COURSE	Course Name	: History of Architecture
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules,

		procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Sejarah Arsitektur : Sebuah Pengantar oleh Setiadi Soepandi, Penerbit Gramedia
2. A Global History of Architecture : Frank Ching 1995

COURSE		
	Course Name	**: Technology Communication and Application**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills		

COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

S E M E S T E R VII

COURSE		
	Course Name	**: Architecture Design V**
	Course Code	**: DA184xxx**
	Credit(s)	: 6
	Semester	: VII

DESCRIPTION OF COURSE		
The Architecture Design V course aims to give students ability to design architectural object through research activity with laboratory-based approach innovatively in relation with experimental architecture topic.		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs

		or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

1. THEORY: Experimental Architecture Design, Lab-Based Research
2. FRAMEWORK/PROSES: Concept-Based Design process (framework), Force-Based process (framework), Pattern-Based process (framework)
3. CONTEXT: Conceptualizing Context and contextualizing concept
4. PROGRAM/PROJECT: Commercial Building and Private Building focused on design by research
5. METHOD: Design by Research, through various/selected design method based on Lab.
6. BUILDING SYSTEM: multi-storey (5-10) building system in-line with experimented architectural object.

PREREQUISITES

1. Architecture Design IV with minimum score D
2. Experimental Architecture

REFERENCE(S)

1. Cook, Peter; Experimental Architecure; PIE Books; 1970
2. Sadler, Simon; Archigram Architecture Without Architecture; The MIT Press; London, 2005
3. Plowright, P. (2014). Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge.
4. Brookes, Alan J & Poole, Dominique; Innovation in Architecture, Spon Press, 2005
5. Alison, Jane; Future City; Experimentat and Utopia in Architecture; Thames

and Hudson, 2006
6. Bono, Edward D; Lateral Thinking; Harper & Row, 1970
7. Groat, Wang; Architecture Research Method, Wiley, 2013
8. Allen, Edward & Iano, Joseph; Fundamental of Building Construction; John Wiley & Sons; New Jersey, 2009
9. Oxman, Rivka, Oxman, Robert ; The New Structuralism; Architecture & Design; 2010
10. Balmond, Cecil; Informal; Prestel; 2007
11. Balmer, Swisher; Diagramming the Big Idea; Roudledge, 2013
12. LaGro Jr., James; Site Analysis; John Wiley & Sons; New Jersey, 2007

COURSE		
	Course Name	**: Integration V**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page

	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

1. THEORY: Innovative Design
2. METHOD: Design by Research
3. DESIGN THINKING: Lateral Thinking
4. REPRESENTATION: Experimental Representation

PREREQUISITES

-

REFERENCE(S)

1. Plowright, P. (2014). Revealing Architectural Design: Methods, Frameworks and Tools. New York: Routledge.
2. Brookes, Alan J & Poole, Dominique; Innovation in Architecture, Spon Press, 2005
3. Alison, Jane; Future City; Experimentat and Utopia in Architecture; Thames and Hudson, 2006
4. Bono, Edward D; Lateral Thinking; Harper & Row, 1970
5. Groat, Wang; Architecture Research Method, Wiley, 2013
6. Allen, Edward & Iano, Joseph; Fundamental of Building Construction; John Wiley & Sons; New Jersey, 2009
7. Oxman, Rivka, Oxman, Robert ; The New Structuralism; Architecture & Design; 2010
8. OVE ARUP Journal, various; publication.arup.com
9. Balmer, Swisher; Diagramming te Big Idea; Roudledge, 2013
10. LaGro Jr., James; Site Analysis; John Wiley & Sons; New Jersey, 2007

COURSE	Course Name	: Architecture Design Proposal
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form

		of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. De Bono, Edward. Lateral Thinking, Harper & Row Publisher, New York, 1970
2. Duberly, H. (2004), How Do You Design, A Compendium of Models, San Francisco: Duberly Design Office.
3. Lawson, B. (2005), How designer Think, The Design process Demystified, London; Routledge.
4. Jones, CJ. (1992), Design Methods, New York: John Wiley & Sons.
5. Jormakka, K. (2007), Basic Design Methods, Basel: Birkhauser Architecture

COURSE		
	Course Name	**: Contemporary Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis

	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Charles Jencks : The Language of Late Modern Architecture
2. Robert Venturi : Complexity and Contradiction in Architecture
3. Robert AM Stern : Modern Classicism

COURSE		
	Course Name	**: Technopreneur**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude		
Knowledge		
Specific Skills		
General Skills		

COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

S E M E S T E R VIII

COURSE		
	Course Name	**: Final Project**
	Course Code	**: DA184xxx**
	Credit(s)	: 8
	Semester	: VIII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form

		of thesis or final project report , and uploaded it in the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

Can only be taken after passing all Architecture Design course

REFERENCE(S)

1. Cook, Peter (2008), Drawing: The Motive Force of Architecture. John Wiley & Sons Ltd.
2. Duberly, H. (2004), How Do You Design, A Compendium of Models, San Francisco: Duberly Design Office.
3. Lawson, B. (2005), How designer Think, The Design process Demystified, London; Routledge.
4. Jones, CJ. (1992), Design Methods, New York: John Wiley & Sons.
5. Jormakka, K. (2007), Basic Design Methods, Basel: Birkhauser Architecture

