



MODUL HANDBOOK BUILT ENVIRONMENT AND SUSTAINABILITY

Bachelor Degree Program
Department of Interior Design
Faculty of Creative Design and Digital Business

Institut Teknologi Sepuluh Nopember



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Description of Course Unit

Course unit title	Built Environment and Sustainability
Course unit code	DI 184733
Type of course unit (compulsory, optional)	Compulsory
Level of course unit (according to EQF: first cycle Bachelor, second cycle Master)	First Cycle Bachelor
Year of study when the course unit is delivered (if applicable)	4 th year
Semester/trimester when the course unit is delivered	7 th
Number of ECTS credits allocated	4,8
Name of lecturer(s)	Lea Kristina Anggraeni, S.T., M.Ds. Dr. Ir. Susy Budi Astuti, M.T.
Learning outcomes of the course unit	<ol style="list-style-type: none"> 1. Students understand the concept of behavior, built environment and sustainable design. 2. Students are able to see the phenomena that occurs in Indonesia related to lifestyles and ecological issues. 3. Students understand the relationship between lifestyle prevailing in society as the basic concept in designing interior and its aesthetic elements. 4. Students understand and able to apply the process of design and sustainability management in designing the interior and its supporting elements. 5. Students recognize, understand the characteristics of material, and are able to choose the right material to support the sustainable design. 6. Students are able to create design as problem solver, which is visually attractive and environmentally friendly. 7. Students are able to create research based on behavior, lifestyle and environmental ecological issues.
Mode of delivery (face-to-face, distance learning)	Face-to-Face
Prerequisites and co-requisites (if applicable)	<ol style="list-style-type: none"> 1. Already take Course Study - Interior Design & Culture 2. Already take Course Study – Interior Design Research 3. Already take Course Study – Behavior & environment 4. Already take Course Study – Interior Science 5. Already take Course Study – Material & Interior application 6. Already take Course Study - Ergonomic
Course content	<ol style="list-style-type: none"> 1. Human behavior 2. Lifestyle 3. Environmental ecological issues 4. Sustainable design
Recommended or required reading and other learning resources/tools	<ol style="list-style-type: none"> 1. Obeidat, I., Obeidat, S., Rumman, S. A., & Al-Jubouri, F. (2022). The role of sustainable interior design and its impact on customer's behavior in Commercial Environments. <i>IOP Conference Series: Earth and Environmental Science</i>, 1026(1), 012054. https://doi.org/10.1088/1755-1315/1026/1/012054 2. Whiting, P., Cullen, V., Adkins, H., & Chateur, F. (2023). A new retail interior design education paradigm for a circular economy. <i>Sustainability</i>, 15(2), 1487.

	<p>https://doi.org/10.3390/su15021487</p> <ol style="list-style-type: none"> 3. Pacheco-Torgal, F., & Goran-Granqvist, C. (2023). <i>Adapting the built environment for climate change: Design principles for climate emergencies</i>. Woodhead Publishing. 4. Obeidat, I. (2022). The effect of self-sufficiency in interior design and its reflection on user's behavior within built environments. <i>Dirasat: Human and Social Sciences</i>, 49(1), 428–457. https://doi.org/10.35516/hum.v49i1.1669 5. Araya León, M. J., Guasch, R., Estévez, A. T., & Peña, J. (2022). Interaction between the interior built environment and the human being. an integrative review in relation to perception, health, and well-being. <i>Theoretical Issues in Ergonomics Science</i>, 24(6), 698–728. https://doi.org/10.1080/1463922x.2022.2134940 6. Kotradyova, V. (2019). Sustainability in interior design: Interdisciplinary research used for exploring relation between built environment and human. <i>IOP Conference Series: Materials Science and Engineering</i>, 603(4), 042100. https://doi.org/10.1088/1757-899x/603/4/042100 7. Hes, D., & Hernandez-Santin, C. (2019). <i>Placemaking fundamentals for the built environment</i>. Palgrave Macmillan. 8. Coles, R., Costa, S., & Watson, S. (2019). <i>Pathways to well-being in design: Examples from the Arts, humanities and the built environment</i>. Routledge, Taylor et Francis Group. 9. Seta, F., Biswas, A., Khare, A., & Sen, J. (2018). <i>Understanding built environment proceedings of the National Conference on Sustainable Built Environment 2015</i>. Springer Singapore. 10. Briede, I., & Strode, A. (2020). Possibilities of environmental sustainability in interior design. <i>SOCIETY. INTEGRATION. EDUCATION. Proceedings of the International Scientific Conference</i>, 5, 627. https://doi.org/10.17770/sie2020vol5.4870
Planned learning activities and teaching methods	Problem-Based Learning, Group Discussion
Language of instruction	Indonesia and English
Assessment methods and criteria	Assignment, Midterm Exam, and Final Exam

