



Curriculum / Course Study Plan,
Module descriptions and,
Methodologies handbook

29.08.2021

Curriculum / Course Study Plan

Quarters

L: Lecture S Seminar

Quarters			1th		2nd		1th		2nd		1th		2 nd		
L: Lecture S Seminar			L	S	L	S	L	S	L	S	L	S	L	S	
Theory/Fundamentals	location	ects	1 st semester			2nd semester			3rd semester			4S	exam		
RMB 1 Hist. Modernism 1	Antwerp/UA	3	2	2									2 3		
RMB 1 Hist. Modernism 2	Coimbra/ UC	3					2	2					2 3		
RMB 1 Hist. Modernism 3	Belgrade/UB	3							2	2			2 3		
RMB 2 Reuse Theory 1	Antwerp/ UA	3	3	1									1		
RMB 2 Reuse Theory 2	Lisbon/IST	3					2	2					2		
RMB 2 Reuse Theory 3	Online/UA	3							3	1			1		
RMB 3.1 Environ.Design 1	Online/IST	3		2	2								2 3		
RMB 3.2 Environ.Design 2	Coimbra/UC	3				1	3						2 3		
RMB 3.3 Environ.Design 3	Belgrade/UB	3								2	2		2 3		
RMB 4.1 Urban 1	Detmold/ OWL	3		1	3								2		
RMB 4.2 Urban 2	Coimbra/UC	3				1	3						2		
RMB 4.3 Urban 3	Belgrade/UB	3								2	2		2		
Design/Research		36													
RMB 7.1 Design 1A	Antwerp/UA	6	2	6									2		
RMB 7.2 Design 1B	Detmold/OWL	6		2	6								2		
RMB 10.1 Design 2A	Coimbra/UC	6				2	6						2		
RMB 10.2 Design 2B	Lisbon/IST	6					2	6					2		
RMB 13.1 Design 3A	Belgrade/OWL	6							1	7			2		
RMB 13.2 Design 3B	Belgrade /UB	6								2	6		2		
Specialist Skills		18													
RMB 5 Typological	Detmold/OWL	3		1	3								3		
RMB 6 Research	Antwerp/UA	3	1	3									3		
RMB 8 Assessment	Lisbon/IST	3					2	2					1 3		
RMB 9 Social Aspects	Coimbra/UC	3				1	3						3		
RMB 11 House/Housing	Online/IST	3							2	2			3		
RMB 12 Build. Constr	Belgrade /UB	3								2	2		2 3		
RMB 14 Thesis		Choice/All	30							2					
TOTAL credits		120													
TOTAL weekly hours			56	84	35	98	35	98	56	84	56	84	56	84	826

1 Written exam 2 Paper 3 Presentation

Module descriptions

Module Title	HISTORY OF MODERNISM IN NORTHERN EUROPE			
Module Number	RMB 1.1			
Module Responsibility	Els De Vos			
Lecturer	Els De Vos, Eva Storgaard, Inge Somers			
Course of Study	RMB (Joint Master)			
Status	Mandatory	x	Optional Module	
	Module			
Semester	1			
Forms / Methods of Teaching	Lecture, webinar, Seminar (online)			
Language of Teaching	English			
Contact Hours	Lecture	2	Other	2
Workload (h)	T - Theoretical Teaching	12	PL - Practical and laboratory teaching	-
	S – Seminar	2	TP - Theoretical - practical teaching	12
	TC - Field work	6	E – Internship	-
	Self-Study	49	OT - Tutorial orientation	-
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	Basic knowledge of architectural modern history in Northern Europe			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Students will learn about the history of modernism in Northern Europe. Students will be able to:</p> <ul style="list-style-type: none">- explain and present the history and the main architects/designers of modernism in those countries- distinguish the historical context of a case approach and contextualize a case within its specific time frame- write about the historical content relevant for a case- recognize the most important features and characteristics of modernist architecture relevant for a given case- recognize modernist principles of construction and use.			
Syllabus	<p>Discussion of modernist ideology characteristic for Northern Europe and of representative architectural modernist buildings. Introduction to modernist building types. Discussion of problems and potentials for a successful functional conversion and examination of functional conversion options for specific building types by means of design exercises.</p> <p>Research on design approaches for interventions in, and extension to existing buildings. Existing projects are analysed categorised, assessed and presented in a paper and a presentation.</p>			
Evidence of the syllabus coherence with the curricular unit's intended learning outcomes	The Case Study Handbook provides cases that will be discussed in the course. The additional papers posted on the learning platform allow to elaborate on the current state of the art, by showing recently investigated cases.			

Teaching/Learning methodologies (including assessment)

One midterm presentation and 1 final presentation + paper

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The lectures will mainly transfer knowledge about the cases in the Northern countries. The excursions, and in pandemic times videos of projects, will allow students to explore and experience projects and their atmospheres. The seminars will discuss the characteristics of a specific case. The presentation and paper is a way to encourage students to demonstrate their built up knowledge and share it with fellow students, who on their turn comment and give feedback.

Main Bibliography

Case Study Handbook RMB

Data base with original plans and publications on the buildings in Novell Filr

Papers posted on the learning platform

- De Kooning, E. (Ed.). (2001). *Horta and after: 25 masters of modern architecture in Belgium*. Ghent University. Department of Architecture and Urbanism.
- Henket, H.J. & Heynen H. (2002). *Back from Utopia. The Challenge of the Modern Movement*. 010 Publishers.
- Spliid Høgsbro, C. and A. Wischmann. (2009). *Nortopia. Nordic Modern Architecture and Postwar*. Jovis.
- Creagh, L. et al. (2008). *Modern Swedish Design. Three Funding Texts*. New York: The Museum of Modern Art
- Mattsson, H. and S. Wellenstein. (2010). *Swedish Modernism. Architecture, Consumption and the Welfare State*. Black Dog Publishing
- Asgaard Andersen, M. (2008). *Nordic Architects Write. A Documentary Anthology*. Routledge.
- Lund, N-O and J. Manley. (2008). *Nordic Architecture*. The Danish Architectural Press.
- Norberg-Schulz, C. (1996). *Nightlands. Nordic Building*. MIT Press.

Module Title	HISTORY OF MODERNISM IN SOUTHERN EUROPE				
Module Number	RMB 1.2				
Module Responsibility	Jorge Figueira				
Lecturer	Jorge Figueira, José Fernando Gonçalves, Bruno Gil				
Course of Study	RMB (Joint Master)				
Status	Mandatory	x	Optional Module		
Semester	2				
Forms / Methods of Teaching	Lecture, webinar, Seminar (online)				
Language of Teaching	English				
Contact Hours	Lecture	2	Other	2	
Workload (h)	T - Theoretical Teaching	14	PL - Practical and laboratory teaching	-	
	S – Seminar	-	TP - Theoretical - practical teaching	14	
	TC - Field work	-	E – Internship	-	
	Self-Study	53	OT - Tutorial orientation	-	
Workload total (h)	81				
Credits (ECTS)	3				
Prerequisites	RMB 1.1 History of modernism in Northern Europe				
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Students will learn about the history of modernism in South Countries, Portugal, Spain and Italy</p> <p>Students will be able to:</p> <ul style="list-style-type: none">- explain the history and the main architects/designers of modernism in Portugal, Spain and Italy- to distinguish the historical context of a case- approach and contextualize a case within its specific time frame- write about the historical content relevant for a case- recognize the most important features and characteristics of modernist architecture relevant for a given case- recognize modernist principles of construction and use				
Syllabus	<p>Discussion of modernist ideology characteristic for Portugal, Spain and Italy in the frame of the authoritarian regimes</p> <p>In-depth discussion of several representative architectural modernist buildings architects and buildings</p> <p>Introduction of modernist building types; discussion of problems and potentials for a successful functional conversion</p> <p>Examination of functional conversion options for specific building types by means of design exercises</p> <p>Research on design approaches for interventions in, and extension to existing buildings. Existing projects are analysed categorised, assessed and presented in a paper</p>				

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

With the presentation of the history of modernism in the countries of the South, students will be encouraged to participate critically, identifying architectural features and classifying principles of composition, construction and use. Through the analysis of specific case studies with architects / buildings, students are encouraged in practical work to demonstrate the research and knowledge acquired in the course. It promotes autonomous critical thinking capable of conducting future academic research and practical work in the area of modern heritage and building reuse.

Teaching/Learning methodologies (including assessment)

Lectures with exposition of themes and concepts using PP and video; comparative analysis and discussion of examples and architects who worked in this period, extending their comparative analysis with architectures from other latitudes. Launch of practical works to promote research and content exposure capacity. Assessment through presentation and an illustrated written paper.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The ability to investigate and expose the results is the main and most effective way to acquire knowledge, especially because it establishes a method of expanding knowledge in each new situation placed in an academic or professional context. Thus, the incentive to critically look at and interpret the exemplary case studies established by the History of Modern Architecture is a way to promote an attentive, critical look capable of establishing principles of analysis and classification for other lesser-known buildings/architects, but whose heritage is equally important for the cohesion and quality of the urban environment.

Main Bibliography

- Case Study Handbook RMB
- Data base with original plans and publications on the buildings
- Papers posted on the learning platform
- Figueira, Jorge. A Periferia Perfeita. Pós-Modernidade na Arquitectura portuguesa, Anos 1960-1980. Vale de Cambra: Caleidoscópio, 2014.
- Figueira, Jorge. Escola do Porto: Um Mapa Crítico. Coimbra: eldlarq, Darq/FCTUC, 2002.
- Gonçalves, José Fernando (2002), "Ser ou não ser moderno - Considerações sobre a Arquitectura Modernista Portuguesa. Coimbra: Editorial do DARQ – FCTUC
- Gonçalves, José Fernando (2007), Edifícios Modernos de Habitação Colectiva - Desenho e Standard na Arquitectura Portuguesa, PhD, ETSAB - Universidade Politecnica da Catalunha.

Module Title	History of Modernism in Central and Southeast Europe			
Module Number	RMB 1.3			
Module Responsibility	Vladimir Mako, PhD, Full Professor			
Lecturer	Irena Kuletin Čulafić, PhD, Assistant Professor			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Compulsory Module	
Semester	3			
Forms / Methods of Teaching	Lecture, Webinar, Seminar (online), Paper preparation, Presentation Preparation, Copies and papers on digital media (via RAF)			
Language of Teaching	English			
Contact Hours	Lecture	2	Other	2
Workload(h)	Lecture	14	Laboratory	
	Seminar		Workshop	1
				4
	Excursion		Paper preparation	
	Self-Study	53	Presentation Preparation	
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	Basic knowledge of modernist urban and architectural history; Basic knowledge and intellectual output of RMB 1.1 and RMB 1.2			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none"> - distinguish particularities and variable forms of Modernism in architecture within the cultural and geographical space of Central and Southeast Europe – particularly Serbia, and Balkan region - as a result of merging of cultural particularities and traditions; - enhance knowledge about the main characteristics and periods of urbanization and landscape transformation in the Serbia, and Balkan region within the socialist condition and ideology; - understand these developments in their art-historical, economic, political and demographic context - approach and contextualize a case within its specified time frame; - understand and distinguish the historical context of a different types of cases – single spatial units (interiors), buildings, urban settlements, urban blocks, and overall modernist landscape; - recognize the most important elements of modernist architecture relevant for a given cas; - document and systematize sources and archival material through digitization of historical sources. - 			
Syllabus	The goal of the study within the History of Modernism in Central and Southeast			

Europe course is related to students' understanding of the shaping process of possible variable cultural forms of Modernism in Serbia and related countries of former Yugoslavia, regarding the particular influences related to their French, German, Austrian or Czech origins.

Studies will be based on discussion of modernist ideology developing in Serbia, according to related influences of European Modernist tradition. It is crucial to develop fundamental discussion on the issue through a number of representative architectural modernist buildings, and their authors. The course will pay attention to the research process regarding contemporary issues, merging from the necessities for creative design interventions in, and extension to existing buildings.

The outcomes of this research will be analyzed, categorized, assessed and presented in a final paper.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

In this course students will get familiar with broad and particular research areas related to modernism in Central and Southeastern Europe, particularly in Serbia, former Yugoslavia.

The ambivalence of modernism will be considered through: Modernism and Early Avant-Garde Studies; Bauhaus and Conception of New Architecture in Central and Southeast Europe; Modernism Between the Two World Wars; Modernism After the Second World War; Building and Rebuilding New Socialist Federal Republic of Yugoslavia; History, Theory and Criticism of Modernism Practice; Aesthetic Theory of Modernism; Modernism and Urban Environment - Modernist Cityscapes; Modernism and Interior Design; Socialist Utopia and Architecture With a Human Face; Unity and Diversity in Yugoslav Modernist Architecture; Modernist Housing and Typologies; Memorial Sculpture and Architecture. Many other topics will be discussed through discussions and various Case Studies dedicated to particular examples of architecture.

Teaching/Learning methodologies (including assessment)

The final grade is formed on the basis of the student's activities in discussions and active attendance during the course. The final grade includes a midterm presentation of the selected case study, which the student presents in the form of a Power Point presentation / drawings and graphic attachments with short written explanations. This midterm presentation is presented orally, followed by a discussion, comments and suggestions from the professor. The most important part of the final grade is a written essay with which the student presents an oral presentation of the paper.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The set goals will be realized through *ex catedra* lectures and presentations, discussions and case studies presentations.

Modernism in Architecture is viewed from different aspects of history, theory, aesthetics, ethics, art, philosophy, religion, politics, economics, sociology, psychology, semiology, hermeneutics, science, technology, culture, environmentalism, and many others.

Modernist architecture is a complex and broad research area, so the course pays special attention not only to modernist buildings, but also modernism in urban planning, interior design, industrial and graphic design, landscape design and environmental built heritage. The discussions examine the connections of modernist architecture with art, nature, science and various methodological

practices, which help us today to see the ambiguity of the phenomenon of modernism in architecture with a relevant historical distance.

Main Bibliography

- Stierli, M., Kulić, V., eds. (2018). *Toward a Concrete Utopia: Architecture in Yugoslavia 1948-1980*. New York: The Museum of Modern Art.
- Janković, N., Nikolić M., Drobnjak B. and Šuvaković M., eds. (2019). *100 Years of the Bauhaus – Contextualizations and Re-Contextualizations of the Bauhaus in the Yugoslav Art Space*. Belgrade: University of Belgrade – Faculty of Architecture and Goethe-Institut Belgrad.
- Kulić, V., Parker, T. and Penick, M., eds., (2014). *Sanctioning Modernism: Architecture and the Making of Postwar Identities*. Austin: University of Texas Press.
- Kulić, V., Maroje Mrduljaš, M. and Wolfgang Thaler .W, *Modernism In-Between: The Mediatory Architectures of Socialist Yugoslavia* (Berlin: Jovis, 2012)
- Kulić V., Stierli, M. and Thaler W., eds., (2018). *Bogdanovic By Bogdanovic: Yugoslav Memorials Through The Eyes Of Their Architect*. New York: The Museum of Modern Art.
- Kuletin Ćulafić, I., (2014). “Philosophic reflections on the work of Bogdan Bogdanovic – Socialist utopia and realistic fantasy”, in *2nd International Conference and Exhibition on Architecture: On Architecture – Facing the Future*, ed. Ružica Bogdanović. Belgrade: Serbian Academy of Sciences and Arts and STRAND – Sustainable Urban Society Association.
- Bogdanović, J., Filipovitch, L. and Marjanović, I., eds., (2014). *On the Very Edge : Modernism and Modernity in the Arts and Architecture of Interwar Serbia (1918-1941)*. Leuven : Leuven University Press.
- Vidler, A. (2008). *Histories of the Immediate Present: Inventing Architectural Modernism*. Cambridge: The MIT Press.
- Tournikiotis, P. (1999). *The historiography of modern architecture*. Cambridge, Mass., etc. : The MIT Press.
- Scully, V. (2003). *Modern architecture and other essays*. Princeton, etc., : Princeton University Press.