COURSE		
	Course Name	**: Professional Ethics and Practice**
	Course Code	**: DA184xxx**
	Credit(s)	: 2
	Semester	: VIII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form

		of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Undang Undang No 6 – 2017, tentang Arsitek
2. Kode etik profesi arsitek dari Ikatan Arsitek Indonesia
3. Dep. P.U RI, Manajemen Pelaksanaan Pekerjaan Konstruksi I; II; II
4. (Construction Management I, II, III).
5. Soegihardjo, Gambar Ilmu bangunan I. II. III (Shop Drawing I, II, III).
6. Design and Build : Planning Through Development, Jeffre L Beard, Mc Graw Hill, 2004
7. Manajemen Proyek dari Konseptual Sampai Operasional, Imam Suharto, Erlangga 1997
8. Buku Standar Arsitektur

ELECTIVE COURSES
S E M E S T E R V

COURSE		
	Course Name	**: Basic of Digital Design**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

1. Rease C, McWillims C, Barendse J.(2010). Form+Code in Design, Art, and Architecture. Princeton Architectural Press. New York.
2. Helmut Pottmann , Andreas Asperl, Michael Hofer, Axel Kilian (2007) Architectural Geometry, Bentley Institute Press
3. Terzidis, Kostas (2003), Expressive Form, edisi ke-1, Spons Press, New York.
4. Sakamoto, T. & Ferré, (2008) From Control to Design: Parametric/Algorithmic Architecture. Actar-D. New York.

COURSE	Course Name	: Architecture Engineering I
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page

	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

1. Gravity, Forces and its relation to building elements
2. Borrowing from others (Idea, Innovation on structural engineering, inspired by field oudside architecture)
3. Overhang & Cantilevers
4. Wide Span
5. Highrise Building
6. Folded Plate
7. Blob Architecture
8. Materials, Joints & Construction Details

PREREQUISITES

-

REFERENCE(S)

1. Balmond, Cecil; Informal; Prestel; 2007
2. Brookes, Alan J & Poole, Dominique; Innovation in Architecture, Spon Press, 2005
3. Allen, Edward & Iano, Joseph; Fundamental of Building Construction; John Wiley & Sons; New Jersey, 2009
4. Oxman, Rivka, Oxman, Robert ; The New Structuralism; Architecture & Design; 2010
5. Macdonald, Angus J; Structural Design for Architecture; Architectural Press; 1997
6. OVE ARUP Journal, various; publication.arup.com

COURSE		
	Course Name	**: Open Space**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture;
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Webb, M. (1990), The City Square, Thames and Hudson Ltd, London
2. Hakim, R & Sediadi E (2006), Komunikasi Grafis & Lansekap (Graphics and Landscape Communication).
3. Broto, C. (2010), Playground.

4. Gunadi, Sugeng (2002), Perencanaan Dan Perancangan Ruang Luar..
5. Hakim, Rustam (2003), Komponen Perancangan Arsitektur Lansekap. Bumi Aksara

COURSE		
	Course Name	**: Architecture and Behavior**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE

Architecture and human behavior is a contemporary approach which places the values, needs and preferences of users at the forefront of the design process. Its purpose is to make the people feel more human, more alive, more fulfilled in design. This course will examine the social and behavioral factor in Architecture Design through critical thingking, discussions, and case studies around two questions: (1) how the nature relationship between human behavior and built environment, (2) how using behavioral science in the design process. A variety of the nature and human nature and type of built environment ranging from room and buildings to parks and communities will be discussed.

LEARNING OUTCOMES

Attitude	1.6	Working together, having social sensitivity and caring for community and environment
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
	1.12	Working together to be able to make the most of his/her potential
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	Able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	Able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture

	3.3	Able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.9	Being able to document, store, secure and recover data to ensure validity and prevent plagiarism
	4.12	Being able to implement information and communication technology (ICT) in the context of implementation of his/her work

COURSE LEARNING OUTCOMES

1. Being able to interpret theories and knowledge from behavioral science as related to architectural design
2. Being able to use thingking to analayse and synthesize information with regards to behavioral factors in specific design projects
3. Being able to conduct applied research on architecture and human behavior relationships through the case studies
4. Being able to use written, oral and visual communications to explain behavioral considerations in architectural design

SUBJECTS

1. The importance of human behavioral factors for design
2. Considering human behavior factors in architectural design
   a. Using behavioral science in the design process
   b. Environmental perception and spatial cognition
   c. Social environment process: behavior setting, privacy, crowding, etc
3. design research on environtment behavior relationship
   a. Evidence Based Design
   b. Research methods: observing and asking questions
   c. Human behavior theory and Architecture Design methods
4. Addressing behavior factors in architectural design

a. Design for anthropometric/ergonomic
b. Design for perception and spatial cognition
c. Design for learning
d. Design for health

PREREQUISITES

-

REFERENCE(S)

1. DAK Kopec (2012/2018) Environmental Psychology for Design. Fairchild Pubns
2. Lang, Jon, & Moleski, Walter. (2010). Functionalism Revisited: Architectural Theory and Practice and the Behavioral Sciences. Ashgate.
3. Cama,Rosalyn (2009), evidence based design for healthcare Design, John Wiley and Sons
4. Hamilton,Kirk(2008),Evidence based design for multiple building types, John Wiley and Sons
5. Augustin, Sally (2009) Place Advantage APPLIED PSYCHOLOGY FOR INTERIOR ARCHITECTURE, John Wiley and Sons
6. Deasy and Lasswell (1990) Designing Places for People. A handbook on human behavior for architects, designers, and facility managers. Watson-Guptill Publication. New York
7. Lang, Jon. (1987). Creating Architecture Theory: The Role of the Behavioral Sciences in Environmental Design: Van Nostrand Reinhold Company.
8. Zeisel, John (1985) Inquiry by Design. Tools for Environment-Behavior Research. Cambridge University Press. London