Learning Outcome (LO)

LO	Description
LO2	Able to think critically and creatively in preparing interior design ideas/ concepts
LO5	Able to utilize environmental and maritime technology in the field of interior design
LO7	Mastering basic knowledge of aesthetics, behavior and technology in the field of interior design
LO9	Mastering design concepts and able to compile reviews/ assessments on the quality of a design result

Course Learning Outcome (CLO)

CLO	Description	Mapping of CLO to LO				Weight of CLO (%)
		LO 2	LO 5	LO7	LO9	
CLO1	Able to think critically and creatively in interior design ideas/concepts	x				25
CLO2	Able to utilize environmentally friendly technology in interior design		x			15
CLO3	Understand basic knowledge of aesthetics, behavior and technology in the field of interior design			x		30
CLO4	Able to apply design concepts and able to compile a review/assessment of the quality of a design result				x	30

Assessment Plan

No.	Course Learning Outcomes*	Assessment Technique	Assessment Weight (%)
1.	CLO1 Able to think critically and creatively in interior design ideas/concepts CLO2 Able to utilize environmentally friendly technology in interior design CLO3 Understand basic knowledge of aesthetics, behavior and technology in the field of interior design CLO4 Able to apply design concepts and able to compile a review/assessment of the quality of a design result	Material enrichment through literature study (Cognitive - Assignment)	45
2.	CLO1 Able to think critically and creatively in interior design ideas/concepts CLO2 Able to utilize environmentally friendly technology in interior design CLO3 Understand basic knowledge of aesthetics, behavior and technology in the field of interior design CLO4 Able to apply design concepts and able to compile a review/assessment of the quality of a design result	Analyze design objects based on 4 pillars (Case Method)	35
3.	CLO2 Able to utilize environmentally friendly technology in interior design CLO3 Understand basic knowledge of aesthetics, behavior and technology in the field of interior design CLO4 Able to apply design concepts and able to compile a review/assessment of the quality of a design result	Research Report	20
Total Assessment Weight			100

Learning Outcome Plan

Week	Sub Achievement-Subject Final Ability	Breadth (Learning Material)	Learning Method	Estimated Time	Students Learning Experience	Assessment Criteria and Indicator
1	Students understand the relation between human behavior related to environmental setting and territory.	Introduction Lecture - Introduction of Built Environment and Sustainability Design Subject, materials and assignments; - Theories of behavioral, territory and behavioral settings	Introduction lecture and Practice. - Explanation of the behavioral, territory, and behavioral settings theories - Learn to analyze the behavior of established settings - Discussion and q&a - Assignment 1 Assignment 1 Make a presentation regarding human behavior with the territory - the environment setting that takes place in Indonesia.	SL : 2x(1x60") IL : 1x(1x60")	- Understand the relationship of behavior - setting environment settings - territory - Able to find problems and provide solutions, ideas / design ideas	On time and in accordance with the criteria.

2, 3	Students are able to find Problems and provide solutions / ideas related to human behavior, environmental setting and territory.	Presenting assignment 1 and briefing next week material	<ul style="list-style-type: none"> - Assignment 1 Presentation - Assignment 1 Review <p><i>Next week brief :</i> Students are asked to find information about 'lifestyle, capital, and habitus' interior design. Presentation in ppt format.</p>	SL : 2x(1x60") IL : 1x(1x60")	Students are able to see a problem, analyze it and provide solutions / ideas.	On time and in accordance with the criteria.
4	Students are able to understand the meaning of lifestyle, capital, and habitus.	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Explanation about lifestyle, capital, and habitus. - The role of lifestyle, capital, and habitus in interior design and elements inside. 	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Presentation (4 students) - Reviewing students presentation - Explanation of theory and application on interior and elements inside - Discussion and q&a. <p><i>Next week brief :</i> Students are asked to find information about 'lifestyle and taste' and the relationship with interior design. Presentation in ppt format.</p>	SL : 2x(1x60") IL : 1x(1x60")	Students are able to understand the relation between lifestyle, capital, and habitus.	On time and in accordance with the criteria.
5	Students are able to understand the meaning of lifestyle and taste, and how to express it.	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Explanation about lifestyle and taste. - The role of lifestyle and taste in interior 	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Presentation (4 students) - Reviewing students presentation 	SL: 2x(1x60") IL : 1x(1x60")	Students are able to understand the relation between lifestyle and taste.	On time and in accordance with the criteria.