Module Title	Re-Use Theory: An Introduction			
Module Number	Rmb 2.1			
Module Responsibility	Marc Jacobs			
Lecturer	Marc Jacobs			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Optional Module	
Semester	1			
Forms / Methods of Teaching	Lecture, Seminar (online), Webinar, Self-Tuition, Self-Test			
Language of Teaching	English			
Contact Hours	Lecture	3	Other	1
Workload (h)	T - Theoretical Teaching	21	PL - Practical and laboratory teaching	-
	S - Seminar	1	TP - Theoretical - practical teaching	-
	TC - Field work		E – Internship	-
	Self-Study	53	OT - Tutorial orientation	-
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	-			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Situate and explain the meaning of Re-Use of buildings and their interiors as part of a long-term history and the 21st century heritage paradigm.</p> <p>Understand the extended notion of heritage.</p> <p>Be familiar with framework-conventions of UNESCO and European institutions and a relevant set of other charters and texts (ICOMOS, ICOM).</p> <p>Understand the relations between good heritage practices and sustainable development, including the sustainable development goals.</p> <p>Understand heritage significance as a sum of heritage values.</p> <p>Master an updated vocabulary and scientific toolbox, understand the recent paradigm of heritage studies, and situate this in a long-term heritage history.</p> <p>Understand how the heritage paradigm has evolved from focusing on monuments to a broader field, where re-use, participatory approaches and management processes are important.</p> <p>Apply the tools for sustainable development, including the 2030 Agenda.</p> <p>Understanding heritage significance assessment.</p>			
Syllabus	<p>The emergence of different heritage policy frames on the global level is studied in depth, focusing on the relevant UNESCO conventions, recommendations and programmes, as they frame, inspire and structure heritage discourse, policy and practice in the last century. This is linked to other relevant frames on the global level, in particular the sustainable development goals (Agenda 2030).</p> <p>The 1972 World Heritage Convention, the 2003 Convention and other texts, will be discussed, both as policy texts and via para-ethnographic studies of the institutions and networks. Furthermore the consequences of the Burra Charter, of participatory methods, and the importance of values and significance assessment are discussed. A discussion of European policy texts, in particular the Framework Convention on the Value of Cultural Heritage for society, is combined with a discussion of literature</p>			

from other continents. Special attention is devoted to concepts like re-use and transformation.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

This course provides a global (and European level) introduction to “heritage” and heritage practices. It introduces key concepts and themes (including re-use). How is heritage policy and practice structured in the 21st century?

In the course a roadmap and an overarching heritage (work)frame, and even paradigm, in the 2020s is presented, in a historical and intercontinental perspective. We are not only focusing on European narratives on the evolution of heritage since the 18th century but also in other continents, particularly in Asia. Next to China, Japan and Korea, in particular India will be discussed (via the work of Romilia Thapar). We also explore the relevance of notions like historicity regimes (François Hartog), politics of scales and levels. To a large degree but not only built, but also natural, digital, intangible and movable heritage. This course yields not only a global frame but also a toolbox, with key concepts and relevant perspectives, including re-use, and modernism.

Teaching/Learning methodologies (including assessment)

Written exam. On request, the student can make an appointment immediately after the exam period to get feedback on the scores, positive and negative aspects of their exam.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

- Focused knowledge and information transfer (‘the basics’), partly ex-cathedra, using knowledge video clips (with questions) and flipped-classroom sessions. “re-use” receives special attention as part of introducing the history and the differentiation of several “re-“, “trans-“ and “co”-concepts.
- Critical questioning the (evolution of the) semantic field through policy texts and historical and global examples.
- Close-reading UNESCO and framework texts on the European level, particularly the 2005 (Faro) Framework Convention on the value of heritage for society. The theoretical underpinning, fruitful ambiguity and consequences of these influential texts is discussed by using a case-study methodology.
- “glocal ethics” and ethical tools for heritage work, including the tension between relative autonomy and interventions.
- A guided tour through websites and heritage literature, with a special focus on current debates to stimulate further, and even lifelong, learning on the topic.

Main Bibliography

- From 2022-2023, a handbook will be available: Jacobs, M., Heritage. Theories, policies and practices.
- Digital media and scripts at the E-learning platform
- Wong, L., Adaptive Reuse. Extending the life of buildings. Birkhäuser, 2017.

Module Title	Re-Use Theory: Theory And Practice			
Module Number	Rmb 2.2			
Module Responsibility	Ana Tostões			
Lecturer	Ana Tostões, Bárbara Coutinho, Zara Ferreira and invited experts.			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Optional Module	
Semester	2			
Forms / Methods of Teaching	Lecture, Seminar (online), Webinar, Self-Tuition, Self-Test			
Language of Teaching	English			
Quantity (SWS)	Lecture	2	Other	2
Workload (h)	T - Theoretical Teaching	14	PL - Practical and laboratory teaching	-
	S - Seminar		TP - Theoretical - practical teaching	1 4
	TC - Field work		E – Internship	-
	Self-Study	53	OT - Tutorial orientation	-
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	-			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Deepen the knowledge and the architectural theory context in the global framework of the reusing Modern Movement architecture in order to:</p> <ul style="list-style-type: none"> - understand the main issues and challenges posed by modern heritage. - identify the potentialities of rehabilitation of modern heritage to meet the current challenges of urban regeneration. - improve skills related to rehabilitation actions. - overcome processes related with rehabilitation actions. - know reference cases: from adaptive reuse to integral restoration. <p>1. Develop students' ability to understand and research the main issues regarding modern heritage rehabilitation. The analytical effort is to identify techniques of rehabilitation of Modern Movement architecture.</p> <p>2. Develop the ability to analyse and coordinate heritage conservation with its adaptation to contemporary demands.</p> <p>3. Production of a Scientific Paper. Development of the critical ability of the students as a form of research. Focus on the analysis of key works of reuse/maintenance conservation plans.</p>			
Syllabus	<p>1. Introduction to concepts relating heritage and reuse:</p> <ul style="list-style-type: none"> - Fundamental concepts - Heritage and the safeguard cycle - Documentation and preservation - Restoration, rehabilitation and adaptive reuse operations <p>2. Modern city and urban regeneration:</p> <ul style="list-style-type: none"> - Challenges of urban regeneration - Functions, use and management of assets - Compatibility of pre-existing elements with current interventions 			

- The heritage in the modern city
- 3. Rehabilitation and reuse:
 - The concept of reuse and the demands of contemporary comfort
 - Introduction to case studies
 - Architectural rehabilitation and compliance with safety and energy efficiency parameters
 - Seismic safety and security in urban rehabilitation
- 4. Restoration:
 - World heritage: recognition, classification and restoration
 - Future challenges of a global listing
 - The restoration of the Villa Tugendhat de Mies Van der Rohe as case study

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

To deepen the knowledge of architectural theories in the context of reuse of Modern Movement architecture and sites. To stimulate the understanding of the relations between: Art and Technique; Form and Ideology; Architecture and Landscape; Nature and Culture. Topics related to the ideology of heritage as a feature of contemporary culture are discussed.

1. Disciplinary framework: concepts and criteria.
2. The question of heritage and its classification.
3. Public Space and Urban Landscape, the genesis of a new approach.
4. Fundamental texts for heritage conservation and reuse.
5. Disciplinary deepening and case studies.
6. The enhancement of the heritage built in conjunction with environmental and immaterial values.
7. Sustainability, reuse, flexibility and renewal: interventions in pre-existing spaces
8. Current problems, concepts and criteria.
9. Rehabilitation and Reuse as a central theme of contemporary culture: perception of the various agents involved.

Teaching/Learning methodologies (including assessment)

The teaching-learning model adopted involves three components: theoretical, experimental and instrumental components complemented by study visits and lectures with invited experts.

- 1 Midterm presentation and 1 final presentation
 - Case Studies (group work)
 - A final paper including presentation and discussion

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The course is conducted in a workshop format, supported by weekly readings. It is complemented with lectures with invited researchers. Didactics are based in reflexive learning practices focused on the functional dimension of the built space and its social implications related with the reuse concepts.

Students' grades are determined on the basis of the portfolio of exercises done through the semester and class participation. The portfolio considers weekly readings reports and a research training exercise focused on a topic/case studies selected by the student. This exercise can follow two alternative models: a) "scientific paper" to be published in a technical/scientific journal supported on a case study; b) "survey paper". The survey paper should not be limited to the review of a case study related to the reuse topic. Rather it should adopt an original and comprehensive perspective concerning the conservation and reuse question.

- **Main Bibliography**

- ABRAMSON, Daniel, *Obsolescence. An Architectural History*, Chicago and London, University of Chicago Press, 2016.
- CARUGHI, Ugo, VISIONE, Massimo, *Time Frames: Conservation Policies for Twentieth-Century Architectural Heritage*, London, Routledge, 2017.
- GRAF, Franz, *Histoire matérielle du bâti et projet de sauvegarde. Devenir de l'architecture moderne et contemporaine*, Lausanne, Presses Polytechniques Universitaires Romandes, 2014.
- JOKILEHTO, Jukka, *A History of Architectural Conservation*, Oxford, Butterworth-Heinemann, 1991.
- MACDONALD, Susan; OSTERGREN, Gail, *Conserving Twentieth Century Built Heritage: A Bibliography*, Los Angeles, The Getty Conservation Institute, 2011.
- PRUDON, Theodore, *Preservation of Modern Architecture*, Hoboken, N.J., Wiley, 2008.
- TOSTÕES, A. (2018), "Modern Built Heritage Conservation Policies: How to Keep Authenticity and Emotion in the Age of Digital Culture", *Built Heritage*, n. 2, vol. 2, Tongji, Tongji University, p. 17-34.
- TOSTOES, Ana, "Le Défi de la réutilisation de l'architecture du Mouvement Moderne face aux contraintes normatives", in GRIGNOLO, Roberta (ed.), *Law and Conservation of 20th Century Architecture*, Mendrisio, Silvana Editoriale/Mendrisio Academy Press, 2014.
- TOSTOES, Ana, FERREIRA, Zara (ed.), *Adaptive Reuse. The Modern Movement towards the Future*, Lisboa, Docomomo International/Casa da Arquitectura, 2016.
- TOSTÕES, Ana, KECHENG, Liu (ed.), *Docomomo International 1988-2012: Key papers in Modern Architectural Heritage Conservation*, Beijing, China Architectural and Building Press, 2014.

Module Title	Re-Use Theory			
Module Number	RMB 2.3			
Module Responsibility	(Prof. Marc Jacobs ad interim) A new full-time professor in critical heritage studies and monuments in the Heritage Department of the, with a special focus on re-use and re-destination will be recruited in the spring of 2022			
Lecturer	(Prof. Marc Jacobs ad interim) New professor in the heritage department in the University Antwerp from 2022 onwards			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	X	Optional Module	
Semester	3			
Forms / Methods of Teaching	Lecture, Seminar (online), Webinar, Self-Tuition, Self-Test			
Language of Teaching	English			
Contact Hours	Lecture	3	Other	1
Workload (h)	T - Theoretical Teaching	21	PL - Practical and laboratory teaching	-
	S – Seminar	7	TP - Theoretical - practical teaching	
	TC - Field work		E – Internship	-
		-		
	Self-Study	53	OT - Tutorial orientation	-
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	-			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Using the case-study method to gain insight in theories and models of reuse, adaptive reuse and redestination and to deal with the relation between theory and real practices.</p> <p>Exploring the potential of adaptive reuse or “herbestemming” (literal translation re-destination) of monuments, churches, schools, factories, army buildings, farms... There will be a strong focus on cases in Northern Europe (Belgium, the Netherlands, Germany, and Scandinavia).</p> <p>Using the case-studies method to enrich theories and models.</p> <p>Being able to discuss adaptive reuse in several contexts.</p> <p>Independent study/ treatment of knowledge by inclusion of blended mobility (virtual lectures, flipped classroom and reading courses with tutorials).</p>			
Syllabus	<p>This course uses cases to test and improve reuse theories and methods. A series of cases (that can vary each year) will be used to study interventions in the ‘destination’ of building. It explores the differences between re-ruse, rehabilitation, adaptive reuse or even re-destination (inspired by the idea of destination culture of Barbara Kirshenblatt-Gimblett to discuss heritage and partly inspired by a future oriented interpretation of the Dutch concept of herbestemming in heritage work)</p>			
Evidence of the syllabus coherence with the curricular	Every year a selection of cases, that show great potential to discuss complex and challenging options, will be examined in detail. They will be used to discuss concepts			

unit's intended learning outcomes

and ideas introduced in the other units. In the case-studies several line of the course converge.

Teaching/Learning methodologies (including assessment)

In this course the case-study approach is at the core of the research-teaching nexus of the program. Written exam, without oral presentation.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

An example is an illustration of a theory, a category or some other overarching idea. "what makes it relevant and illuminating will always be its reference to some generality or ambition of such. Examples can be used to explain, persuade or instruct, and their unique energy comes from the way they make the general specific and let the specific reflect the general. The case "represents a challenge to generalizations, existing theories, dominant categories or habits of thought. The case is "an enigma to solve, a question to interpret. (...) It is just because the case represents a challenge to existing theories and dominant norms that its existence – and interpretation – supplies a unique possibility to develop theory and explore norms. This dialectic relationship between the normal (or normative) and the 'case' is fundamental and is also what makes the case an important epistemic tool.

(A. Eriksen, From Antiquities to Heritage: Transformations of Cultural Memory. New York, 2014, p. 10-11.)

Main Bibliography

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- Graeme Brooker, Sally Stone, Re-Readings. Interior Architecture and the Design Principles of Remodelling Existing Buildings, Riba Publishing (Febr. 2014).
- Harald a Mieg (Herausgeber), Heike Oevermann , Industrial Heritage Sites in Transformation, Taylor & Francis Ltd (14. August 2014)
- J. Stanley Rabun and Richard Kelso. Building Evaluation for Adaptive Reuse and Preservation, Hoboken, NJ: John Wiley & Sons, Inc., 2009
- Jäger, Frank-Peter (Ed.), Old and New Design Manual for Revitalizing Existing Buildings. Basel, Boston: Birkhäuser, 2010.
- Passeron, J. and Revel, J. (eds.), Penser par cas. Paris, 2005
- Plevoets B. & Van Cleempoel K., Adaptive Reuse of the Built Heritage. Concepts and Cases of an Emerging Discipline, London, 2019.
- Wong, L., Adaptive Reuse. Extending the life of buildings. Birkhäuser, 2017.

Selection depends on the cases selected in a specific academic year

Module Title	Environmental Design 1			
Module Number	RMB 3.1			
Module Responsibility	Miguel Amado			
Lecturer	Miguel Amado (IST), Patricia Lourenço (IST), Carlos Augusto Santos Silva (IST), invited lecturers, inputs from all partners			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x		Compulsory Module
Semester	1			
Forms / Methods of Teaching	Lecture, Seminar, Webinar, Workshops, Field Work, Research through design, Self-Tuition, individual and group work.			
Language of Teaching	English			
Contact Hours	Lecture	2	Other	2
Workload (h)	T - Theoretical Teaching	7	PL - Practical and laboratory teaching	-
	S - Seminar	4	TP - Theoretical - practical teaching	14
	TC - Field work	7	E – Internship	-
	Self-Study	3	OT - Tutorial orientation	
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	-			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Learning concepts and strategies for an environmentally sustainable design practice; Learning techniques in bioclimatic project strategies and practical solutions to the project, in a collaboration with de Design Studio -<i>Sustainability integration within the design practice</i>;</p> <p>Learning process HOW TO DO with support on practice within the case studies in the specific area of sustainable re-use;</p> <p>Developing Key competences in sustainability: systems-thinking competence, anticipatory competence, normative competence, strategic competence, and interpersonal competence.</p>			
Syllabus	<p>PRINCIPLES AND THEORETICAL CONCEPTS IN ENVIRONMENTAL DESIGN.</p> <p>Architecture and Sustainable Development: a challenge to creativity; an ethical responsibility.</p> <p>Climate and contextualization. From energy consumption in buildings to energy production. Embodied energy and water. Environmental impacts. Adaptive comfort. UN Sustainable Development Goals (SDGs)</p> <p>STRATEGIES AND METHODOLOGIES</p> <p>Concepts, strategies, methodologies and analysis of parameters of environmental performance and environmental comfort.</p> <p>Lessons from vernacular architecture and its integration in modern architecture.</p> <p>Re-use principles and criteria.</p>			

The urban scale: criteria and parameters for a more sustainable urban design.
Legislation on buildings energy performance and environmental certification systems.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

The syllabus proposed allows the students to frame and context sustainability main concepts and state of the art. Therefore, fostering an informed critical thinking. The main strategies and tools proposed for data collection, analysis and use within the project development during the course allows the students to feel empowered not only in developing sustainable design strategies but also in evaluating their efficiency considering the buildings life cycle.

Teaching/Learning methodologies (including assessment)

Competence focused approach: foster the development of sustainability key competences that allow connecting sustainability to the field of study – reuse of modernist buildings.

Hands-on work, which implies workshops, approaches to real-life situations and a close relationship with the design studio module, where students have the main opportunities to put in practice the development of sustainable design strategies.

Post Occupancy Evaluation (POE): learning from buildings in use. Data and inputs from modern buildings in use.

Collaborative design practices to promote environmental and social sustainability.

Simulation tools to test the project design strategies.

The teaching methodology includes in presence and e-learning (synchronous sessions). Assessment includes logs on theoretical concepts, practical workgroup and individual project development (in coordination with the design studio).

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

Several studies regarding sustainability teaching emphasize the relevance of soft skills and sustainability key competences as fundamental tools to empower students developing effective strategies to promote sustainability in their future professional fields.

The course methodological approaches rely on a balance between: (i) fostering key competences (soft skills), (ii) feed the students with sustainability contents, concepts and problematics, (iii) teach and experiment with tools and methodological strategies that allow to develop sustainable design projects, such as POE tools and analysis, collaborative design and simulation models.

The goal of this methodological approach is to balance data and information with reflective self-learning strategies. It is simultaneous a Competence and Content focused teaching methodological approach.