COURSE		
	Course Name	**: Urban Design Theory**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form

		of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Knox, Paul L (2011). Cities and Design. Routledge, New York.
2. Kaspirin, Ron (2011). Urban Design The Composition of Complexity, Routledge, New York.
3. Gehl, Jan (2010). Cities for People, Island Press Washington.
4. Lang, Jon (2005).Urban Design: A Typology Of Procedures And Products. Architectural Press, UK.
5. Shirvani, Hamid (2005). Urban Design Process, Van Nostrand Reinhold.
6. Trancik, Roger (1986). Finding Lost Space. John Wiley & Sons Inc., Paperback Edition.

COURSE		
	Course Name	**: Informal Housing**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE
The Informal Housing course aims to provide students the ability to scientifically evaluate informal housing program that have ever been implemented and to develop a concept of housing development and improvement creatively and innovatively.

LEARNING OUTCOMES		
Attitude	1.1	Believing in the oneness of God and able to demonstrate religious attitude
	1.2	Upholding the value of humanity in undertaking the task based on religion, morality and ethics
	1.3	Contributing in improving the quality of community life, nation and state and the advance of civilization based on Pancasila
	1.4	Playing a role as a proud citizen who loves his/her homeland , having a nationalism and responsibility to the country and nation
	1.5	Appreciating the diversity of cultures, point of view, religion and belief as well as opinion or the original findings of others.
	1.6	Working together, having social sensitivity and caring for community and environment
	1.7	Law abiding and disciplined in community and state life
	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
	1.10	Internalizing spirit of independence, struggle and entrepreneurship.
	1.11	Trying his/her best to achieve perfect results, and

	1.12	Working together to be able to make the most of his/her potential
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to explain theories about settlements and its relation to the policy and housing development/improvement model through self-help method & self-help housing program
2. Being able to review and analyze housing improvement process conducted independently by the community by correlating the requirements in housing development that considering the capability of the residents.
3. Being able to apply slum criteria to determine inadequate housing as a case study, as well as to apply the terms and aspects to be considered in the construction of self-help houses.
4. Being able to analyze issues about informal housing in globalization context and sustainable development and relating them to informal housing theories/policies/best practices/programs.

SUBJECTS

1. Relevant housing theories: JFC Turner, SAR/Habraken, self-help housing, community participation
2. Analysis of various policies of self-help housing development/improvement and self-help housing programs

3. Description about various models in informal housing development/improvement
4. Description about slum criteria, requirements and aspects considered in developing informal housing
5. Various inputs in housing and settlement planning: urban spatial layout, environmental aspects, and supporting services and facilities
6. Various resources, institutions, and financing for informal housing
7. Examples, best practices. case studies, and programs in informal housing
8. Requirements and guidelines for housing and settlement environment (services and facilities, etc.)
9. Manpower and fund raising efforts for informal housing development
10. Informal housing in globalization and sustainable development context

PREREQUISITES

-

REFERENCE(S)

1. Departemen Permukiman dan Prasarana Wilayah, (2004-2006) 'Pedoman Umum Pembangunan Perumahan Swadaya' , DepKimPraswil RI, Jakarta
2. UN-Habitat's Report: 'An Urbanizing World' (1996)
3. John F. Turner, (1972) 'Freedom to Build', McMillan Ltd, New York
4. John F. Turner (1976) 'Housing by People', Marion Boyars, London
5. Habraken, NJ. et al, (1976) 'Variations, the Systematic Design of Supports', Laboratory for Architecture and Planning/ MIT Press, Cambridge, Massachussets
6. Hamdi, N. (1991) 'Housing without Houses: Participation, Flexibility, Enablement', van Nostrand Reinhold, New York
7. UU No. 1/2011, tentang Lingkungan dan Kawasan Permukiman
8. New Urban Agenda (2016)

COURSE		
	Course Name	**: Biophilic Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page

	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Kellert, Stephen R; Heerwagen, Judith; Mador, Martin L. (2008) Biophilic Design, John Wiley and Sons Inc
2. Beatly, Timothy (2011) Biophilic Cities, Island Press
3. Almusaed, Amjad (2011) Biophilic and Bioclomatic, Springer Verlag, London
4. Beatly, Timothy (2017) Handbook of Biophilic City Planning and Design, Island Press
5. Terrapin Bright Green (2014) 14 Pattern of Biophilic Design, Terrapin Bright Green Lcc
6. http://biophiliccities.org/biophilic-cities-journal

COURSE	**Course Name**	**: Climate-Geography of Nusantara Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE
The Climate-Geography of Nusantara Architecture course aims to give the students the ability to understand and scientifically analize an architectural object of Nusantara architecture in climate and geography context.