		design and elements inside.	<ul style="list-style-type: none"> - Explanation of theory and application on interior and elements inside - Discussion and q&a. <p>Assignment 2 Writing popular essay about the lifestyle phenomenon that developed in Indonesian society associated with interior design. The phenomenon is analyzed using capital approach, habitus and taste.</p>			
6, 7	Students are able to find problems and provide solutions /design ideas related to lifestyle in Indonesian society.	Presenting assignment 2 and briefing next week material	<ul style="list-style-type: none"> - Assignment 2 Presentation - Assignment 2 Review <p><i>Next week brief :</i> Students are asked to find information about 'design issues and ecology' in Indonesia. Presentation in ppt format.</p>	SL : 2x(1x60") IL : 1x(1x60")	Students are able to see a phenomenon / problem in Indonesian society and analyze it, to get design solution in the form of ideas.	On time and in accordance with the criteria.
8	Students are able to understand the concept of sustainable design.	Introduction Lecture <ul style="list-style-type: none"> - Explanation about design concept. - The role of design in sustainable design 	Introduction Lecture <ul style="list-style-type: none"> - Presentation (4 students) - Reviewing students presentation - Explanation of 	SL : 2x(1x60") IL : 1x(1x60")	<ul style="list-style-type: none"> - Students are aware of environmental issues in the world - Students understand the concept of sustainable design 	On time and in accordance with the criteria.

		actualization.	<p>theory and application on interior and elements inside</p> <ul style="list-style-type: none"> - Discussion and q&a. <p>Midterm examination : Students write a popular essay and present it. The topic is lifestyle, design issues, and ecology on material. Format esay dan presentasi ppt.</p>			
9, 10	Able to present analysis result properly, clearly, and communicatively.	Midterm examination presentation	<ul style="list-style-type: none"> - Presenting midterm examination - Reviewing midterm examination <p><i>Next week review :</i> Students are asked to analyze a product/interior that address environmental issues and sustainable design. Presentation in ppt format.</p>	SL : 1x(1x60") IL : 2x(1x60")	Students are able to present analysis result properly, clearly, and communicatively.	On time and in accordance with the criteria.
11	Students are able to understand environmental issues in design.	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Explanation about sustainable design concept and environmental issues. - Choosing the right material. - The role of design in sustainable 	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Presentation (4 students) - Reviewing students presentation - Explanation of theory and application on interior and elements inside 	SL : 2x(1x60") IL : 1x(1x60")	<ul style="list-style-type: none"> - Students are aware of environmental issues in the world - Students understand the concept of sustainable design 	On time and in accordance with the criteria.

		design actualization.	<ul style="list-style-type: none"> - Discussion and q&a. <p><i>Next week review :</i> Students are asked to find information and analyze the customs and culture that exist in Indonesia and its application on traditional and modern interior design. Presentation in ppt format.</p>			
12	Students understand the concept of sustainable design, modernization, and consumerism.	Introduction lecture. Explanation about traditional culture and modernization.	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Presentation (4 students) - Reviewing students presentation - Explanation of theory and application on interior and elements inside - Discussion and q&a. 	SL : 2x(1x60") IL : 1x(1x60")	Students understand the concept of sustainable design, modernization and consumerism.	On time and in accordance with the criteria.
13	Students are able to understand design process and sustainable design management and research methods.	Introduction lecture. Explanation about design process and sustainable design management according to Victor Papanek.	<p>Introduction Lecture</p> <ul style="list-style-type: none"> - Explanation of theory and application on interior and elements inside - Reach methods - Discussion and q&a. <p>FINAL PROJECT EXAMINATION Write a scientific paper and present it. The topic is interior design</p>	SL : 2x(1x60") IL : 1x(1x60")	Students understand the concept of space in the arrangement of area.	On time and in accordance with the criteria.

			concept based on user behavior, built environment and ecological issues in Indonesia. Group of 3 people.			
14 - 16	Students are able to design based on user behavior, built environment in sustainable design	Presenting topics of final project.	<ul style="list-style-type: none"> - Topics presentation and final project consultation. - Final project is submitted on week-17, Monday. 	SL : 2x(1x60") IL : 1x(1x60")	Students are able to find the right topic, analyze it and provide solutions / ideas in design.	On time and in accordance with the criteria.

REFERENCES (max 5):

1. Hall, Edward T. 1966. *The Hidden Dimension*. Anchor Books. ISBN 0-385-08476-5.
2. Lauraens, Joyce M. (2005). *Arsitektur dan Perilaku Manusia*. Jakarta: Penerbit Grasindo.
3. Moskow, Keith G. ._. *Sustainable Facilities : Green Design, Construction, and Operations*. USA:McGraw Hill
4. Rapoport, Amos. 1990. *The Meaning of The Built Environment : a nonverbal communication approach*. Arizona : The University of Arizona Press.

Note:

* Presentation