Main Bibliography

- Anink, D.; Boonstra, C.; Mark, J. (1998) "Handbook of Sustainable Building", James & James, London
- Baker, Nick; Steemers, K., (2000) "Energy and Environment in Architecture: A Technical Design Guide", E&FN Spon, London.
- Birkeland, Janis, (2020) "Net-Positive Design and Sustainable Urban Development", Routledge, London (ISBN: 9780367258566)
- Brian Edwards, David Turrent, (2000) "Sustainable Housing: principles and practice", Spon, London
- Givoni, Baruch, (1969) "Man, Climate and Architecture", ed. Henry Cowan, ASP, London

- Goulding, J.; Lewis, J.O.; Steemers, (1992) "Energy in Architecture - The European Passive Solar Handbook", Batsford for the Commission of the European Communities, London
- Olgyay, Victor, n (1963) "Design with Climate - Bioclimatic Approach to Architectural Regionalism", Princeton University Press, Princeton
- Mossin, Natalie et al, (2018) "AN ARCHITECTURE GUIDE to the UN 17 Sustainable Development Goals", KADK, Copenhagen (ISBN: 978-87-7830-992-1)
- Porteous, Colin (2002) "The new Eco-Architecture: alternatives from the modern movement", Spon Press, London
- Thomas, Randal, (1996) "Environmental Design: An Introduction for Architects and Engineers", E & F Spon, London
- Union European, (1999) "A green Vitruvius - principles and practice of sustainable architectural design", Univ. College Dublin, Thermie - European Commission, James and James, Dublin.

Module Title	Environmetal Design 2		
Module Number	RMB 3. 2		
Module Responsibility	Jorge Carvalho		
Lecturers	Jorge Carvalho Invited lecturers (to be confirmed): Raimundo Mendes da Silva Guilherme Machado Vaz, Miguel Correia, Alexandre Dias, Desiré Pedro, José Neves		
Course of Study	RMB		
Status	Mandatory Module	x	Compulsory Module
Semester	2		
Forms of Teaching	lectures, workshop, field trips, studio and desk crits. Some classes will be online, using digital communication (ZOOM) and online board (MIRO)		
Language of Teaching	English		
Contact Hours	Lecture	1	Other 3
Workload (h)	Lecture	7	Workshop 2
	Study Visit	7	Seminar 12
	Self-Study	52	Exam Preparation 20
Workload total (h)	81		
Credits (ECTS)	3		
Prerequisites	RMB 3.1 Environmental Design 1		
Goal of study/ Competences study / Competences	1. Creating awareness of the value of representations elements 2. Operationalizing constructional design through design tools 3. Applying up to detailed scales the intervention criteria defined in the built heritage conservation charters 4. Selecting and specifying restoration techniques adequate to modernist construction systems.		
Contents of Study	Weeks 1-3 Design Workshop, Groups of four students, face-to-face. Lectures: 1. Work method: recommended in the historic study, the architectural survey, the construction survey and in the diagnosis report - Invited Lecturer: Raimundo Mendes da Silva 2. Conservation (Maintenance, Restoration and Reconstruction) of modernist construction systems: correction of weaknesses and pathologies in exposed concrete, wood, steel and waterproofing elements – Invited Lecturer: Raimundo Mendes da Silva 3. Reuse and technical update of non-listed modernist buildings: optimising the environmental performance while maintaining interior-exterior transparencies; introducing state of the art ventilation, energy co-generation and new fire escape routes while maintaining open-space systems of organization. Week 4 Study Visits – Model cases of integration in the design of the above-mentioned principles: - Casa da Arquitectura - Real Vinícola (Guilherme Machado Vaz)		

- Silos de Mértola (aNC arquitectos)
- Cooperativa Farmacêutica Plural (Alexandre Dias)
- Escola Francisco de Arruda (José Neves)

Weeks 5-7

Seminar: Individual work, face-to-face

Demonstration of the syllabus coherence with the curricular unit's objectives

In the lectures we transmit knowledge about restoration techniques adequate to modernist construction systems, intervention principles and design methods.

In the study visits we let know the results of applying up to detailed scales the intervention principles defined in the built heritage conservation charters.

In the practical exercise the students operationalize constructional design through design tools and become aware of the value of representations elements

Demonstration of the teaching methodologies coherence with the curricular unit's objectives

During the workshop, the students will have the opportunity to study and understand in-depth the building to reuse, namely in its construction and environmental aspects.

The practical exercises in the workshop and seminar will be integrated with RMB 10 - Design Studio 2, so as to promote the application of the principles, specialized knowledge and design tools transmitted in the lectures and study visits.

Forms of Exam

The assessment will be continuous, including:

1. Active participation of the students in the workshop, visits and seminar
2. Mid term and final "Presentation with colloquium" according to § 19 of the RMB Exam Regulation

Literature

- Thomas, Randal, "Environmental Design: An Introduction for Architects and Engineers", E & F Spon, London, 1996
- Union European, "A green Vitruvius - principles and practice of sustainable architectural design", AAVV

Module Title	Energy and Climate, Environmental Design			
Module Number	RMB 3. 3			
Module Responsibility	Dušan Ignjatović, PhD, Associate Professor			
Lecturer	Dušan Ignjatović, PhD, Associate Professor; Nataša Ćuković Ignjatović, PhD, Associate Professor; Bojana Zeković, PhD, Assistant Professor			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Compulsory I Module	
Semester	3			
Forms / Methods of Teaching	Lecture, Workshop, Laboratory			
Language of Teaching	English			
Contact Hours	Lecture	2	Other	2
Workload(h)	Lecture	12	Laboratory	1
				2
	Seminar		Workshop	1
				5
	Excursion		Paper preparation	
	Self-Study	30	Presentation	1
			Preparation	2
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	Knowledge and understanding of building performance Basic knowledge of modernist urban and architectural history; Basic knowledge and intellectual output of RMB 3.1 and RMB 3.2			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	Students will be able to: <ul style="list-style-type: none">- Understand the principles and methodology of building performance simulation and verification through measurement techniques- Understand the simulation postulates, principles and basic procedures as well as complexity levels- Understand the principles and method of contact and non-contact measurement procedures- Setup and perform basic non-contact and contact measurement-			
Syllabus	Contents of Study will include: <ul style="list-style-type: none">- Theoretical ground for implementation of simulation methods: principles, models, input data- Simple simulation method: setting up of a model, definition of parameters (environmental, material, usage, performative...)- Theoretical ground for implementation of measurement procedures: principles, equipment, methods, constrains- Infrared inspection- Heat flux measurement- Infiltration measurement- Practical implementation of methods: case study - workshop- Report generations			

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

The curriculum combines theoretical ground and practical implementation approaches in order (1) to rise understanding of the basic methodological framework of simulation and measurement, and (2) to develop skills for practical testing of principles, equipment, methods, constraints.

Teaching/Learning methodologies (including assessment)

In order to continuously monitor the development of students' knowledge and their practical skills, practical tasks will be formed, which will refer to specific methods and techniques that are the content of the course. Students will present the results of these tasks in 1 Midterm presentation followed by a critical discussion of all course participants. The second part of the semester will be methods/techniques testing oriented and the results of the research through the workshop will be prepared in 1 final seminar. 1 Midterm presentation and 1 final seminar

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

In the first part of the semester, students will gain knowledge and understanding of the principles and methodology of building performance simulation and verification, as well as the principles and method of contact and non-contact measurement procedures through a series of thematic lectures (ex-cathedra with group discussion). In the second part of the semester, students will practically apply a series of basic principles and procedures through case studies in the form of a workshop that will combine individual and group work of students.

Main Bibliography

- Szokolay, S. V. (2008) Introduction to Architectural Science: The Basis of Sustainable Design, Elsevier/Architectural Press,
- Kwok, A.G. Grondzik, W. (2018) The Green Studio Handbook: Environmental Strategies for Schematic Design, Routledge
- Giebeler, G et al. (2009) Refurbishment Manual: Maintenance, Conversions, Extensions, Birkhauser
- Vollmer, M. Moellmann, K.P. (2010) Infrared Thermal Imaging– Fundamentals, Research and Application, Weinheim: Wiley-VCH Verlag GmbH & Co,
- Novicki, A. (2004) Infrared thermography volume two–Applications, Northampton: Bindt–British institute of Non- Destructive Testing
- Lanzoni, D. (2015) Building thermography: Including blower door and heat flux meter (Infrared thermography) Create Space Independent Publishing Platform
- Ignjatović, D. Ćuković Ignjatović, N. (2017) Сачувај енергију /Conserve energy, Belgrade: Faculty of Architecture and GIZ
- Jovanović Popović, M. Ignjatović, D. (2011) SEEING ENERGY - Видети енергију, Belgrade: Faculty of Architecture and GIZ
- Konstantinou, T. N. Ćukovic Ignjatović, N. Zbašnik-Senegačnik M. Eds. (2018) Energy resources and building performance, thematic book series Reviews of Sustainability and Resilience of the Built Environment for Education, Research, TU Delft Open.
- EN standards: SRPS EN13187: 2008, SRPS EN 13829:2008, SRPS ISO 9869-1:2016

Module Title	Urban open space, landscape, and infrastructure			
Module Number	RMB 4.1			
Module Responsibility	Prof. Dipl.-Ing. Kathrin Volk /Prof. Ir. Michel Melenhorst			
Lecturer	Prof. Dipl.-Ing. Kathrin Volk and invited speakers and input with lectures, seminars, workshops and excursions from all other partner schools.			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	Status	Mandatory Module	Status
Semester	1			
Forms of Teaching	Workshop and research through design studios, lectures On-site instructions and particular emphasis on the specific local conditions and context Copies and papers on digital media (via ILIAS)			
Language of Teaching	English			
Contact Hours	Lecture	Contact Hours	Lecture	Contact Hours
Workload(h)	Lecture	Workload(h)	Lecture	Workload(h)
	Seminar	16	Seminar	-
	Excursion	16	Excursion	
	Self-Study	42	Self-Study	
Workload total (h) (h)	81			
Credits (ECTS)	3			
Prerequisites	Basic knowledge of modernist architectural history			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Competencies in the field of knowledge and understanding of the modern movement in urbanism and landscape architecture in general and in NW. Europe in particular</p> <p>In-depth understanding of analysis and methods for understanding and interpreting the design aspects of modernist urban landscapes and landscape architecture</p> <p>Specific knowledge of design, reuse and further development of urban landscapes in the context of modernist landscape architecture</p> <p>In-depth knowledge of theoretical approaches of modern landscape architecture and urbanism and their impact on current developments in urbanism and landscape architecture</p> <ul style="list-style-type: none"> - Inventing and using tools and methods for mapping , analyzing, and for assessing heritage values of modernist landscape architecture and urbanism 			
Syllabus	<p>Discussing and developing a contextual and conceptual understanding and specific knowledge to reuse, redefine and rethink urban landscapes based on theoretical and methodological knowledge and a site-specific approach.</p> <p>The teaching of in-depth knowledge of application-oriented, central theoretical approaches in rethinking and reusing modern urban landscapes in different scales and contexts.</p> <p>Exploring and combining analytical and problem-solving skills and methods with innovative thinking to address the current issues of urbanity and urban landscapes as a basis for redesigning modern urban landscapes</p>			

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

Students need to know the different typologies of urban open spaces, to understand their contribution to the urban fabric from the large scale of the city to the small scale of neighborhoods.

To do this it is necessary to define, invent and use analyzing methods, that are suitable for modernist sites and landscape. Contextualizing the modern sites and landscapes with the cultural zeitgeist broadens the approach to read and understand them. Thus, analyzing space is not only observing and mapping spatial contexts, but becomes, a tool to interpret it as a basis to rethink and reuse modern landscapes.

Teaching/Learning methodologies (including assessment)

Students read and analyse texts related to modernism (film, art literature, society) and modernist architecture, urban design, and landscape architecture in particular. With these texts in mind, they analyse and interpret modernist sites, neighbourhoods and landscapes. The division between reading, discussing going out, collecting, observing, analysing, and comparing will shift from one location to another.

1 Midterm presentation and 1 final presentation
Presentation and discussion of the results within the seminar per semester

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The students use specific modernist techniques of the flaneur and flaneuse, dérive, decomposition and montage to analyse topics such as size, colour, light, FAR and BCI. Besides fixed parameters for comparison in discussion and brainstorming, students will also develop methods that are more speculative: How was this design intended and what came out of it. Or: can we analyse the aspect of gender in the possibilities to use the public space. After three semesters, an accumulation of information and comparative studies will give students tools to recognise theory in real and vice versa.

Literature

- Brantz, D., Dümpelmann, S. (eds.). 2011. Greening the City: Urban Landscapes in the Twentieth Century. University of Virginia
- Gold, JR 2007. The Experience of Modernism: Modern architects and urban transformation, 1954–1972. New York: Routledge.
- Jacobs, J. 1961. The Death and Life of Great American Cities. New York: Random House.
- Lynch, K. 1960. The Image of the City. The MIT Press.
- O'Malley, Th., Wolschke-Bulmahn, J. 2015. Modernism and Landscape Architecture, 1890-1940. Washington: National Gallery of Art
- van Es, E., G. Harbusch, B. Maurer, M. Pérez, K. Somer, and D. Weiss (eds.) 2014. Atlas of the Functional City CIAM 4 and Comparative Urban Analysis. Bussum, Zurich: Thoth Publishers, gta Verlag
- Weilacher, U. 2001. Visionary Gardens: The modern landscapes of Ernst Cramer. Zürich: Birkhäuser Architecture.
- Debord, G. Theory of the Dérive. 1899. Barcelona: Museum of Contemporary Art.
- Les Lèvres Nues #9 (November 1956)
- Louis Aragon. Le Paysan de Paris. 1924

Module Title	Urban space, landscape, and infrastructure in SW Europe: social and cultural urban design			
Module Number	RMB 4.2			
Module Responsibility	Prof. José António Bandeirinha			
Lecturer	Prof. Gonçalo Canto Moniz			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Compulsory Module	
Semester	2			
Forms of Teaching	Theoretical lectures Workshop integrated in the design studios for practical exercise On-site visits Online lectures and workshops (when the students are based in Lisbon). The course will use digital platforms for communication, as ZOOM, and for collaborative design, as MIRO Copies and papers on digital media (via ILIAS)			
Language of Teaching	English			
Quantity (SWS)	Lecture	2	Other	2
Workload(h)	Lecture	14	Laboratory	
	Seminar		Workshop	14
	Excursion		Paper preparation	
	Self-Study	53	Presentation Preparation	
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	Basic knowledge of modernist architectural history - RMB 1.1 History of Modernism and RMB 2.1 Reuse Theory RMB 4.2			
Goal of study / Competences Programme.	RMB 4.2 will explore two educational dimensions on urban spaces, landscape and infrastructure. Firstly, urban production during the modern period, taking in consideration the cultural and social context of Portugal, Spain and Italy. Secondly, the contemporary urban regeneration of the modern cities in this regions, according to social and environmental challenges. The students should develop critical thinking to understand: <ul style="list-style-type: none">- Political impact of authoritarian regimes in the urban production- Conflicts between the urban theories and the cultural and social context- Abandonment of city centres and the creation of suburbs- The emerging of new forms of public space- Technical and Empirical knowledge- Alternative Urban planning methods- modern urban heritage values Students should also develop research through design: <ul style="list-style-type: none">- Urban analyses to understand the modern concepts in specific cases- Identify complex problems			

- urban strategies
- Implement participatory activities to co-design public spaces

Contents of Study / Syllabus

Part 1 – Modern urban space
 The early modern experiences in the urban center
 The modern public spaces – the avenue and the square
 The urban design under dictatorship
 The new state facilities and the urban developments
 The modern urban plan
 The modern infrastructures
 The park
 Social housing and the suburbs

Part 2 – Urban regeneration
 Rethinking modern planning
 Participatory planning and social housing
 Renovation of city center
 Public space strategy
 Tourism and urban regeneration
 Integrated urbanism
 Green cities
 Inclusive urban regeneration

Demonstration of the syllabus coherence with the curricular unit's objectives

Students need to know the different meanings of urban intervention within the modern movement, as well as its different social and political contexts, in order to be able to intervene and adapt modern urban spaces to contemporary circumstances, respectfully and avoiding mischaracterization.

Demonstration of the teaching methodologies coherence with the curricular unit's objectives

Rmb 4.2 will explore two main teaching methodologies.
 On one hand, a theoretical approach to consolidate the knowledge on the urban theories, the urban policies, the urban design approaches, and the social impact of the city developments.
 On the other hand, a research through design strategy will promote the learning by doing in articulation with the assignment proposed in the design studio RMB 10. Student will develop an urban strategy for the intervention area in order to explore an inclusive urban regeneration. There will be also the integration of the participatory methodologies developed in RMB 9 (Social Aspects)

Forms of Exam Assessment methods/Examination methods

Practical design exercise in groups
 Midterm presentation and final presentation
 Presentation and discussion of the results within the seminar per semester

Literature

- Aureli, Pier Vittorio (2013), *The City As A Project*, Ruby Press
- Bandeirinha, J. A.; Mota, N.; Correia, L. M. (2017), "Ideas and Practices for the European City", *Joelho: Journal of Architecture Culture*, 8
- Bandeirinha, José António, (2011), "Il processo SAAL, trentacinque anni dopo. Modelli, valutazione e upgrades. The SAAL Process, Thirty-Five Years

On. Models, Assessments and Upgrades”, in Lotus international, 145, 2011, pp. 48-53.