LEARNING OUTCOMES		
Attitude	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
Specific Skills	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently
	4.9	Being able to document, store, secure and recover data to ensure validity and prevent plagiarism

	4.11	Being able to implement sustainability principles and develop knowledge
COURSE LEARNING OUTCOMES		
SUBJECTS		
PREREQUISITES		
-		
REFERENCE(S)		

COURSE		
	Course Name	**: Tectonics**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: V

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules,

		procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

ELECTIVE COURSES
S E M E S T E R VI

COURSE		
	Course Name	**: Algorithmic Design**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
Specific Skills	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis

COURSE LEARNING OUTCOMES

SUBJECTS

1. Algorithmic Script
2. Vector and Point
3. Free form curve
4. Free form Surface and NURBS
5. Shape evolution

PREREQUISITES

-

REFERENCE(S)

1. Woodbury R (2010). Elements of Parametric Design. Routledge. New York
2. Tedeschi, A (2014) AAD Algorithms-Aided Design. Parametric strategies using Grasshopper, Le Penseur.
3. Helmut Pottmann , Andreas Asperl, Michael Hofer, Axel Kilian (2007)

Architectural Geometry, Bentley Institute Press
4. Terzidis, Kostas (2006), Algorithmic Architecture, edisi ke-1, Architectural Press, Burlington, USA.

COURSE		
	Course Name	**: Building Information Modelling 1**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE

The course of Building Information Modeling 1 aims to give students the ability to emphasize how the design process needs to be changed to achieve the benefits of using technology. This module addresses the data and standard structure, and explains the need for data exchange in different use cases. It also describes multidisciplinary collaborative design arrangements, communications with project stakeholders, impact detection, design integration and management of design changes.

LEARNING OUTCOMES

Attitude	1.9	show a responsible attitude towards the work in the field of expertise independently
Knowledge	2.3	understand the presentation techniques of architectural conceptual design
Specific Skills	3.3	able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
General Skills	4.1	Being able to develop logical, critical, systematic, and creative thinking through scientific research, the creation of designs or works of art in the field of science and technology which concerns and applies the humanities value in accordance with their field of expertise, prepares scientific conception and result of study based on rules, procedures and scientific ethics in the form of a thesis or other equivalent form, and uploaded on a college page, as well as papers published in scientific journals accredited or accepted in international journals;
	4.5	Being able to take decisions in the context of solving problems of science and technology development that concerns and implements the humanities value based on analytical or experimental studies of information and data;
	4.7	Being able to improve the capacity of learning independently;
	4.8	Capable of documenting, storing, securing, and rediscovering research data in order to ensure validity and prevent plagiarism;
	4.11	Being able to implement information and communication technology in the context of execution of his work.

COURSE LEARNING OUTCOMES

1. Demonstrate a responsible attitude towards work in the field of Architecture Design that cooperates digitally in the completion of the design independently.
2. Mastering the conceptual conceptual pessimistic technique especially related to coordinating information in the design
3. Being able to arrange the concept and Architecture Design related to the coordination of information architecture independently and communicate the thoughts and design results in the form of graphics, writing, and communicative models with manual techniques and digital and presents some alternative design solutions and make choice decisions based on scientific considerations of architecture.
4. Being able to apply logical, critical, systematic, and innovative thinking, demonstrate independent, quality, and measurable performance, and examine the implications of developing or implementing the science of technology.

SUBJECTS

1. The Concept of BIM
2. BIM Deployment Strategy
3. Design and Construction Process for BIM
4. BIM Tool in Design
5. Interoperability, IFCs, parametric modeling and BIM
6. Build information exchange
7. Changing the process of management and human resources
8. Data sharing and design integration
9. BIM, energy efficiency and sustainability

PREREQUISITES

-

REFERENCE(S)

1. Francis DK Ching, Building Construction Illustrated, Willey, 2014
2. The manual of Revit 2017

COURSE		
	Course Name	**: Innovative Landscape**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently;
Knowledge	2.1	understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture;
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture;
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page

COURSE LEARNING OUTCOMES
SUBJECTS
PREREQUISITES
-
REFERENCE(S)
1. Thoren, Roxi (2014). Landscapes of Change: Innovative Designs for Reinvented Sites. 2. Mc Leod, V. (2008), Detail in Contemporary Landscape Architecture. Laurence King Publishing Ltd. 3. Façade Greenery 4. Spens, Michael (2003). Modern Landscape. Phaidon 5. Nicholin, P. and Repishti (2003). Dictionary of Today's Landscape Designers. Skira, Italy.

COURSE	Course Name	: Architecture Engineering II
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page

	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Balmond, Cecil; Informal; Prestel; 2007
2. Ulrich Knaack, Tillmann Klein, Marcel Bilow, Thomas Auer; Facades, Principles of Construction; Birkhauser; Germany 2007
3. Herzog, Thomas, Knipper, Roland Lang, Werner; Facade Construction Manual; Birkhauser; Germany 2004
4. Aksamija, Ajla, Perkins+Will; Sustainable Facades; John Wiley & Sons; New Jersey, 2013
5. Larson, Magali Sarfatti; Behind the Postmodern Facade, University of California Press; London, 1993

COURSE		
	Course Name	**: Urban Design Procedures**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE

Urban Design Procedures is an elective course that discusses the process in designing urban in which contains the stages / systematics from the stage of formulating the problem to the stage of implementing the solution.

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture
	3.3	able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
	3.5	able to utilize the capability of design to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise

	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

5. Being able to explain urban design process / procedure deeply from several typology through case study
6. Being able to apply the initial stages in the process of urban design correctly and completely through case studies.
7. Being able to analyze and synthesize facts that have been obtained in the previous stage in a systematic or procedural manner
8. Being able to apply the procedures / final stages of urban design process in the form of alternative solutions that are communicated comprehensively

SUBJECTS

10. Introduction
    a. Typology of Design Process
    b. Urban Design Method
    c. Urban Design Product
11. Designing the Problem (Who Is the Client? What Is the Program? Where Is the Site?)

12. Designing the Solution
    a. Observation, Visual Representation, Precedents, Collegiality
    b. Generating Alternatives
    c. Project Evaluation
13. Urban Design Presentation
14. Implementing the Solution

PREREQUISITES

-

REFERENCE(S)

3. Lang, J. (2005). URBAN DESIGN: A TYPOLOGY OF PROCEDURES AND PRODUCTS. Oxford, Elsevier
4. Moughtin,C et al (1999). Urban design: method and techniques. Oxford, Architectural Press.
5. Shirvani, H. (1986). Urban Design Process. NY,van Nostrand Reinhold Company.
6. The Nature of Urban Design (2013)
7. Urban Design Associates (2003); Urban Design Handbook: Techniques and Working Methods

COURSE	Course Name	: Formal Housing
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE

Formal Housing course aims to provide students with the ability to program, plan and build a formal housing and real estate environment on a small scale with an economic, technological and eco-friendly approach to the socio-cultural context of the user

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
Specific Skills	3.1	Able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.3	Able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	Able to present several alternative design solutions and to make a decision based on scientific considerations of architecture
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis;
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution;

	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to develop a Real Estate requirement program that includes the type and floor area of houses, public facilities and environmental utilities for Residential Units in Primary School Service Level, taking into account the economic, technological and environmental principles.
2. Being able to develop a Real Estate development plan for Residential Units in Primary School Service Level by applying the principles of economic, technological and environmental approaches in the socio-cultural context of the user.
3. Being able to design Real Estate projects for residential Units in Primary School Service Level, comprehensively based on the design programmings and site planning by using economic, technological, environmental and sustainable development principles in the socio-cultural context of users.

SUBJECTS

1. Principles of the interrelation between economic, technology, and environmental with the Real Estate requirement program;
2. Development of Real Estate requirement program that includes type and floor area of houses, public facilities, and environmental infrastructure for Residential Units in Primary School Service Level with economic, technological and environmental approaches.
3. Principles of the interrelation between economic, technological, environmental, legal and developmental in Real Estate planning
4. Real Estate Planning that includes site selection, proportional sharing of land use, and environmental facilities and infrastructure for Residential Units in Primary School Services Level with economic, technological and environmental approaches
5. Principles of settlement planning and design in economic, technological, environmental and socio-cultural contexts.

PREREQUISITES

-

REFERENCE(S)

1. McLean, A. Gary W. Eldred, Investing in Real Estate, 5th Edition , 2005
2. Gary W. Eldred Andrew James McLean, Investing in Real Estate, 5th Edition, 2005
3. David F. Windish, Practical Guide to Real Estate Taxation (Fifth Edition) (Practical Guides), 2008

4. Denise DiPasquale and William C. Wheaton, Urban Economics and Real Estate Markets, 1995Michael P. Watson and Jennifer Hawkins, The "Highest and Best" Real Estate Investment!, 2008

COURSE		
	Course Name	**: Tropical Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE

The Tropical Architecture course studies the buildings' behavior as an architectural medium in the tropics, with the focus of the discussion emphasized on the location of Indonesia. Tropical architecture will address the mindset and tropical life, the basic principles of Architecture Design in the tropics, and how the buildings' response to the climate.

LEARNING OUTCOMES

Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently.
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understand the principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understand the presentation techniques of architectural conceptual design
Specific Skills	3.3	Able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page;
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis;

	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently;
	4.9	Being able to document, store, secure and recover data to ensure validity and prevent plagiarism;
	4.12	Being able to implement information and communication technology (ICT) in the context of implementation of his/her work.

COURSE LEARNING OUTCOMES

1. Show responsible attitude towards work in Architecture Design related to the tropical architecture independently
2. Understand the theoretical concepts, principles, and the presentation techniques of architectural conceptual design related to d building science and ecology.
3. able to plan the concept and architecture design of tropical architecture independently and communicate thinking and design result in communicative graphic, writing, and model with manual technique and digital and also present some alternative design solution and make decision based on scientific consideration of architecture
4. able to apply logical, critical, systematic, and innovative thinking, show independent performance, quality, and measurable, and examine the implications of developing or implementing the science of technology
5. able to develop scientific descriptions and make decisions appropriately in the context of problem solving in the field of Architecture Design related to the tropical architecture
6. able to maintain and develop network, to take responsibility for the achievement result of group work and do supervision and evaluation of work completion, and also to conduct process of self evaluation towards work group

SUBJECTS

1. Tropical environment, mindset, and living
2. Tropical design paradigm
3. Climate and comfort
4. Cimatic analysis and design: Thermal, ventilation, and lighting strategy
5. Working with climate: sun, wind, and light
6. Working with material and Technology

PREREQUISITES

-

REFERENCE(S)

1. Bay, J-H, Ong, B.L. (2006). Tropical Sustainable Architecture, Social and Environmental Dimensions. Oxford: Architectural Press.

2. Chang, J-H. (2016). A Genealogy of Tropical Architecture: Colonial Networks, Nature and Technoscience (Architext) 1st Edition. New York: Routledge.
3. de Reus, M. (2011). Tropical Experience: Architecture + Design. ORO Edition.
4. Lauber, W. (2005). Tropical Architecture; Sustainable dan Humane Building in Africa, Latin-America and South-East Asia, Munich: Prestel.
5. Tzonis, A., Lefaivre, L., Stagno, B. (2001). Tropical Architecture: Critical Regionalism in the Age of Globalization. Academy Press.