- Grande, Nuno (orgs.) (2012), O Ser Urbano. Nos Caminhos de Nuno Portas. (The Urban Being: on the trail of Nuno Portas), Lisboa: INCM/Guimarães 2012
- Moniz, G. C.; Ferreira, I. (2019), "Healthy Corridors for Inclusive Urban Regeneration", *Rassegna di Architettura e Urbanistica*, 158, 51-59
- Moniz, Gonalo Canto; Oppen, Christian von (2015), Urbanism under Salazar: Program, Practice, and Reception, in Harald Bodenschatz, Piero Sassi, Max Welch Guerra (org.), *Urbanism and Dictatorship. A European Perspective*. Basileia: DE GRUYTER, 89-101
- Moniz, Gonalo Canto; Correia, Lu s Miguel; Gonalves, Adelino (2017), "Fernando T vora Oporto's Urban Renewal. A Changing Moment in Urban Rehabilitation Policy Debate", *Journal of Urban History*, 009614421668845
- Swenarton, Mark, Avermaete, Tom, van den Heuvel, Dirk (2015), *Architecture and the Welfare State*, Routledge
- Sol -Morales, Manuel. Progettare citt  / Designing cities. Milano: Electa, 1999
- Tost es, Ana (Ed). (2016), Housing Reloaded, *DOCOMOMO JOURNAL*, 5

Module Title	Typo-Morphology of Modernist Settings – Yugoslav cultural space <i>In Situ</i>			
Module Number	RMB 4.3			
Module Responsibility Lecturer	Vladan Djokić, PhD, Full Professor Vladan Djokić, PhD, Full Professor; Milica Milojević, PhD, Assistant Professor; Aleksandra Djordjević, PhD, Teaching Assistant; Mladen Pešić, PhD, Teaching Assistant			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Compulsory / Optional Module	
Semester	3			
Forms / Methods of Teaching	Lecture/ Seminar (Webinar), Workshop on-site (instructions with particular emphasis on the specific local conditions and context)			
Language of Teaching	English			
Contact Hours	Lecture	2	Other	2
Workload(h)	Lecture	14	Laboratory	
	Seminar		Workshop	1
	Excursion		Paper preparation	4
	Self-Study	53	Presentation Preparation	
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	Basic knowledge of modernist urban and architectural history; Basic knowledge and intellectual output of RMB 4.1 and RMB 4.2			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none">- Understand the urban morphology as the study of the physical form of the city aligned with the processes and agents that shape that form over time;- Understand how modernist urban areas and landscapes are structured, how they evolved and function. Identifying the principles that mark the genesis and transformation of the urban fabric;- Get acquainted with the phenomenon of open spaces in relation to built structures in modernist city and landscapes while gaining insights into their diversification, typological perception, as well as an introduction to the process of formulating guidelines for their transformation and re-use;- Offer theoretical framework to architectural and urban design through analytical research, understanding, and design experimentation by using the typo-morphological approach <i>In Situ</i>;- Understand modernist urban form in order to inform design strategies and management decisions regarding the modernist urban heritage in relation to the contemporary challenges.			

Syllabus

CONCEPTUAL: Basic determinants and research methodology of urban morphology; Typology, diversification, and hierarchies of open spaces and built structures in relation to urban levels as the expression of social, economic, political, and cultural context.

CONTEXTUAL: Observation and measurement perspective, multi-disciplinary and multi-scalar approaches to understand the transformational logic of modernist heritage; Understanding the formation and transformation of modernist cityscape and landscape through the understanding of spatial network properties of modernist urban areas, patterns of urban blocks and its configurational properties.

SYNTHESIS: Scalar sequence of physical forms related to aggregation and spatial organization; *In Situ* research; Developing of Morphological Map(s) on all physical scales; Scientific analysis that can be translated into operational design tools for creating fundamentals and transposing specific values into the design phase.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

Conceptual part: students will have the opportunity to gain basic theoretical knowledge regarding the urban morphology and to comprehensively understand relations between open spaces and built structures. Introduction to the main typomorphological approach, concepts, and techniques from the perspective of theoretical research and professional practice.

Contextual part: students will be acquainted with the concept of Yugoslav cultural space as a specific context within which architectural and urban settings were conceptualized and built, representing characteristic modernist heritage on regional level in the present. Urban morphology approach will be used to apply tools for urban analysis to allow critical and historical reading of past, present, and future of modernist cities, territories, and landscapes.

Synthesis part: will allow students to gain skills and knowledge for the anticipation of changes within modernist settings and to conceptualize models of future re-use.

Teaching/Learning methodologies (including assessment)

3 presentations during semester and 1 final presentation

Presentations during the semester should be in line with three parts of the course conceptual, contextual and synthesis. In the first presentation students should conceptualise the thematic framework for research. In second presentation students will be expected to define research scope. Third and final presentation should be related to concept of mapping, selection of criteria for typology and spectrum of re-use.

Final presentation is in the form of a research Atlas of modernist settings that will follow all research phases (graphical, textual elaborations and explanations).

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

Urban morphology deals with urban fabric based on a typomorphological analysis of landscapes, districts, neighborhoods, streets, green spaces, blocks, plots, and buildings and their dynamics over time.

Lectures come in the first part, seminars, guest lectures and site visits with professionals in the second, the third part has field visits and individual students' work.

The theoretical part mediates between architecture, urban design, and landscape, while the practical part develops a conceptual and analytical framework to inform

critical design thinking and processes by using applicative and theoretical knowledge.

Interactive lectures encourage research into open spaces and built structures, their cultural context and historical continuity. With an insight into the determinants of open spaces and the research methodology, students select and systematize information for a critical presentation of the morphogenesis of modernist spaces. The research follows the themes of the lecture.

Main Bibliography

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- Oliveira, V., (Ed.). (2021). *Morphological Research in Planning, Urban Design and Architecture*. Springer.
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- Mrduljaš, M., and Kulić, V. (Eds.). (2012). *Unfinished Modernisations: Between Utopia and Pragmatism*. Zagreb: UHA.
- Stierli, M., and Kulić, V. (Eds.). (2018). *Toward a Concrete Utopia: Architecture in Yugoslavia, 1948–1980*. New York: The Museum of Modern Art.

Module Title	Typological Aspects		
Module Number	RMB 5		
Module Responsibility	Prof. Ir. Michel Melenhorst		
Lecturer	Michel Melenhorst, Janine Tüchsen		
Course of Study	RMB (Joint Master)		
Status	Mandatory Module	x	Optional Module
Forms / Methods of Teaching	Lecture, Seminar, Workshop		
Language of Teaching	English		
Contact Hours	Lecture	1	Other 3
Workload(h)	T - Theoretical Teaching	7	PL - Practical and laboratory teaching
	S - Seminar	21	TP - Theoretical - practical teaching
	TC - Field work	14	E – Internship -
	Self-Study	39	OT - Tutorial orientation
Workload total (h)	81		
Credits (ECTS)	3		
Prerequisites			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none"> - Learning research design- and planning strategies for implementing new uses and functions in existing building stock. - Learning to analyse, objectify and document different building types and the parameters influencing the possibilities for reuse such as context, history, construction, theory, building physics, and technics. - Present and discuss the results in the plenum. - Independent study/ treatment of knowledge by the inclusion of blended mobility (virtual lectures, online self-tests, flipped classroom and reading courses with tutorials) 		
Syllabus	<ul style="list-style-type: none"> - Different building types will be presented in the lectures, and the problems and potentials for a successful functional conversion will be illustrated and put in perspective. - Research on design approaches for interventions in, and extension to existing buildings, categorised by building typology. Existing projects are analysed, categorised, assessed and presented. - In a series of design case studies exercises, functional conversion options for specific building types will be tested. - 		
Evidence of the syllabus coherence with the curricular unit's intended learning outcomes	<p>Students need to know the opportunities and difficulties of conversion of specific building typologies such as warehouses, schools, industrial building to new uses to be able to prepare strategic intervention techniques adapted to building typology, future use, and modernism. The combination of research, problem-based learning, and informed design forms a balanced pack of frontal teaching and self-active learning. This combination is effective for a deep and long-lasting development of knowledge and applicable skills.</p>		

Teaching/Learning methodologies (including assessment)

Methodology: Problem-based learning

Scientific and artistic research leading to an extensive paper/design on the given topic and an informed design as follow up of the research.

Assessment of the paper/design:

- Research and design: integral, methodical, independent, underpinned research and design decisions, can argue and reflect critically.
- Environment and contextual awareness
- undertakes purposeful, design-related research
- uses existing knowledge and thus acquires new insights
- research is scientific
- Communicates orally, in writing and graphically, clearly, and concisely.
- can work effectively and efficiently together
- work has led to a deepening of the task and question
- Architectural /Heritage means are carefully incorporated in the design.
- The presentation is clear; the technique chosen is appropriate and has a high visual standard.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

- Lectures focusing on reuse problems of a specific building type into housing.
- Systematic building inquiry, case study of the originals state of a specific building typology and its cultural context in word, image, movement, and sound. The information-gathering over different sources plays an important role.
- Problem Based Learning and flipped classroom, Brainstorm, and planar session to gather and exchange knowledge to discuss and sort the information found on a specific conversion assignment.
- Students will visit examples of the building typology under survey.
- Learning to work with research by design and design by research in reuse assignments
- Students are asked to apply the collected knowledge to make a conceptual design. The design should be presented in a communicative format, making it suitable to forward the gained knowledge to others.

Main Bibliography

- van Uffelen, Chris (2010): *Re-Use Architecture*, Braun Publishing
- L Patrice Frey, iz Dunn, Ric Cochran cs. (2012): *The Greenest Building: Quantifying the Environmental Value of Building Reuse*, Preservation Green Lab
- Blom, Anita; Vermaat, Simone; de Vries, Ben (2017): *Post-War Reconstruction the Netherlands 1945-1965 The Future of a Bright and Brutal Heritage*, Rotterdam: nai010
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- Harald a Mieg (Herausgeber), Heike Oevermann, (2014): *Industrial Heritage Sites in Transformation*, Taylor & Francis Ltd
- J. Stanley Rabun and Richard Kelso. (2009): *Building Evaluation for Adaptive Reuse and Preservation*, Hoboken, NJ: John Wiley & Sons, Inc.,
- Prudon, Theodore (2008): *Preservation of Modern Architecture. 1. Aufl.* New York, NY: Wiley, J.

- Orazzi, Steffi (2018): *Modernist Estates Europe. The Buildings and the People who live in them Today*. London White Lion
- Michel Melenhorst, Uta Pottgiesser, Theresa Kellner and Franz Jaschke (Eds.): (2019) "100 YEARS BAUHAUS. *What interest do we take in Modern Movement today?*". 3rd RMB and 16th Docomomo Conference, Technische Hochschule Ostwestfalen-Lippe and Docomomo Germany, Lemgo,
- Michel Melenhorst, Goncalo Canto Moniz and Paulo Providencia (Eds.) (2018) "*Teaching through Design*". 2nd RMB Conference, University of Coimbra and Technische Hochschule Ostwestfalen-Lippe, Detmolder Schule für Architektur und Innenarchitektur, Coimbra

Module Title	Research and Methodology, documentation and analysis			
Module Number	RMB 6			
Module Responsibility	Maria Leus,+ new full professor when Maria Leus goes in emirate			
Lecturer	Philippe Lemineur			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Compulsory Module	
Semester	1			
Forms / Methods of Teaching	Lectures and studio method: concepts presentation and discussion; methodological approach; instructional sessions, discussion, and student work, Workshops, Self-tuition and Field Work (case studies approach)			
Language of Teaching	English			
Contact Hours	Lecture	1	Other	3
Workload(h)	Lecture	9	Laboratory	
	Seminar	20	Workshop	1
	Excursion		Paper preparation	
	Self-Study	42	Presentation Preparation	
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	Basics of Building Physics and History of Architecture			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none">- The main goal of this course is to underline the importance of in-depth interdisciplinary research on modernist heritage. The methodology is based on a historical and architectural analysis that will support the valuation and reuse of modernist buildings. <p>On the successful completion of the course, students will have demonstrated:</p> <ul style="list-style-type: none">- The competence to execute a building history research.- The ability to analyze historic documentation.- The ability to make an architectural analysis and to formulate their own vision on cultural heritage issues- The ability to formulate a preliminary valuation and concept for reassessment- The competence to work interdisciplinary.- The competence to write down and present their research.			
Syllabus	Using existing theoretical models and roadmaps, the topic of the reallocation of modernist buildings and sites will be addressed. These models will be tested against practical and recent examples of redevelopment projects. Subsequently, this theoretical part will be tested by means of a group assignment based on specific supplied cases, as well as recent cases proposed by the students themselves.			

The course will provide a methodology to approach, research and analyse modernist heritage for conservation and future re-use.

The course will aim to support the students with a methodology to document and study modernist heritage based on onsite research, archival sources and contemporary literature.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

Teaching/Learning methodologies (including assessment)

As case studies are central in this course, papers selected and gathered about a specific case or context of a case, will support the case study research.

The RMB Case Study Handbook can be inspirational, but can also be extended by case studies developed in this course.

- 1: Making a final report that includes the historical and architectural analysis, a valuation and the reassessment concept, which will be concretized in words and plans.
- 2: Making a final presentation based on the conclusion of the research. This presentation will be presented to an international jury of experts.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

Students will develop these capacities through the learning of a methodology that focuses on:

- Exploring building history research of the exterior, interior and design concept of a building.
- Analyzing the architectural elements (material and construction) based on onsite investigation and archival sources.
- Formulating a valuation and reassessment

The work in the studio, consisting of (concept) presentations and discussions of cases-studies allow students to develop the above mentioned capacities. The learning process in the studio encourages students to develop and communicate an opinion about their project and the one of others. The methodology that will be applied is based on the Adaptive Reuse finding process, developed by Maria Leus (see IO 2.1. Methodology).

The lectures and papers (self-tuition) will nourish the discussions and support their analysis of their onsite observations (field work) as well as the archival sources. It will also enhance them in making evaluation and reassessment of their cases.

Main Bibliography

- RMB Case study handbook.
- Course information will be put on ILIAS/Novell Filr
- Specific literature depending on the projects.

Module Title	Design Studio 1^a		
Module Number	RMB 7.1		
Module Responsibility	Paul Wauters/Eva Storgaard		
Lecturers	Architectural design: Paul Wauters (UA) Eva Storgaard (UA), Michel Melenhorst (TH-OWL), Janine Tüchsen (TH-OWL)		
Course of Study	RMB (Joint Master)		
Status	Mandatory Module	x	Compulsory Module
Semester	1		
Forms / Methods of Teaching	Workshop, Design Studio, Lecture, Seminar		
Language of Teaching	English		
Contact Hours	Lecture	2	Other 6
Workload(h)	T - Theoretical Teaching		PL - Practical and laboratory teaching 42
	S – Seminar		TP - Theoretical - practical teaching 14
	TC - Field work	20	E – Internship
	Self-Study	86	OT - Tutorial orientation
Workload total (h) I (h)	162		
C Credits (ECTS)	6		
Prerequisites	Basic knowledge of building physics and history of architecture		
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>To develop the ability ...</p> <ul style="list-style-type: none"> - to analyze architectural, cultural and societal coherence in designing sustainable use and reuse of historical buildings - to use (exploratory) research to gain valuable insights into the characteristics of modernism specifically of interior architecture - to use appropriate research techniques for collecting data or for constructing empirical evidence - to analyze and assess different contextual influences and situations to the benefit of a project - to present the concept of a project critically, both orally and written - to develop strategies for learning and researching independently - to work in interdisciplinary teams - to search for, select, consult and interpret relevant sources in relation to exploring a specific research focus - to use visualization techniques with the aim of analysing the subject and gaining insight into the matter - to bring the research to a valuable final result that has an added value for the discipline of (interior) architecture 		
Syllabus	<p>Modernism influenced Belgian architecture from the 1920s-1970s. Currently modernist housing is subject of reuse, conversion, reallocation – or demolition. Architects and interior architects are as a result increasingly confronted with the architectural heritage of modernism. New living patterns and new quality standards often require radical interventions. From a heritage perspective, (interior)architects play an important role in recognizing and acknowledging the characteristic qualities</p>		

of modernism. This studio develops knowledge deriving from modernism, focusing on its origins, underlying vision, ideology, principles and properties. Three different themes (plan libre versus raumplan / materialization and color / equipment and techniques) are addressed in three different assignments. Each theme contributes to insights into modernism and is introduced by a lecture and followed by individual design assignments. The outcomes are presented, discussed and evaluated in a group of peers.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

Bibliography: the literature, of which some seminal works, supports and deepens the main themes of the course: plan libre versus raumplan / materialization and color / equipment and techniques)

Teaching/Learning methodologies (including assessment)

Mid-term crits: presentations of architectural model (1) + design assignments (3)
Final presentation (jury)

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

Architectural model building: based on original plans, site visits and local surveys students will produce a scale model of an existing modernist house. This model serves as point of departure for subsequent assignments.