COURSE		
	Course Name	**: Aesthetic of Nusantara Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules,

		procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. FDK.Ching (...) Bentuk ,Ruang dan Susunannya,
2. FDK.Ching (...) Menggambar,
3. Gerhard Gollwitzer (...) Menggambar
4. Mangunwijaya (...) Wastu Chitra
5. Prijotomo (2008) pasang Surut Arsitektur Indonesia

COURSE		
	Course Name	**: Stylistics**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE
Ability to identify canons and rules of western and Asian architecture through architecture object identification; and to develop ability to apply stylistic meaning in general, as foundation to think, to imagine, to communicate and to evaluate architecture, written in a report, presented and discussed in a class.

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise

	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Ability to describe various styles in western and Asian architectureand their meanings
2. Ability to formulate various rules and canons of each style in western and Asian architecture
3. Ability to provide examples of systematically exploration and investigation; to critically and efectivelly communicate idea through graphics, written and oral presentation, and to work in a team

SUBJECTS

1. Understanding style in Architecture
2. Role and Potential style
3. Style and tectonic
4. Architectural styles in the Western country, Asianand Indonesia
5. Style cases in the Western coutries, Asia and Indonesia

PREREQUISITES

-

REFERENCE(S)

1. Fletcher, Sir Banister, History of Architecture in a Comparative Method, 1996
2. Gerlenter, M., Sources of Architectural Form, 1995
3. Klassen W., Architecture and Philosophy, 1990
4. Stern, Robert A.M., Modern Classicis
5. Krier, R., Architectural Composition, 1988

ELECTIVE COURSES
S E M E S T E R VII

COURSE		
	Course Name	**: Digital Fabrication**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
General Skills	4.2	Being able to demonstrate independent performance, quality, and measurable
COURSE LEARNING OUTCOMES		
SUBJECTS		
1. Model Making and Architecture 2. Fabrication Techniques 3. Cutting-Based Processes 4. Additive Processes: Layered Fabrication 5. Subtractive Techniques 6. Geometric Challenges Related to Machining and Rapid Prototyping 7. Assembly		
PREREQUISITES		
-		

REFERENCE(S)

1. L. Iwamoto, Digital Fabrication: Architectural and Material Techniques, Princenton Architectural Press, 2009
2. Helmut Pottmann , Andreas Asperl, Michael Hofer, Axel Kilian (2007) Architectural Geometry, Bentley Institute Press
3. • Terzidis, Kostas (2006), Algorithmic Architecture, edisi ke-1, Architectural Press, Burlington, USA

COURSE		
	Course Name	**: Building Information Modelling II**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently
	4.9	Being able to document, store, secure and recover data to ensure validity and prevent plagiarism
	4.12	Being able to implement information and communication technology (ICT) in the context of implementation of his/her work

COURSE LEARNING OUTCOMES
SUBJECTS
PREREQUISITES
-
REFERENCE(S)

COURSE		
	Course Name	**: Internship**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VI

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.1	Believing in the oneness of God and able to demonstrate religious attitude
	1.2	Upholding the value of humanity in undertaking the task based on religion, morality and ethics
	1.3	Contributing in improving the quality of community life, nation and state and the advance of civilization based on Pancasila
	1.4	Playing a role as a proud citizen who loves his/her homeland , having a nationalism and responsibility to the country and nation
	1.5	Appreciating the diversity of cultures, point of view, religion and belief as well as opinion or the original findings of others.
	1.6	Working together, having social sensitivity and caring for community and environment
	1.7	Law abiding and disciplined in community and state life
	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
	1.10	Internalizing spirit of independence, struggle and entrepreneurship.
	1.11	Trying his/her best to achieve perfect results, and
	1.12	Working together to be able to make the most of his/her potential

Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis

	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently
	4.9	Being able to document, store, secure and recover data to ensure validity and prevent plagiarism
	4.10	Being able to develop themselves and compete in national and international level
	4.11	Being able to implement sustainability principles and develop knowledge: and
	4.12	Being able to implement information and communication technology (ICT) in the context of implementation of his/her work.
	4.13	Being able to apply entrepreneurship and understand technology-based entrepreneurship

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. A Guide to The Projec Management Body Of Knowledge (PMBOK GUIDE) 4th Ed. Project Managemen Institute (PMI), 2008
2. Project Management : Experience and Knowledge Self Assessment Manual , Project Nmanagement Institute, 2000
3. Design and Build : Planning Through Development, Jeffre L Beard, Mc Graw Hill, 2004
4. Manajemen Proyek dari Konseptual Sampai Operasional, Imam Suharto, Erlangga 1997

COURSE		
	Course Name	**: Inclusive Design**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE

This course introduces the definition of inclusive design and the philosophy behind its concept to architectural design. Inclusive Design is design for all. A global movement that seeks to improve the usability of environments, products and systems for the widest range of people. Inclusive design is grounded in the democratic values of non-discrimination, equal opportunity and personal empowerment.

The course also evaluates the theory and concept of inclusive design in Architecture, utilizes case studies and examples to examine the development its design concept through behavior and space; ergonomic in building design and community design service.

LEARNING OUTCOMES

Attitude	1.6	
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
	1.12	
Knowledge	2.1	Understand the theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	
	2.3	Understand the presentation techniques of architectural conceptual design
Specific Skills	3.1	Able to make the concept of Architecture Design that integrates the study on behavior, environment, technical aspects and values related to architecture
	3.2	Able to design the architecture independently with research-based design methods, and produce creative architectural works, which is a solution to the problem of contextual architecture, and verified theoretically to the rules of architecture

	3.3	Able to communicate thoughts and design results in the through graphics, writing, and communicative models with manual techniques and digital
	3.4	
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise;
	4.2	Being able to demonstrate independent performance, quality, and measurable;
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.9	
	4.12	

COURSE LEARNING OUTCOMES

1. Able to intrepret theories and knowledge from inclusive design theory and its development as related to architectural design
2. Able to use critical thinking to identify, analyze and synthesize the concept and origins of inclusive design in specific design Issues
3. Able to discuss and conduct applied research on contemporary design project/case study that relate to inclusive design using examples to expain the relationships;
4. Use effective written, oral and visual communications to explain inclusive design in design

SUBJECTS

1. The definition and concept of Inclusive design and its development
   a. Design culture, building and user
   b. Inclusive design principles and concept
   c. Inclusive design criteria
2. Understanding users' needs
   a. User characteristics: Disabled people, ageing population
   b. Barriers to users' inclusion in the built environment
3. Access directives in the development and design process in Architectural design
   a. Architects and developers' responses to the building needs of users

b. Design for social participation

4. Incusive environment: case studies
   a. Building categories: classification by use and types
   b. User friendly living environment
   c. Designing for ageing population
   d. Designing for children population
   e. Designing for marginalized population in general

PREREQUISITES

-

REFERENCE(S)

1. Maisel, Steinfeld, Basnak and Smitt (2017) Inclusive Design: Implementation and Evaluation (PocketArchitecture), Routledge, New York
2. Langdon, P.M., Lazar, J., Heylighen, A., & Dong, H. (2014). Inclusive Designing: Joining Usability, Accessibility, and Inclusion: Springer International Publishing.
3. Farrelly, Lorraine (2014) Designing for The Third Age: Architecture Redefined for Ageneration Of 'Active Agers'. Architecture Design March/April 2014. John Wiley & Sons. London, UK
4. Steinfeld, E., & Danford, G.S. (2013). Enabling Environments: Measuring the Impact of Environment on Disability and Rehabilitation: Springer US.
5. Clarkson, John. (2007). Designing a more Inclusive World. Paper presented at the Universal Design for the 21st century: Irish & International Perspectives, Irish.
6. Burton, E., & Mitchell, L. (2006). Inclusive Urban Design: Streets for Life: Architectural Press.
7. Fletcher, Howard. (2006). The Principles of Inclusive Design. London: The Commission for Architecture and the Built Environment.
8. Fletcher, Howard (2006). Principles of Inclusive Design (They Including You). UK: The Commission for Architecture and The Building Environment (CABE).
9. Deardorff, Carolyn J., & Birdsong, Craig. (2003). Universal Design: Clarifying a Common Vocabulary. Housing and Society, 30(2), 20.
10. Imrie, Rob, & Hall, Peter. (2001). Inclusive Design: Designing and Developing Accessible Environment (1 ed.). London: Spon Press.

COURSE	Course Name	: Human Aspects in Urban Form
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Altman, I., & Low, S. M. (Eds.). (1992). Place attachment. New York: Plenum.
2. Rapoport (1977). Human Aspect of Urban Form: toward a Man_Environment Approach to Urban Form and Design: Pergamon Press, Oxford.
3. Tuan, Y.-F. (1974). Space and place: Humanistic perspective. Progress in Geography, 6, 233e246.
4. Giuliani, M. V. (2003). Theory of attachment and place attachment. In M. Bonnes, T. Lee, & M. Bonaiuto (Eds.), Psychological theories for environmental issues (pp. 137e170). Ashgate, Hants.

COURSE		
	Course Name	**: Slum Upgrading**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
Slum Ugrading course aims to give students the ability to scientifically evaluate informal housing programs that have been implemented and to develop slum upgrading concept creatively and innovatively.		
LEARNING OUTCOMES		
Attitude	1.1	Believing in the oneness of God and able to demonstrate religious attitude
	1.2	Upholding the value of humanity in undertaking the task based on religion, morality and ethics
	1.3	Contributing in improving the quality of community life, nation and state and the advance of civilization based on Pancasila
	1.4	Playing a role as a proud citizen who loves his/her homeland, having a nationalism and responsibility to the country and nation
	1.5	Appreciating the diversity of cultures, point of view, religion and belief as well as opinion or the original findings of others
	1.6	Working together, having social sensitivity and caring for community and environment
	1.7	Law abiding and disciplined in community and state life
	1.8	Internalizing values, norms and academic ethics
	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
	1.10	Internalizing spirit of independence, struggle and entrepreneurship
	1.11	Trying his/her best to achieve perfect results, and
	1.12	Working together to be able to make the most of his/her potential

Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

1. Being able to understand the characteristics of "housing by process" housing model and able to distinguish it from "housing by product" model
2. Being able to apply "housing by process" model to evaluate simple cases from user with two different house type
3. Being able to understand "housing by process" principles and understand the role of each stakeholder (regulator, supplier, user) in the process (plan, construction, management) as well as participation and empowerment role for low-income people
4. Being able to evaluate ugrading cases in context of small kampung based on "housing by process" principles
5. Being able to understand the evolution of Kampung Improvement Program in Surabaya and to distinguish the differences between each program
6. Being able to synthetize lessons learnt from slum upgrading cases that have been analyzed in the previous assignment to formulate its upgrading program
7. Being able to understand the evolution of slum upgrading program in Indonesia and other countries