Lectures: during three lectures, students get acquainted with three different main themes characteristic for modernism. Each theme nurtures the assignments.

Design assignments: students apply, explore and interpret their gained knowledge about modernism through own work. The methods of problem-based learning is applied in the studio. The communication techniques to teach embodied architectural knowledge in the design studio, developed by Marjan Michels (see IO 2.1. methodology), encourage students to reflect and communicate about their project.

Crits: design outcomes are presented, discussed and evaluated with peers which will learn them how to present the concept of a project critically, both orally and written.

Literature

- papers on ILIAS depending of the project
- Risselada, M. (1989) *Raumplan versus Plan Libre : Adolf Loos and Le Corbusier, 1919-1930*. Rizzoli
- Rüegg, Arthur. (1997). *Le Corbusier. Polychromie Architecturale. Color Keyboards from 1931 and 1959*. Birkhäuser
- Le Corbusier. Architectural Polychromy. In: Komossa, S. et al. (2009) *Colour in contemporary architecture: projects/essays/calender/manifestoes*. (pp 372-386) SUN.
- Loos, A. Het principe van de bekleding. In Komossa, S. et al. (2009) *Colour in contemporary architecture: projects/essays/calender/manifestoes* (pp 350-354). SUN
- Overy, P. (2008) *Light, air and openness. Modern architecture between the wars*. Thames & Hudson.
- Giedion, S. (1947). *Mechanization takes command*, O.U.P.
- De Vos, E. & Storgaard, E. (2018). Teaching re-use strategies for modernist buildings: a case study handbook for a joint European Master in Architecture. *Joelho: journal of architectural culture*, 187-201

- Colomina, B. & Wigley, M. (2020). The Bacterial Clients of Modern Architecture. *Docomomo Journal: Cure and Care* (62), 6-17

Module Title	Design Studio 1B		
Module Number	RMB 7. 2		
Module Responsibility	Prof. ir Michel Melenhorst		
Lecturers	Architectural design: Paul Wauters (UA) Eva Storgaard (UA), Michel Melenhorst (TH-OWL), Janine Tüchsen (TH-OWL)		
Course of Study	RMB		
Status	Mandatory Module	x	Compulsory Module
Semester	1		
Forms / Methods of Teaching	Lectures and studio method: concepts presentation and discussion; methodological approach; instructional sessions, discussion, and student work, workshops, self-tuition and field work (case studies approach)		
Language of Teaching	English		
Contact Hours	Lecture	2	Other 6
Workload(h)	T - Theoretical Teaching		PL - Practical and laboratory teaching 42
	S - Seminar		TP - Theoretical - practical teaching 14
	TC - Field work	20	E – Internship
	Self-Study	86	OT - Tutorial orientation
Workload total (h)	162		
Credits (ECTS)	6		
Prerequisites	RMB 7.1		
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none"> - Use analysis and design results from RMB 7.1 and RMB 5 - Further develop concepts into a design in existing buildings in complicated and complex contexts. - Prove the ability to successfully develop a range of coherent steps from design concept to a definitive design for a factual architectural assignment considering the buildings' physical, structural, climatological, and cultural context. - To develop respectful design methods for acts of intervention in modern movement architecture, focusing on the interior architecture. - The ability to present the project, both orally and on paper/screen clearly and appropriately as well as a critical reflection of the results - The students will be qualified to develop strategies for learning and research independently. - By working in interdisciplinary teams, students will learn to work in an office-like situation and benefit from the resulting cross fertilization. In the teamwork students will develop conflict management and chair skills. 		
Syllabus	<ul style="list-style-type: none"> - In the RMB 7.2 studio, students develop design solutions responding to spatial qualities, characteristics of the building, the site/urban setting, the program, and the construction process requirements. - Start Up is an onsite workshop. 		

- The project centres on a building design in a historical context with the possibilities to work with re- use, building extensions, and the design of new constructions with direct spatial connection to the existing structure.
- The design focusses on the building's interior design and housing. RMB 7.1 lies a focus on analytical skills and modernist concepts, RMB 7.2 on using these modernist concepts and use them for developing concepts for actual interventions modernist buildings.
- analysing building fabric and its economic, technical and cultural assessments are integrated into the design process.
- The documentation of the project shows the design as well as the design process
- Materials and details are considered in relevant scales.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

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The active application of knowledge in a holistic design, integrating aspects of interior architecture, architecture, heritage construction, culture, in a design project of moderate scale is the most effective way for training and testing research by design and design by research. Specifically focusing on interior architecture and housing.

The workshop is not only for research and getting familiar with the topic and subject, but also to develop team skills

All the parameters affecting the design such as economics, building technics and culture are requested to be integrate into the design keeping up the goals as formulated in the design concept

Teaching/Learning methodologies (including assessment)

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Mid-term crits: presentations of architectural model (1) + design Concept
Final presentation (jury)

Criteria:

work deepened the task and question

task, program, and context analysis show an understanding of the essence of the task and lead to reasoned, appropriate, personal convincing and original (not copied) design.

the design reflects to the qualities and potentials of the existing building, integrating modernistic concepts as plan libre and raumplan in a contemporary version.

Heritage means are carefully incorporated

The presentation is clear, appropriate and has a high visual standard.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

Architectural model building: based on original plans, site visits and local surveys students will produce a scale model of the object for intervention and use this for testing their design. Adaptation in the model is recorded in photos, sketches and film.

Lectures: during three lectures, the relation between reuse concept and constructive, economic and technical parameters is highlighted

Design assignments: students apply, explore and interpret their gained knowledge about modernism through own work. The methods of problem based learning is applied in the studio. The communication techniques to teach embodied architectural knowledge in the design studio, developed by Marjan Michels (see

methodologies), encourage students to reflect and communicate about their project.

Crits: design outcomes are presented, discussed and evaluated with peers which will learn them how to present the concept of a project critically, both orally and written.

Literature

- RMB Case study Handbook
- Graeme Brooker, Sally Stone, (2014). *Rereading, Interior Architecture and the Design Principles of Remodelling Existing Buildings*, RIBA Enterprises, London
- Graeme Brooker, Sally Stone, (2019). *Rereading 2, Interior Architecture and the Design Principles of Remodelling Existing Buildings*, RIBA Enterprises, London
- Steven Hillyer, Sunnie Joh, Kveni Bone (eds), (2014), *Lessons from Modernism, Environmental Design Strategies in Architecture, 1925-1970*, Monacelli Press, New York
- van Uffelen, Chris (2010). *Reuse Architecture*, Braun Publishing
- Pettinari, J. 1980, *Adaptive Reuse: A Case Study*, Journal of Interior Design and Research, Vol. 6, No. 2, pp. 33–42
- Pfammatter, Ulrich (2014). *Building for a Changing Culture and Climate*. Berlin: Dom Publishers, Berlin.
- Preservation Green Lab (2012). *The Greenest Building: Quantifying the Environmental Value of Building Reuse*
- Rabun, J. Stanley, and Kelso, Richard (2009). *Building Evaluation for Adaptive Reuse and Preservation*, Hoboken: John Wiley & Sons, Inc.,
- Michael U. Hensel (Editor) on (2012). *Design Innovation for the Built Environment: Research by Design and the Renovation of Practice*, Routledge publishers New York.

Module Title	Assessment of modern buildings in use			
Module Number	RMB 8			
Module Responsibility	Teresa Heitor, Alexandra Alegre			
Lecturer	Teresa Heitor, Alexandra Alegre and guests			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Optional Module	
Semester	2			
Forms / Methods of Teaching	Lecture, Seminar, Workshop			
Language of Teaching	English			
Contact Hours	Lecture	2	Other	2
Workload (h)	T - Theoretical Teaching	14	PL - Practical and laboratory teaching	-
	S - Seminar		TP - Theoretical - practical teaching	1
	TC - Field work		E – Internship	4
	Self-Study	53	OT - Tutorial orientation	-
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	-			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>The course aims to underline the importance of the user’s perspectives and to develop students’ research skills related to the performance assessment of the modern built environment: knowledge and capacity to understand, design and implement space-use analysis (SUA) and effective and strategic post-occupancy evaluations (POE) in various facility contexts.</p> <p>The course aims to develop students understanding of the conceptual knowledge and research methods employed in SUA and POE and to develop students’ skills in:</p> <ul style="list-style-type: none">- understanding programmatic/functional concerns from the user’s point of view implicated in the reuse of modern buildings;- planning, designing, planning and implementing SUAs and POEs project;- analysing the information collected in SUAs and POEs, writing practical and strategic reports based on the findings and using the information to inform the design phase;- facing the conclusion of the previous research with the typological, spatial and technical aspects of the case study.			
Syllabus	<p>Students will develop these capacities through the learning of conceptual knowledge on SUA and POE and the subsequent application of this knowledge in the planning, designing, implementing and reporting of SUA and POE projects by developing exercises based on case studies.</p> <p>Course contents are focused on 3 main topics:</p> <ul style="list-style-type: none">- THE PROBLEM: How to identify and formulate problems, and to envisage and enact processes in response to them;- THE EVIDENCE: How to carry out a SUA and a POE project; How to collect and analyse facts (reliable information to inform the design process); How to find, evaluate and synthesize information from evidence. How to uncover and test concepts, determine needs and inform design decisions.			

- THE RESULTS: How to develop critical thinking, make informed judgments, solve problems, and construct knowledge and arguments.

How to make effective use of oral, written, statistical, visual and other forms of communication to critique, negotiate, create and communicate understanding.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

The syllabus of the course provided theoretical, methodological and technical assessment for architectural objects in use. The focus is directed to the suitability of the design solution concerning the type of demands made by the social organization that accommodates. It follows an holistic understanding of the architectural design process based on a critical reflection on the different conditions, requirements, implications and risks that arise in the planning, design, construction, occupation and maintenance stages. The student ability to communicate the validity of the analysis produced (diagnostic use) and decision-making (proposed design solutions and intervention principles) is exercised.

The contents taught allow the student: 1) to revise and extend previous knowledge, 2) to acquire new knowledge useful to architecture practice, 3) to enable further learning through autonomous research.

Teaching/Learning methodologies (including assessment)

The teaching-learning model adopted involves three components: theoretical, experimental and instrumental components complemented by study visits and lectures/seminars with invited experts.

Discussion of theoretical/methodological concepts and presentation of relevant examples complemented by practical exercises based on a case study. These exercises are planned to allow the application and testing of methodological procedures and analytical tools.

Students' grades will be determined on the basis of the student portfolio (group work) done through the semester, class participation and a written examination.

1. Map and review of a SUA and POE project (problem statement; constructs, variables, and methods; methods and analyses and their strengths/weaknesses; possible alternative hypotheses; results)
2. Case studies (modern building in use) in a standard format with descriptions/data, plans, photos, diagrams, etc. focusing on the application of SUA and POE methodologies.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The learning and assessment methods are designed so that students can develop a comprehensive understanding of the potential in this area, ensuring at same time the acquisition of technical skills necessary to achieve the course objectives. Students are faced with real situations that allow them: 1) to implement the methodological procedures and related analytical tools, 2) to open prospects for further research and critical exploration of architectural objects and their conditions of use.

The theoretical component provides the fundamental basis for understanding the architectural problems.

The practical component facilitates students with tools to evaluate the conditions of use of architectural objects. The experimental component, which integrates theoretical and practical issues, is established along the development of the case study. The studio method includes lectures, instructional sessions and discussion, but the emphasis is on student work. Learning by doing through exercises based on case studies is the focus that is supported by collaboration with colleagues in a cooperative, interactive milieu. Lectures and discussions will be supplemented by practical exercises that will provide

students with practical experience for a fundamental understanding of the importance of the user's point of view as part of the design process.

Main Bibliography

- Baird, George (1996). *Building Evaluation Techniques (Centre for Building Performance Research, Victoria University of Wellington)*. McGraw-Hill.
- Brand, Stewart (1994). *How Buildings Learn: What Happens After They're Built?* Viking Press, 1994.
- Friedmann, Arnold, Zimring, Craig, & Zube, Ervin (1978). *Environmental Design Evaluation*. Plenum Press.
- Kernohan, David, Joiner, Duncan; Daish, John; Gray, John (1992). *User Participation in Building Design and Management*. Butterworth.
- Preiser, Wolfgang (2003). *Improving Building Performance*. NCARB.
- Preiser, Wolfgang, Rabinowitz, Harvey Z, & White, Edward T. (1988). *Post-Occupancy Evaluation*. Van Nostrand Reinhold.
- Preiser, Wolfgang & Vischer, Jacqueline C (Eds.). (2005). *Assessing Building Performance*. Elsevier Butterworth-Heinemann.
- Preiser, W., Davis, A., Salama, A. & Hardy, A. (2015). *Architecture beyond criticism. Expert judgment and performance evaluation*. Routledge.
- Groat, Linda, & Wang, David (2002). *Architectural Research Methods*. Wiley.
- Van der Voordt, Theo J.M., & Van Wegen, Herman B.R. (2005). *Architecture in Use: An Introduction to the Programming, Design, and Evaluation of Buildings*. Elsevier.
- Zeisel, John & Eberhard, John P. (2006). *Inquiry by Design*. Wiley.

Module Title	Social Aspects			
Module Number	RMB 9			
Module Responsibility	Paulo Providência, Sandra Xavier			
Lecturer	Paulo Providência, Sandra Xavier, Paulo Peixoto			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Optional Module	
Forms / Methods of Teaching	Seminar, Workshop, Practical Teaching			
Language of Teaching	English			
Quantity (SWS)	Lecture	1	Other	3
Workload(h)	T - Theoretical Teaching	7	PL - Practical and laboratory teaching	-
	S – Seminar	7	TP - Theoretical - practical teaching	1
				4
	TC - Field work		E – Internship	-
	Self-Study	53	OT - Tutorial orientation	
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	History of modernism and Theory of modernism and reuse (RMB 1)			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>To develop critical reflexions concerning participation processes</p> <p>To develop analytical methodologies to map the use of a building or urban area</p> <p>To develop design methodologies to engage users in the design process</p> <p>To Introduce research methodologies in social sciences, namely participant observation and photo-elicitation</p> <p>To translate architecturally the social content of design</p>			
Syllabus	<p>Session 1, Presentation of the Course (PPr, SX, PPx)</p> <p>Module 1</p> <p>Session 2, Photo-elicitation, Seminar. Paulo Peixoto</p> <p>Session 3, Photo-elicitation, Workshop, Groups of four students. Paulo Peixoto</p> <p>Module 2</p> <p>Session 4, Ethnography and Participant Observation, Seminar. Sandra Xavier</p> <p>Session 5, Ethnography and Participant Observation, Practical, Groups of four students. Sandra Xavier</p> <p>Module 3</p> <p>Session 6, Architectural Ethnography, Seminar. Paulo Providência</p> <p>Session 7, Architectural Ethnography, Workshop, Groups of four students. Paulo Providência</p> <p>Session 8, Assessment and Results Discussion (PPx, SX, PPr)</p>			
Evidence of the syllabus coherence with the curricular unit's intended learning outcomes	Through the three modules of ethnography, participant observation, photo-elicitation and architecture ethnography, students will learn research methodologies in order to develop critical reflexions concerning participation processes			

Teaching/Learning methodologies (including assessment)

Seminars and Practical Group Work (Workshop)
Report on visual methodologies (module 1) 30%
Ethnography (module 2) 30%
Architectural Design (module 3) 30%
Final Assessment and Results Discussion 10%

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The teaching methodologies are based in seminars for theoretical discussion of the contents, and workshops and practical work in which the contents are applied. The teaching/learning methodologies avoid just bibliographic or purely academic knowledge.

The final outcome should be observed in the design proposals of students.

Main Bibliography

- Emerson, R. M.; Fretz, R. I. E Shaw, L. L., (1995), *Fieldnotes in Ethnographic Research*, in Writing Ethnographic Fieldnotes, Londres, The University of Chicago Press: 1-16.
- Flood, N., (2019). "Drawing on Thick Descriptions in Architectural Pedagogy", Irish Journal of Anthropology, 22(1), 328-335.
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- Ingold, T. (2014), *That's enough about ethnography!* in Hau: Journal of Ethnographic Theory 4(1): 383-395.
- Jones, Petrescu, Till (eds) (2005), *Architecture and Participation*. London: Routledge.
- Kajima, Stalder, Iseki (2018) *Architectural Ethnography*. Tokyo: Toto.
- Moniz, et al. (2017), *Dialogue with the community and photo elicitation for reuse of modern buildings design studios: a pedagogical experience* in Michel Melenhorst, Uta Pottgiesser, Christine Naumann, Theresa Kellner (org.), RMB Conference 2017. Detmold: Hochschule OWL (University of Applied Sciences), 79-89.
- Till, Jeremy (2005) 'The Negotiation of Hope', in *Architecture and Participation*, eds. Blundell Jones, Petrescu, Till. London: Routledge, 25-44.