SUBJECTS

1. Introduction to "Housing by People" housing model (housing as a process)
2. Housing resource, value of housing (functional and market value) and housing

problems
3. Authorities in housing: regulator, supplier, user in housing process (plan, construction, and management)
4. Three principles of housing: authoritiy, technology, and planning
5. Community empowerment in housing
6. Community participation in housing
7. Evolution of Kampung Improvement Program in Surabaya
8. Characteristics of Kampung Improvement Program in Surabaya
9. Slum upgrading in Surabaya
10. Slum upgrading in other countries

PREREQUISITES

REFERENCE(S)

1. Turner, John F.C. (1976). Housing by People. Great Britain Marion Boyars Publishers Ltd.
2. Silas, Johan. (2016). Housing Footprint. Surabaya
3. Cities Alliance, 2003. People and places: An overview of urban renewal, SA Cities Network, South Africa.
4. Hamdi, N., 2010. The placemaker's guide to building community, Earthscan, London.
5. Freek Colombijn. (2010)."Under Construction", KITLV Press, Leiden
6. UN HABITAT. (2009). Participatory Slum Upgrading and Prevention Programme.
7. Bruni De Mendler, Kelly Shannon. (2010). Human Settlement Formulations and (re) Calibrations. Amsterdam: SUN Architecture Publisher.

COURSE		
	Course Name	**: Forensic Architecture**
	Course Code	**: DA184xxx**
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES
SUBJECTS
PREREQUISITES
-
REFERENCE(S)
1. Kubba, S.A.A (2008), Forensic Architecture, London: McGraw-Hill Companies. Icn. 2. Lechner, N. (2008), Heating, Cooling, Lighting: Sustainable Design Methods for Architects 3rd Edition. 3. Lechner, N. (2011), Plumbing, Electricity, Acoustic: Sustainable Design Methods for Architects 3rd Edition. 4. Jablonski, M. & Matsen, C. (2009), Architectural Finishes in the Built Environment, Archetype Books, … 5. ARCOM, The American Institute of Architects, Elena M. S. Garrison (2002) The Graphic Standards Guide to Architectural Finishes: Using MASTERSPEC to Evaluate, Select, and Specify Materials, New York: Wiley & Sons.

COURSE	Course Name	: Structure and Construction in Nusantara Architecture
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE

LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable

	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules, procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

1. Structure and construction in western or generic architecture
2. Structure and construction in Nusantara architecture
3. Construction tectonics in Nusantara architecture

PREREQUISITES

-

REFERENCE(S)

COURSE	Course Name	: Appreciating Architecture
	Course Code	: DA184xxx
	Credit(s)	: 3
	Semester	: VII

DESCRIPTION OF COURSE		
LEARNING OUTCOMES		
Attitude	1.9	Demonstrating attitude of responsibility on work in his/her field of expertise independently
Knowledge	2.1	Understanding theoretical concepts of architecture, architectural design, aesthetics, structural system and building services and security and building safety
	2.2	Understanding principles of building science, landscape, urban planning and design, settlement, Nusantara architecture, ecology, and meaning in architecture
	2.3	Understanding presentation techniques of architectural conceptual design
Specific Skills	3.1	Being able to develop Architecture Design concept that integrates studies on behavior, environment, technical aspects and values related to architecture
	3.2	Being able to design architecture independently with research-based design methods, and produce creative architectural works, which is a solution to contextual architectural problem, and verified theoretically to the rules of architecture
	3.3	Being able to communicate thoughts and design results through graphics, writings, and communicative models with manual or digital techniques
	3.4	Being able to present several alternative design solutions and to make a decision based on scientific considerations in architecture
	3.5	Being able to utilize design capability to assist the supervision and / or implementation of environmental development and building construction
General Skills	4.1	Being able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise
	4.2	Being able to demonstrate independent performance, quality, and measurable
	4.3	Being able to examine the implications of the development or implementation of the science of technology which concerns and implements the value of humanities in accordance with its expertise based on rules,

		procedures and scientific ethics in order to produce solutions, ideas, designs or art criticism, compile scientific descriptions of the study results in the form of thesis or final project report , and uploaded it in the college page
	4.4	Arrange the scientific description of the results of the above study in the form of a thesis or final project report, and upload it on the college page
	4.5	Being able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis
	4.6	Being able to maintain an expanded network with mentors, colleagues, colleagues both inside and outside the institution
	4.7	Being able to take responsibility for the achievement of group work and supervise and evaluate the work completion assigned to the worker under his/her responsibility
	4.8	Being able to conduct self-evaluation process to work group under his/her responsibility, and able to manage learning independently

COURSE LEARNING OUTCOMES

SUBJECTS

PREREQUISITES

-

REFERENCE(S)

1. Sturgis, Russell, The Appreciation of Architecture, Read Books, 2007
2. Rasmussen, Steen Eiler, Experiencing Architecture, MIT Press, 1964
3. Antoniades, Anthony C., Poetics of Architecture: Theory of Design, Van Nostrand Reinhold, 1990
4. Mitias, Michael H., Philosophy and Architecture, Rodopi, 1994
5. Wiseman, Carter, Writing Architecture: A Practical Guide to Clear Communication about the Built Environment, Trinity University Press, 2014