Module Title	Design Studio 2A, Reuse, social and urban design		
Module Number	RMB 10. 1		
Module Responsibility	Gonçalo Canto Moniz		
Lecturers	Architectural design: Gonçalo Canto Moniz, José Fernando Gonçalves, Paulo Providência		
Course of Study	RMB		
Status	Mandatory Module	x	Compulsory Module
Semester	2		
Forms / Methods of Teaching	Workshop, Design Studio, Lecture, Seminar		
Language of Teaching	English		
Contact Hours	Lecture	2	Other 6
Workload(h)	T - Theoretical Teaching		PL - Practical and laboratory teaching 42
	S – Seminar		TP - Theoretical - practical teaching 14
	TC - Field work	20	E – Internship
	Self-Study	86	OT - Tutorial orientation
Workload total (h)	162		
Credits (ECTS)	6		
Prerequisites	First Design Studio (RMB 7)		
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none"> - Learning of design methodologies to modernize existing public and private collective buildings. - Learning how to dialogue with the social actors of an existing public building to integrate it in the design process - Implementing participatory methods in the design process. - Analyze the discourses of the social actors in the design process. - Develop co-creation process with citizens - Learning design and planning strategies for the implementation of new uses and functions in existing building stock. - Learning of design methodologies and strategies leading to sustainable architecture - Learning to integrate building's performance with lessons took from post occupancy methods considering users' environmental comfort - Learning to develop new solutions for energy and climate challenge - practicing reflection-in-action (along the workshop). - Acquiring group work capacity to develop concepts, strategies, and projects - Present and discuss the results in the plenum and with users. - 		
Syllabus	<p>Architecture and Urbanism of the welfare state (1945-2015)</p> <p>Identify and characterize the relation between modern science and modern architecture, namely modern medicine, modern pedagogies, and modern living</p> <p>Case studies of contemporary transformation of modern public buildings – schools, hospitals, housing, courts, etc.</p> <p>Workshops on participatory methods with invited scholars.</p> <p>Workshops on “mapping controversies methodologies” with scholars from science studies.</p>		

Design with people, case studies on social housing, school architecture, and health architecture.

Program (activities and content per week):

Week 1-3, Design Workshop on Reuse

Week 4, Lecture 1: - General introduction to Reuse and Participation

Week 4-5, Seminar/assignment 1: Rethink reuse strategy defined in the workshop

Week 6, Lecture 2: Design Methodologies and References

- Social sciences methodologies on the architectural design for reuse

Week 6-7 Seminar/assignment 2: Individual work

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

The course's syllabus focuses on the social dimension of the reuse of modern buildings and urban spaces

This programmatic approach has the goal to promote the integration of historical, theoretical, urban, and social knowledges in the design process relating it with place and memory.

The student should work with urban and architectural design methodologies that develop his ability to critical reflection and his/her conceptual and instrumental competencies that range from the design of a complex architectural programme, through building systems and techniques suited to the scale and use of the proposed building, ending with a comprehensive understanding of the infrastructural systems employed, their coordination and control.

Ultimately, a simulation of real professional architect's work is stimulated by engaging citizens in the design process

Teaching/Learning methodologies (including assessment)

Design Studio with lectures, seminar, studio and desk crits. Starts with an intensive two-week workshop.

The course will take place in UC and in IST. In this sense, some classes can have some online discussions, using digital communication (ZOOM) and online board (MIRO)

Theoretical lectures presenting themes and concepts that will be worked in the Design Studio.

Practical classes where teachers work with the students on the development of his/her project in which the work of the students either in group or individual work. Field trips to the site, as well as to any other location where the urban or programmatic situation promotes a better understanding of the problems posed by the design studio.

The evaluation of participation and work will be continuous, over the two semesters, and has two moments of presentation, interim and final, with critical evaluation and delivery of documentation (text and drawings). Posters and exhibition at the RMB colloquium.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

In the first weeks the focus will be set on the conceptual resolution of the design issues, seeking to establish an understanding of scale, proportion and balance, mainly in what concerns urban relations and programme development (articulation with RMB4.2 Urban spaces, landscape and infrastructure). Firstly with a workshop and then in the design studio practice.

In the last weeks semester the focus will be set on the articulation between conceptual principles and building system, as well as the ability to control programme, citizens engagement, urban insertion and materialization.

The evaluation system relates the capacity to design and to built a critical and theoretical discourse. So, it will evaluate the project, the research work on the theme, the synthesis work related to the presentations and the participation on the study visits.

Literature

- Latour, B. *Bruno Latour on Mapping Controversies*. Retrived from <https://web.archive.org/web/20150315062615/http://www.mappingcontroversies.net>
- Lawson, B (1997) "How Designers Think: The Design Process Demystified", Oxford: Architectural Press.
- Lawson, B (1997) *How Designers Think: the Design Process Demystified*, Oxford: Architectural Press.
- Ford, E. R. (1997) *The Details of Modern Architecture*, London: MIT Press
- Melenhorst, M.; Moniz, G. C.; Providência, P. (2018), *Teaching through Design*, in: 2nd Reuse of Modernist Buildings Conference. Coimbra, Detmold: RMB Project, e|d|arq
- Moniz, G. C. (2017), *Dialogue with the community and photo elicitation for reuse of modern buildings design studios: a pedagogical experience*, in Michel Melenhorst, Uta Pottgiesser, Christine Naumann, Theresa Kellner (org.), RMB Conference 2017. Detmold: Hochschule OWL (University of Applied Sciences), 79-89.
- Melenhorst, M.; Bastos, F. *Contributions of Academic Workshops to the Discussion on the Reuse of Modernist Buildings*, in: DOCOMOMO Congress, Lubiana, Procedings of DOCOMOMO Congress, Lubiana, 485-492
- Jones, P, B, Doina P., Till. J. (2013), *Architecture and Participation*. Routledge.

Module Title	Design Studio 2B, Reuse, building and urban design		
Module Number	RMB 10. 2		
Module Responsibility	Francisco Teixeira Bastos		
Lecturers	Architectural design: Francisco Teixeira Bastos, João Appleton, Patrícia Lourenço, Daniela Arnaut, Other Specialist (historian, conservative, structural engineer)		
Course of Study	RMB		
Status	Mandatory Module	x	Compulsory Module
Semester	2		
Forms / Methods of Teaching	Workshop, Design Studio, Lecture, Seminar		
Language of Teaching	English		
Contact Hours	Lecture	2	Other 6
Workload(h)	T - Theoretical Teaching		PL - Practical and laboratory teaching 35
	S - Seminar		TP - Theoretical - practical teaching 7
	TC - Field work	30	E – Internship
	Self-Study	90	OT - Tutorial orientation
Workload total (h) I (h)	162		
C Credits (ECTS)	6		
Prerequisites	First Design Studio (RMB 7) and Design 2A (RMB 10.1)		
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none"> - Through the simulation of the office environment and teamwork, the course aims to promote critical and creative learning, mutual help in building common knowledge and empowering the student to: - Learn design methodologies to modernize existing collective Housing buildings. - Understand the need for and learning to seek “knowledge” to intervene in existing modern buildings. - Acquire the ability to successfully detect the specific multidisciplinary need for knowledge that informs interventions on existing buildings. - Establish intervention strategies based on the knowledge of modern buildings. - Develop learning and understanding of the intervention over modern buildings based on a trilogy that includes increased levels of performance; preservation of values; reinvention of buildings. - Mastering the graphic codes of representation of the project and proposing new modes of communication to defend a clear and adequate critical reflection on the existing and intervention - Develop learning and research strategies independently. 		
Syllabus	<p>As in the first, in the second quarter, the project is the pole of knowledge aggregation. It focuses on adapting a building to current usage and performance conditions, with the aim of maintaining its essential values, as an example of "Modern building / ensemble". The assignment of the project has a particular focus on the habitability and sustainability of the building.</p> <p>In RMB 10B, students should start with the identification of which values (technical, artistic, morpho-typological) to preserve and which are the conditions of the</p>		

intervention to propose competently informed intervention strategies aiming for the conceptualization of the proposal.

The confrontation between the required program and its compatibility with the implementation in the existing building should be part of the conceptual proposal. Redesigning existing building (reinvention) should be developed following the defined strategy and always framed by self-imposed restrictions (values to preserve) and the objectives established for the functioning of buildings (performance levels to achieve).

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

The course's syllabus focus is on physical and typological dimension of the reuse of modern buildings and urban spaces

This programmatic approach has the goal to promote the integration of historical, theoretical, and urban knowledges in the design process relating it with place and memory.

The student should work with urban and architectural design methodologies that develop his critical reflection ability and his/her conceptual and instrumental competencies that range from the design of a complex architectural programme, through building systems and techniques suited to the scale and use of the proposed building, ending with a comprehensive understanding of the spatial articulations and building systems employed, their coordination and control.

Ultimately, a simulation of real professional architect's work is stimulated by engaging citizens in the design process

Teaching/Learning methodologies (including assessment)

Design Studio with lectures, seminar, studio and desk crits. Starts with an intensive two-week workshop.

The course will take place in UC and in IST. In this sense, some classes can have some online discussions, using digital communication (ZOOM) and online board (MIRO) and will include:

- Theoretical lectures presenting themes and concepts that will be worked in the Design Studio.
- Practical classes where teachers work with the students on the development of his/her project in which the work of the students either in group or individual work.
- Field trips to the site, as well as to any other location where the urban or programmatic situation promotes a better understanding of the problems posed by the design studio.

The evaluation of participation and work will be continuous, over the two semesters, and has two moments of presentation, interim and final, with critical evaluation and delivery of documentation (text and drawings). Posters and exhibition will be presented at the RMB colloquium.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

In the first weeks the focus will be set on the conceptual resolution of the design issues, seeking to establish an understanding of scale, proportion, and balance, mainly in what concerns urban relations and programme development (articulation with RMB4.2 Urban spaces, landscape and infrastructure). Firstly, with a workshop and after in the design studio practice.

In the last weeks of the trimester, the focus will be set on the articulation between conceptual principles and building system, as well as the ability to control programme, urban insertion and materialization.

The evaluation system relates the capacity to design and to build a critical and theoretical discourse. So, it will evaluate the project, the research work on the theme, the synthesis work related to the presentations and the participation on the study visits.

Literature

- Lawson, B (1997) *How Designers Think: the Design Process Demystified*, Oxford: Architectural Press.
- Ford, E. R. (1997) *The Details of Modern Architecture*, London: MIT Press
- Melenhorst, M.; Moniz, G. C.; Providência, P. (2018), *Teaching through Design*, in: 2nd Reuse of Modernist Buildings Conference. Coimbra, Detmold: RMB Project, e|d|arq
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- Douglas, James (2006), *Building Adaptation*, Oxford, Butterworth-Heinemann (1ª ed. 2002).
- Forty, Adrian (2012), *Words and Buildings – A Vocabulary of Modern Architecture*, London, Thames and Hudson, (1ª ed. 2000).
- Torraca, Giorgio (2009), *Lectures on Material Science for Architectural Conservation*, Los Angeles, The Getty Conservation institute.
- Venturi, Robert (2011), *Complexity and Contradiction in Architecture*, New York, Museum of Modern Art, (1ª ed.1966).
- BRANDI, Cesari (2006), *Teoria do Restauro*, Lisboa, Edições ORION, (1ª ed. 1963).
- CHOAY, Françoise (2010), *ALLEGORIE DU PATRIMOINE*, Paris, Seuil, (1ª ed. 1992).

Module Title	House And Housing			
Module Number	RMB 11			
Module Responsibility	Ana Tostões			
Lecturer	Ana Tostões, Bárbara Coutinho, Zara Ferreira, Jaime Silva and input with lectures, seminars, workshops, and excursions from all other partner schools.			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Optional Module	
Semester	2			
Forms / Methods of Teaching	Lecture, Seminar (online), Webinar, Self-Tuition, Self-Test			
Language of Teaching	English			
Quantity (SWS)	Lecture	2	Other	2
Workload (h)	T - Theoretical Teaching	14	PL - Practical and laboratory teaching	-
	S - Seminar		TP - Theoretical - practical teaching	1
	TC - Field work		E – Internship	4
	Self-Study	53	OT - Tutorial orientation	-
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites				
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Develop students' ability to understand and research the architectural culture and the collective space organization. The analytical effort is to identify the architecture discipline as a unity process between art and technique.</p> <p>Develop the ability to analyse and understand the urban shape in its relationship with the architecture, in particular with the housing production.</p> <p>Identify the multiple evolution stages, relating them with several urban fabric and layouts, with ordinary or exceptional programs.</p> <p>Production of a Scientific Paper. Development of the critical ability of the students as a form of research. Focus on the analysis of key works taken as case studies likely to stimulate reflection and discussion on the shape and life of architecture and cities.</p>			
Syllabus	<p>The House and Housing course introduces the fundamentals of an applied research on the critical history and architectural theory analysis based on the binomial: architecture and city, with an emphasis on the housing production as the major architectural program.</p> <p>Deepen the knowledge and the historical city context through time in order to understand the housing production as a key role in shaping the city in Europe.</p> <p>Develop an operational history, considering that the organized information and the produced knowledge can contribute to structuring: the support for an “informed” architectural project; the definition of development strategies; the decision- making; the rehabilitation intervention and the structures’ reuse.</p>			
Evidence of the syllabus coherence with the curricular	<p>Deepen the knowledge and the architectural theory context in the global framework of the contemporary culture: a) identified since the Enlightenment period; b) from the Modern Movement rise to the crisis during the late 1960s untill contemporary</p>			

unit's intended learning outcomes

times. Focus on the housing issue in its relationship with the city, understood as a primordial matrix of modern space and its use.

Students should be able to:

- understand and distinguish the historical context of a case
- write about the historical content relevant for a case
- recognize the key elements of housing modern realm
- define House type and Housing typology
- relate the housing European production with urban cells

Teaching/Learning methodologies (including assessment)

One Midterm presentation and 1 final presentation

Case Studies (group work)

Final paper including presentation and discussion

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

The course is conducted in a workshop format, supported by weekly readings. It is complemented with lectures with invited researchers. Didactics are based in reflexive learning practices focused on the functional dimension of the built space and its social implications related with Housing for all and its typology.

Students' grades are determined on the basis of the portfolio of exercises done through the semester and class participation. The portfolio considers weekly readings reports and a research training exercise focused on a topic/case studies selected by the student. This exercise can follow two alternative models: a) "scientific paper" to be published in a technical/scientific journal supported on a case study; b) "survey paper".

Main Bibliography

- AVERMAETE, Tom, SWENARTON, Mark, VAN DEN HEUVEL, Dirk (Ed.). (2015). *Architecture of the Welfare State, London and New York*. Routledge.
- CAMELLINO Gaia (2015). *Post-war middle-class housing: models, construction and change*, Bern: Peter Lang.
- DELEMONTEY, Yvan (2015). *Reconstruire La France. L'Aventure du Béton Assemblé, 1940- 1955*. Paris : Éditions de la Villette.
- DE PIERRI Filippo (2015). "Stories of Houses". *Observing post-war middle-class housing in Italy*, Peter Lang Publisher.
- DE VOS Els (2010) "Living with High-Rise Modernity. The Modernist Kiel Housing Estate of Renaat Braem, a Catalyst to a Socialist Modern Way of Life?", in *Home Cultures*, 7:2, 134-158.
- ELEB, Monique, SIMON, Philippe (2013). *Entre Confort, Désir et Normes: le Logement Contemporain (1995- 2012)*. Bruxelles: Editions Mardaga.
- FERREIRA , Zara; TOSTOES, Ana (ed.), *Docomomo Journal*, n. 65. - Housing for all. Lisboa, Docomomo International, 2021.
- MONTANER, Josep Maria (2015). *La Arquitectura de La Vivienda Colectiva. Políticas y proyectos en la Ciudad Contemporánea*. Barcelona: Editorial Reverté,
- SAMBRICIO, Carlos (ed.) (2003). *Un Siglo de Vivienda Social*. Madrid, Nerea.
- TOSTOES, Ana (2015). "Where Desire may Live or How to Love Mass Housing: from Cold War to the Revolution", in *ZARCH, Journal of Interdisciplinary Studies in Architecture and Urbanism*, No. 5 – Modernist Mass Housing Legacy, Zaragoza.
- TOSTOES, Ana, FERREIRA, Zara (ed.), *Docomomo Journal*, n. 54 – Housing Reloaded. Lisboa, Docomomo International, 2016.

Module Title	Building Structural Systems and Building Construction			
Module Number	RMB 12			
Module Responsibility	Jelena Milošević			
Lecturer	Jelena Milošević			
Course of Study	RMB (Joint Master)			
Status	Mandatory Module	x	Optional Module	
Forms / Methods of Teaching	Lecture, Seminar, Workshop			
Language of Teaching	English			
Quantity (SWS)	Lecture	2	Other	2
Workload(h)	T - Theoretical Teaching		PL - Practical and laboratory teaching	14
	S - Seminar		TP - Theoretical - practical teaching	14
	TC - Field work	7	E – Internship	-
	Self-Study	46	OT - Tutorial orientation	-
Workload total (h)	81			
Credits (ECTS)	3			
Prerequisites	Basic knowledge of architectural modernist history			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>Learning structural systems types, assessment methods, design strategies, and construction techniques of modernist buildings, and the approaches to their documentation, preservation, and rehabilitation.</p> <p>Knowledge of structural concepts, principles, and systems of modern buildings. knowledge on the building materials, components, systems, and construction techniques of modern buildings (MB).</p> <p>theoretical and practical knowledge for assessing structural, material, and construction systems of MB.</p> <p>Understanding the methods of structural design.</p> <p>Understanding the methods of intervention in the conservation of MB with the help of case studies.</p> <p>Gaining skills to interpret and form new types of knowledge on structural systems of MB.</p> <p>analyze and interpret the structural condition of MB.</p> <p>Developing a multidisciplinary approach between different fields of practice with the help of case studies.</p> <p>transferring the analyses/studies in written, oral, and/or visual forms.</p>			
Syllabus	<p>Discussion of concepts and types of structural systems in modern architecture.</p> <p>Discussion on construction technologies in modern architecture.</p> <p>Discussion on conservation, restoration, and intervention approaches and methods in modern heritage buildings.</p> <p>Research on approaches and methods of structural design; Integrated and Performance-based design (PBD).</p> <p>Research on diagnostics, testing, and inspection of structures and building elements .</p> <p>Research on environmentally compatible structures (ECS); applications of alternative technologies, materials, and processes - structural design based on reuse of assemblies, elements, and materials.</p>			

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

The syllabus is implemented through the combination of theoretical and practical activities which facilitate:

Development of knowledge and understanding on different typologies of structural systems in modern architecture from the aspects of their development, structural principles; design methods; construction technology; diagnostics, testing and inspection of their performances; their conservation, restoration, and reuse approach.

Development of skills by applying theoretical concepts, methods, and tools in work on hands-on assignments.

Teaching/Learning methodologies (including assessment)

Lecture (classical and web-based), Field Work, Self-Tuition.

The final grade is formed based on the results of 1 midterm presentation and 1 final presentation.

The midterm presentation includes student's elaboration on findings of a case study on defined topics. The case study is in the form of a written report and presented orally.

The final presentation includes the elaboration of the project developed during the workshop. The project elaborate includes visuals and models.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

Two teaching methods that suit specific objectives will be applied in a balanced fashion:

Lectures-based learning (LBL) introduces students to structural concepts, principles, and structural systems, assessment methods, design strategies, construction techniques of modern buildings, and the approaches to their documentation, preservation, and rehabilitation. Group discussions will increase the engagement of students and promote interactivity.

Project-based learning (PBL) facilitates students to develop in-depth content knowledge about previously theoretically discussed concepts and improve skills, critical thinking, and collaboration through the experience of solving an open-ended problem. PBL will position students to function using real-world experience optimally. Students work in small groups, while the lecturer/tutor will facilitate learning by supporting, guiding, and monitoring the learning process and help students to expand their understanding of building structural systems.

Main Bibliography

- Beckmann, P. (2004). *Structural aspects of building conservation*. London: McGraw-Hill.
- Engel, H. (2007). *Structure Systems*, 3rd Edition. Berlin: Hatje Cantz.
- Macdonald, A. J. (2018). *Structure and Architecture*, 3rd Edition. Architectural Press. London: Routledge.
- Prudon, T. H. M. (2008). *Preservation of Modern Architecture*. New York: Wiley.
- Sousa Cruz, P. J. (2016). *Structures and Architecture: Beyond their Limits*, 1st Edition. London: CRC Press.
- Rabun, J. S. (2000). *Structural Analysis of Historic Buildings: Restoration, Preservation, and Adaptive Reuse Applications for Architects and Engineers*. New York: Wiley.
- Whitehead, R. (2019). *Structures by Design: Thinking, Making, Breaking*. London: Routledge.

Module Title	Design Studio 3A		
Module Number	RMB 13.1		
Module Responsibility	Michel Melenhorst		
Lecturers	Michel Melenhorst, Janine Tüchsen		
Course of Study	RMB		
Status	Mandatory Module	x	Compulsory Module
Semester	3		
Forms / Methods of Teaching	Lectures and studio method: concepts presentation and discussion; methodological approach; instructional sessions, discussion, and student work, workshops, self-tuition and field work : On site interventions		
Language of Teaching	English		
Contact Hours	Lecture	1	Other 7
Workload(h)	T - Theoretical Teaching	7	PL - Practical and laboratory teaching 42
	S - Seminar		TP - Theoretical - practical teaching 14
	TC - Field work	20	E – Internship
	Self-Study	79	OT - Tutorial orientation
Workload total (h)	162		
Credits (ECTS)	6		
Prerequisites	First two design studios (RMB 7 and RMB 10)		
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<ul style="list-style-type: none"> - actively research and design on-site and using the knowledge and skills from RMB 7 and 10 to transfer them into methods that can be actively used on site: scenography methods, storytelling, scale 1.1 interventions - Exploring ways of active analysis and design skills, to be used in RMB 13.2. - To develop respectful design methods for acts of intervention in modern movement architecture, concentrating trying to foretell the effects of the design by implementing it in a provisional way in the object of adaptation. - The ability to present the project in an experimental way, using new media, installation techniques - Learning to transfer abstracted notation systems (drawing, text etc) into real life 1.1. abstractions of a future intervention. - Develop a 'PROGRAM OF POSSIBILITIES' for a building instead of working with a 'PROGRAM OF REQUIREMENTS' 		
Syllabus	<p>The theoretical work of Bernard Tschumi, especially his use of the word Transgression is taken as a starting point to work on-site, on a 1.1 scale and testing a building's capacity for adaptation.</p> <p>The start-up of the Design Studio is an on-site workshop to read and discuss the theoretical and practical foundation for active research and design and to explore the site (Building) using learning to use various mapping tools.</p> <p>In the continuation of the workshop, students will continue working on-site individually or in their group. In the Studio, they will report on the development of their interventions concept and strategy.</p> <p>The documentation of the project shows the design as well as the design process</p>		

Modernist presentation techniques are practiced (Collage, Ready Made, Alienation) and transferred and applied in 1.1 scale and into relevant Contemporary techniques (Projection, Soundscapes, Scanning, GIS) Material, techniques and details are considered in relevant scales.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

The ultimate use of the fact that the object of intervention is available as a study object increases the awareness of the potentials, the difficulties to intervene and differences between abstracted and actual representations. These are important aspects for future specialists in reuse and heritage to be aware of, but also opens-up new skills and directions in communicating conservation, reuse and adapted reuse proposals to future users' and to a professional and nonprofessional audience.

criteria

- Deepening of question in reasoned, appropriate, personal decisions,
- Design is convincing and original (not copied) of high architectural quality , reflects the qualities and potentials of the existing building, shows consistency and is deducible to Program of possibilities.
- Heritage means incorporated
- Technique chosen is appropriate and a high visual standard.

Teaching/Learning methodologies (including assessment)

Presentation of a scale 1.1 architectural intervention on-site + reflection on the intervention translating it to a program of possibilities, the format is free (Text, Film, Graphic etc.)

Final presentation (jury) similar as Mid term

Assessment focus points:

- Analysis of the task, the programme and the context are in-depth, show an understanding of the essence of the task and lead to reasoned, appropriate, personal decisions, the design is appropriate, convincing, and original (not copied).
- The design decisions show consistency.
- Architectural /Heritage means are carefully incorporated.

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

On site interventions and active confrontation with the object of intervention is the most effective way for meeting the learning objectives.

The direct connection between theory and practise by reading theories of activist research and planning in the object of intervention will lead to a deeper and hands-on understanding of theories and their effects on practise

One of the key aspects of modernism are experiment, the cut with the 'old', rethinking the existing for a better future. The teaching methodologies builds on this part of modernist heritage, learning about this history and bringing it in to the future

Literature

- Aragon, L., & Trutat, J. (1926). *Le paysan de Paris* (Nouveau tirage en 1945). libr. Gallimard; Éditions de la Nouvelle Revue française.
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Module Title	Design Studio 3B: Re-use structural and integrated design		
Module Number	RMB 13.2		
Module Responsibility	Vladimir Lojanica		
Lecturers	Vladimir Lojanica; Ana Nikezić; Jelena Ristić Trajković; Maja Dragišić;; Aleksandra Milovanović; Miloš Kostić		
Course of Study	RMB		
Status	Mandatory Module	x	Compulsory Module
Semester	3		
Forms / Methods of Teaching	Workshop, Design Studio, Lecture, Seminar		
Language of Teaching	English		
Contact hours	Lecture	2	Other 6
Workload(h)	T - Theoretical Teaching		PL - Practical and laboratory teaching 42
	S - Seminar		TP - Theoretical - practical teaching 14
	TC - Field work	20	E – Internship
	Self-Study	86	OT - Tutorial orientation
Workload total (h) I (h)	162		
C Credits (ECTS)	6		
Prerequisites	First two design studios (RMB 7 and RMB 10)		
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>The main goal of the course is to introduce to students' various possibilities to increase their knowledge about the role, significance and potentials of the Modernist heritage (preservation, revitalization, promotion, transformation, etc.). By working on a research design project individually or in teams, students will research the specific socio-political, cultural, and economic context related to the Modernist period.</p>		
Syllabus	<p>Through design research and practical studio work, students will have to deal with various aspects of the heritage of Modernism:</p> <ul style="list-style-type: none"> - Actualization and examination of the significance and potential of Modernist heritage today. - Identification, review and documentation of relevant scientific knowledge in this field. - Promotion and presentation of Modernist heritage. - Aspects of sustainability, protection and revitalization in Modernist architecture. - Relations between designed, built and space of living (different spatial patterns and levels, program principles, behavioural phenomena, user groups, etc.) - Transforming traditional values and principles of Modernism into new concepts and models by research by design. - Understanding the relationship between society, history and culture in the development, preservation and transformation of the heritage of Modernism. - Establishing relations with other disciplines relevant to the heritage of Modernism (art, technology, sociology, history, etc.) - 		

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

Students will be trained: for critical thinking and application of acquired theoretical and practical knowledge and skills in research and design work in order to: solve specific research issues; formulating new research questions and design projects; generating new concepts and improving existing approaches; etc. Students will have the ability to understand the complex relationship and position of modernist heritage in the context of society, culture and history. Also, they will be trained for independent design work, as well as team work on complex research tasks and preparation of design projects in the field of modernist heritage. In achieving the objectives, the following are of special importance: 1) involvement of students in the development and implementation of current and new research projects and formats in the field of modernist heritage, 2) cooperation with institutions in the field of education and culture (museums, archives, etc.).

Teaching/Learning methodologies (including assessment)

- Lecture (online), Field Work, Self-Tuition, Panels, Oral and Written Presentations, Laboratory and Physical Modelling Workshops Copies and papers on digital media
- Pre-exam: research and project design
- Exam: research project presentation and oral exam. Assessment methods will be additionally formulated depending on the specific research assignment: research presentation, research map, scientific work, etc

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

- Research and design work on a specific topic includes all phases of design methodologies:
- from defining the narrow topic and subject of research
 - work on collecting and analysing relevant sources and literature
 - formulating research questions, methodology, goals and expected results
 - introducing to the complex process of architectural creation, from the stage of conceptualisation and initial ideas to the realization of an architectural work
 - experimenting on the selection, conception and elaboration of the part of the project where it is possible to apply different models of aesthetic and technological achievements.
 - discussion and dissemination of results

Literature

- Nikezić, A., Ristić Trajković, J., Milovanović, A. (2019), *Urban-Rural Synergy Between Housing Spatial Patterns and Landscape: Typological Classification of Belgrade Socialist Settlements from an Environmental 5/16 Perspective*. In: A. Krstić-Furundžić, A. Đukić (Eds.). Handbook of Research on Urban-Rural Synergy Development Through Housing, Landscape, and Tourism, Hershey, PA: IGI Global. pp. 115-137. doi:10.4018/978-1-5225-9932
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- Damljanović Conley, T., Jovanović, J. (2012), *Housing Architecture in Belgrade (1950-1980) and its Expansion to the Left Bank of the River Sava*, in: Mrduljaš, M. and Kulić, V. (eds.), *Unfinished Modernisations Between Utopia and Pragmatism*, Zagreb, 294-311.
- Milovanović, A., Popović, T., Ristić Trajković, J., Krstić, V. (2019), *Environmental and Behavioral Decoding: Multi-Scale Approach in the Process of Architectural*

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- Stiller, A., Kovačević, B. (2011), *Belgrad. Momente Der Architektur*, Wien.
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- Djokic, V., Ristić Trajković, J., Krstić, V. (2016) *An Environmental Critique: Impact of Socialist Ideology on Ecological and Cultural Sensitivity of Belgrade Large Scale Residential Settlements*, Sustainability, ISSN 2071- 1050, doi:10.3390/su8090914

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Module Title	Research Seminar and thesis			
Module Number	RMB 14			
Module Responsibility	Michel Melenhost (OWL) José Fernando Gonçalves (UC) Francisco Teixeira Bastos (UL) Els de Vos (UA) Ana Nikezić (UB)			
Lecturer	All RMB teachers			
Course of Study	RMB (Joint Master)			
Status	Mandatory	x	Optional Module	
Semester	4			
Forms / Methods of Teaching	Lecture, webinar, Seminar (online)			
Language of Teaching	English			
(ECTS)	Lecture	-	Other	1
Workload (h)	T - Theoretical Teaching	14	PL - Practical and laboratory teaching	-
	S – Seminar		TP - Theoretical - practical teaching	-
	TC - Field work	-	E – Internship	-
	Self-Study	768	OT - Tutorial orientation	28
Workload total (h)	810			
Credits (ECTS)	30			
Prerequisites	All RMB units			
Intended learning outcomes (knowledge, skills and competencies to be developed by students)	<p>In preparation for the Thesis, a course is designed to provide a set of research lines that will enable the development of research projects in Reuse of Modernist Buildings by groups of students.</p> <p>This course is based upon the themes of the Design Studio, of the 1st, 2nd 3rd semester.</p> <p>The main objective is to support students in the construction and development of the research project and the thesis, namely the definition of: theme, research methodologies through design, structure and strategy, research tools and bibliography.</p> <p>From there learning goals are</p> <ul style="list-style-type: none">- finalising the course of studies in a holistic interdisciplinary approach as an expert / specialist in a reuse of modernist buildings project			

- Production and documentation of independent solutions to complex problems related reuse of modernist buildings, using scientific knowledge and methods within a prescribed deadline.
- Understanding of in-depth and skilled scientific knowledge and approaches relating to design and construction of a technical, environmental, cultural, artistic and methodological nature in dealing with modernist buildings heritage.
- Produce responsible solutions to complex problems both in practice, design and in research.

Syllabus

The program of the pre-course to the thesis focusses on practical application of research methods to reuse of modernist buildings assignments, in order to define and structure the student's research project and thesis, within the research lines proposed by professors.

- Presentation of research lines: concepts and practices
- Development of the research project: theme, state of the art, structure, strategy, methodology, tools and literature
- Critical analysis of case studies
- Critical review of research
- critic report of scientific papers
- Elaboration of a project portfolio

1. Students learn to
 - a. formulate the research goals
 - b. formulate specific research/design questions independently
 - c. survey the state of a particular field of research
 - d. find, select and interpret relevant research sources and reference projects in relation to the research question
 - e. decide on the methodology necessary for engaging in an innovative research project
 - f. define the research process in a feasible timeline and with an adequate methodological framework
 - g. evaluate and reformulate research questions on the basis of findings, and formulate new research steps
 - h. provide consistent reports about the research
2. The course aims at training the students to function in a group while developing the attitudes and skills that are needed to participate in a scientific debate.
3. Students are able to express themselves professionally both orally and in written form and are able to formulate a constructive critical opinion.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes

A series of steps needs to be followed and reviewed in order to ensure their originality, relevance and viability.
The contents are directly related to these steps, allowing that the research project has a structured development.

Teaching/Learning methodologies (including assessment)

The pre course will be structured as a workshop focused on the development of the student's research project. Each session will explore one theme, as leitmotiv for

presentation and critic of student work. Professors or researchers will bring case studies for discussion and comparison with students proposals. Student develop a trajectory for including objectives, timeframe, methods for their thesis project

Evidence of the coherence between the teaching methodologies and the intended learning outcomes

- The organization of classes in presentation and critique sessions will promote the development of the thesis project by phases, according to the research methodology proposed by the student and framed by the professor's research line.

Main Bibliography

- Borden, I. - Rüedi, K. (2000), *The Dissertation. An architecture Student's Handbook*, London, Architectural Press.
- Schön, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*, New York, Basic Books.
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- Frayling, C. (1993). *Research in art and design*. Royal College of Art Research Papers series, 1(1).
- Groat, L. & Wang, D. (2013). *Architectural Research Methods*. New Jersey: John Wiley & Sons

Methodologies

RMB METHODOLOGIES

The RMB universities developed methodologies and tested it in their local master courses with the support of students.

The methodologies described in the forms are related with the RMB educational modules and constitute an important tool to implement an innovative approach to the reuse problematic.

METHODOLOGY	EDUCATIONAL MODULE
Visual Methodologies (UC)	RMB 9 and RMB 10
Problem Based Learning (OWL)	RMB 5 and RMB 7
Workshop Methodologies (IST)	RMB 7, RMB 10, RMB 13
Documentation and Evaluation (IST)	RMB 2
Assessment of Modern Buildings in Use (IST)	RMB 8
Communication techniques to teach embodied architectural knowledge in the design studio (UA)	RMB 7, RMB 10 and RMB 13
Adaptive Reuse finding process (UA)	RMB 6
Action Research (OWL)	RMB 6 RMB 13

Methodology Title	Visual Methodologies
Relation with Curriculum	RMB9 - Social aspects in Reuse
Module Number	RMB10 - Design Studio 2 Reuse, Social and Urban Design
Methodology	Prof. Paulo Peixoto (Sociology)
Responsibility	Prof. Paulo Providência (Architecture)
Semester	3 rd Semester
Methodology Goals	<p>The use of visual methodologies (photo elicitation and photo voice) and qualitative methodologies (sociological portraits) aims to promote an approach that places individuals at the centre of the research. The researcher puts himself in the background. Individuals take an active role in research. The use of these methodologies allows to realise that in the field of urban studies seeing and observing are two different things. At the same time it seeks to emphasise the need to avoid merely external strategies of observation. Photography is used in order that the individuals speak in a more close and emotive way about the symbolic and functional universe that marks their daily life. Methodology goals wish to promote the idea that observation is a discipline that guides drawing and planning (field sketch), in the sense that we must be trained to observe and that, in order to observe, we must also use the eyes and senses of those we observe.</p>
Methodology Description	<p>Photo elicitation involves the use of photos to extract information from the studied reality. Photos allows a co-construction of the reality through the interaction of 3 elements: the researcher, the photos and the interviewee. Photo elicitation i) allows to explore the complexities and specificities of the individual situation and of the context and ii) facilitates the problematisation and the conceptualization of identity through the interaction between the respondent and the researcher in the co-construction process of the theory.</p> <p>The method of photo elicitation may have variants. The researcher can either use photos that the interviewee does not know, or he can use photos from the interviewee's private collection, or he can either ask the interviewee to take himself certain photos of the studied objects (photo voice).</p> <p>The chosen photos for the interviews (the framing of the photo, the angle from which they are taken, the primacy given to certain details, etc.) i) is important for what the researcher wants to obtain as data and also ii) to understand the perceptions of the Interviewee.</p> <p>Through the photography, the participants are invited to represent the community of which they are part or to express their point of view through the accomplishment of photos of aspects that illustrate the research theme.</p> <p>The photos are interpreted in a collaborative way, implying the researcher and the researched individuals. Hence emerges narratives that explain the photos relating them to the theme of the research.</p> <p>In socially disadvantaged or marginalized communities the photos used for the interview are carried out by the interviewees themselves. It is a technique (called photo voice) that works well to engage children and young people in research. That is, the photo voice seeks to emphasise the perspectives of those who live their lives in a totally or radically different way from those who have the power to construct and affirm the meanings of normality in the context of the production and application of public policies.</p> <p>The photo voice aims to give voice, through photography, to those who are usually silenced. It is also known as "participatory photography".</p>

While **photo elicitation** is more linked to the production of knowledge, **photo voice**, wanting to produce knowledge, is more linked to processes of empowerment of people and communities.

The photo elicitation interview radically redefines the traditional sociological interview insofar as it focuses on the objects or spaces present in the picture, which is being seen at the same time by the interviewer and the interviewee.

When the photo elicitation work well as a technique the interviewee sees himself as the expert and the interviewer is referred to the role of an apprentice. The photo is a bridge between two people who may not even realise how they see and represent the world in a radically different way.

Photo elicitation interviews reveal many things about the images, but also about the interviews. They show that the meaning of the images is not something that is fixed. That the images do not have a univocal reading. The photos are always a bridge between different universes.

In this sense, when we think of the strategies that we can use to analyse photo interviews, we have to give importance to: i) the interviewees' gaze (what do the interviewees point out in the photo?); ii) the context (in what context did that photo appear?); iii) to listen (listen what is said, listen the silences and above all the way the narratives are hierarchized); iv) juxtaposition and relations between photos (for example, how the oral discourse and the visual component of the photo become absolutely obvious or not?);

An image in a photo has several layers of meanings. There are objects, which can be literally described. But there are also the social processes that make appear the objects that are seen in the photograph. But there is also the value that people attribute to both social processes and objects. In a photograph there is a universe of senses.

The use of photo elicitation and photo voice aims to produce a more structured reading of reality by means of sociological portraits (to characterise individuals and their dispositions) and field sketches (to characterise spaces and relationships between individuals and spaces).

The elaboration of sociological portraits implies:

(1) the accomplishment of a biographical interview script adequate to the research objectives, but also developed to questioning the actors about his position concerning diverse spheres of life; (2) performing two to three interview sessions, preferably with an interval of days or weeks between them, in order to promote the reflexivity of the actor; (3) interviews transcription; (4) editing the interviews in order that the final result is a speech in the first person of the interviewee; (5) construction of the portrait, articulating theoretical resources and empirical material, that is, inserting a superficial interpretive slope; (6) production of a title that highlights the interpretive guideline of the story, a summary of the life trajectory and a detailed body of the trajectory. The scheme of the portraits presentation, described in the last phase of elaboration, allows three ways of reading the portrait: by title (ultrafast), by summary (fast), by the main body (more detailed).

Photo elicitation and photo voice are also intriguing instruments for field sketching as they improve the abilities to observe, to record, to contemplate and to interpret the space.

Photo elicitation as tool for participatory process design in re-use of modernist buildings

To enhance architectural interventions and projects in re-use of modernist buildings by incorporating participation contributions by inhabitants of the area Photo elicitation is a method of interview in visual studies on sociology that records how participants respond to photographic images (or any other kind of

images) attributing values and meanings. The social memory of places, for instance, can be highlighted through a process of photographic image description.

On another hand, bringing and verbalizing photographic images is a process that allows constructing human relationships with inhabitants, and the process of image description may bring relevant knowledge about a specific site, urban space use, or any other element that allows a better interpretation of modernist buildings and spaces.

The images collected in the process may give specific clues that can be incorporated in the process design by narrative constructions. These narratives articulate the process of re-use with the social memory (traumatic, or not) by design reference.

Methodology Tools

Photo elicitation
Photo voice
Sociological portraits

Methodology Type

Visual methodologies
Qualitative methodologies
Field Sketch

Pedagogical activity

Lecture	X	Laboratory	
Seminar		Workshop/design studio	
Excursion		Work Experience	X
Self-Study		Exam Preparation	

Best Practices

These methodologies were developed, through the accomplishment of practical work (work experience), by undergraduate students in Sociology, in courses taught by the teacher.



<https://christinehornnet.wordpress.com/2014/10/16/photo-elicitation/>



Photovoice, Workshop at Norton de Matos School, Design Studio 1C, University of Coimbra, 2017-18.

Literature

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- Lahire, Bernard (2005). *Portraits sociologiques: Dispositions et variations individuelles*. Armand Colin.
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- Moniz, Gonalo Canto, Peixoto, Paulo, Xavier, Sandra, Providência, Paulo. (2017-11-23), "Dialogue with the community and photo elicitation for reuse of modern buildings design studios: a pedagogical experience" in Michel Melenhorst, Uta Pottgiesser, Christine Naumann, Theresa Kellner (org.), RMB Conference 2017. Detmold: Hochschule OWL (University of Applied Sciences), 79-89.
- Moniz, Gonalo Canto; Canziani, Andrea; Quiroga, Carolina (2018-08-28), "Learning to reuse modernity: the educational challenge" in Ana Tostões, Natasa Koselj (org.), *Metamorphosis. The Continuity of Change*. Lisboa: Docomomo International, 532-539

Methodology Title	Problem Based Learning
Relation with Curriculum Module Number	Applies to all RMB modules but special to RMB 5 - Typological Comparisons and RMB 7 - Design Studio 1
Methodology ResponsibilityProf	Prof. Michel Melenhorst
Semester	1/2/3
Methodology Goals	<p>This method enhances the development of skills like literature retrieval, critical appraisal of available information and the seeking of opinions and aims at empowering students to learn to be life-long learners, making it enjoyable and motivating. Together, students will compile ideas concerning the underlying circumstances of the problem (explanatory approach) and/or the implications arising from the problem (procedural approach).</p> <p>PBL is consistent with current philosophical views of human learning, particularly constructivism. Three primary constructivist principles, according to Savery and Duffy (1995) are that understanding comes from our interactions with our environment, cognitive conflict stimulates learning, and knowledge evolves through social negotiation and evaluation of the viability of individual understandings.</p>
Methodology Description	<p>One or more assignments on structured, typological comparison of adaptive reuse cases and practices, will be handed to the student groups in written form. Students may elect a leader, timekeeper and/or secretary for each PBL-session. The roles may rotate for each session. Flip charts, whiteboards or cards may be used during sessions to collect and structure items.</p> <p>Generally, there are different ways of case-presentation: paper-cases, real cases (with the drawback of lack of standardization), multimedia cases (with the drawback of distracting from content).</p> <p>General structure of the 7 steps</p> <p>Steps 1 through 5: Preliminary discussion <i>During the preliminary discussion, the group establishes which knowledge is already present with respect to the task set. In this way, the existing knowledge is activated, providing starting points for the search for additional knowledge.</i></p> <p>1 clarifying concepts At the beginning of the session, the problem(s) should be presented to students. If you use paper cases one of the students reads it aloud to get the group talking from the beginning. The first activity of the group should be the clarification of problems, terms and concepts that are not understood at the first moment. To avoid confusion or misunderstanding, the concepts used in the task set are first clarified. This enables all participants to start from a common starting point. The purpose of the first step is to agree on the meaning of the various words and terms and on the situation described in the problem. Use can be made of the knowledge possessed by the group members or retrieved from a dictionary.</p> <p>2 defining the problem The essence of the task is determined in order to establish the boundaries of the topic. Definition of the problem is the main goal during this phase. The group should discuss and reach an agreement on the tricky events, which need explanation.</p>

Occasionally, a problem has been intentionally described on the way to test students' ability to recognize certain symptoms. Though they have some prior knowledge to recognize a problem, the prior knowledge doesn't allow them to resolve the problem straight away.

3 analysing the problem/brainstorming

Refreshing and establishing the knowledge present within the group (activating previous knowledge), followed by a process of providing as many explanations, alternatives and/or hypotheses as possible for the underlying problem. Aspects on basis of prior knowledge are collected.

Each individual may express his or her ideas free and without immediate discussion: it is important not to discuss and not to comment the ideas of others during this step, but to collect many ideas (prior knowledge). Together, students will compile ideas of the underlying circumstances of the problem (explanatory approach) and/or of implications arising from the problem (procedural approach). This should result in ideas to structure the problem.

4 problem analysis/systematic classification

Classifying explanations provided in the brainstorming session, indicating their interrelationships

Review steps 2 and 3 and arrange the explanations into tentative solutions. During the fourth step, which forms the core of the analysis, the problem is explained on different ways. Ideas, which seem to be related, are worked out in relation to each other. Each group member is allowed to fully present ideas about matter. Group members can draw on all the prior knowledge they possess.

This prior knowledge may be based on information acquired in earlier education, facts and insights obtained by reading different articles or in another way. The other members of the group and the tutor are allowed to probe the students' knowledge to the full, to introduce other explanations and question certain opinions. The process of brainstorming and discussion is a collaborative approach. It leads to more creativity and output than each member of the group could generate on his own.

5 formulating learning objectives

Determining on the basis of the explanations given what knowledge is still lacking and what has remained unclear. On the basis of this, learning objectives are formulated; group reaches consensus on the learning objectives; tutor ensures learning objectives are focused, achievable, comprehensive, and appropriate. The systematic approach and discussion may result in several outlines written down on the blackboard. These outlines are like possible explanations for particular problems.

However, since student prior knowledge is limited, questions will come up and dilemmas will arise. In this phase of the discussion, conflict between members of the tutorial group should arise.

The students will find out that certain aspects are not yet explained and resolved in the process of their discussion. PBL encourages students to define these aspects as learning goals putting them in charge of to learn. This state of cognitive dissonance between what I know and what I have to know to understand the outside world is an essential condition for PBL. Questions and dilemmas, which appeared during the session, can be used as learning goals for individual self-directed learning. So, the main aim of this step is to formulate learning objectives on which group will concentrate their activities during phase six. In this stage it is possible to use a conceptual map as a tool for research

summary, making associations, integrating information and proceeding information and transferring it to long-term knowledge, but also a tool for defying new learning objectives.

Step 6 Self-study/self-test

On the basis of specific questions (learning objectives), acquiring knowledge that is understood and can be applied. Self-evaluation can be implemented through online self-test consisting of questions.

a. scheduling

Finding regularity and a proper balance between study time and time off, making efficient and effective use of the available time.

b. selecting sources of information

Looking for relevant sources of information and selecting the appropriate ones, in terms of quality and quantity, with sufficient depth, for effective studying.

c. studying sources

Acquiring new information that one understands and is able to apply in such a way that an answer can be given that is in line with the learning objectives, and the information can be applied, for example, to solve the problem set in the task.

d. preparing report

Looking back critically at existing knowledge, making links with the preliminary discussion and learning objectives. On the basis of the latter, preparing what must be dealt with in the tutorial group in order to participate efficiently and effectively.

Self-independent learning; during this phase students are going home and study. This phase is supposed to provide answers to the questions evoked in the problem-analysis phase and offer students possibility to acquire a more profound knowledge of theories at the root of the problem. The group members collect information individually with respect of defined learning objectives.

Information is collected from the literature but also from other sources (library, journals, internet etc.). PBL is also important because it gives the possibility to students to find their own resources. Minimal time for their individual study is two days but could be longer. Students can learn individually but also in pairs or in groups. It is important to already decide in advance, how the results of the self-study period will be presented: by an individual, a small group or as a discussion of all the groups. Students explore relevant sources of knowledge and then put the new information together, possibly resolving all the issues that were left open

Experimental design is used as an approach to find and judge solutions

Step 7: Synthesis, Discussion and Reporting

During the discussion, the newly acquired knowledge is actively applied and students check whether the problems can be solved and the learning objectives have been met.

Group shares results of private study. The tutor checks learning and may assess the group. So, the final step is synthesizing and testing the newly acquired information. Members of the group are sharing information gathered at home among each other. They also discussed whether they now acquired more proficient, accurate, detailed explanation and understanding about what is going on behind the problem.

If some of the students haven't understood the issues well, the task of the other students is to try to explain them the methodology of their work.

In this step, it would be necessary for the certain types of the problems to check for students' decision-making process and the algorithm behind their decisions.

7 Reporting

In a discussion with fellow-students, answers and learning objectives are presented in a report, questions are asked, and un-clarity is discussed. After the discussion, each student knows whether the new knowledge has been understood, the subject matter has been studied with sufficient depth, and the subject matter can be explained to others.

- presenting what has been studied, briefly and clearly
- creating links with learning objectives in relation to the problem set
- supporting presentation with designs, diagrams and/or examples
- quoting sources
- asking questions in case of un-clarity
- giving additional information, if necessary
- critically testing the new knowledge - depth, relationship, opposition
- meeting learning objectives/solving problem

8 Feedback

It includes feedback of all students on the case, the process and the tutor, to improve the learning process. Also, it is very important the students validate the course and give their comments on the quality of the problem as well as on the quality of the group process and the tutor's performance.

Specific points of relevance to the teaching of architecture

Complexity of the problem

The problem should be sufficiently complex to not only engage the students' interest but also bear some relationship to real-world circumstances. Suitable projects should relate to design studio work and not be seen as separate activities away from the main focus. One example might be the modelling and representation of precedents related to the current studio project.

Open-endedness of problem

The task should be open to multiple interpretations.

Duration of assignment

The assignment should be of sufficient duration to allow students to meaningfully engage with the problem. As indicated previously six weeks appears to be an optimum duration.

Degree of collaboration amongst students

Teamwork and sharing of information lead to an enhanced learning experience.

Explicit incorporation of reflection

Reflection on learning outcomes and skills gained is of particular importance. Students acquire important "generic skills" in these classes and it is worth reflecting on these skills and documenting them in "Personal Development Portfolios".

Variety of skills required

The project should allow for the development of a range of skills. Examples might include the mixing of scanned and manipulated traditional media with computer-generated media or photo-montaging CAD images onto scanned photographs. Presentations may use hardcopy media or projected images.

Diversity of media

CAD modelling and imaging may be taught alongside traditional manual drawing and modelling.

Use of precedents

The selection of suitable precedents is crucial. One of the key considerations is the availability of sufficiently detailed and accurate source material to work with.

Collaborative development of problem definitions

The project is more meaningful if the participants have been involved in the collaborative definition of the problem formulation.

Methodology Tools

Methodology Type

Pedagogical activity

Structured brainstorm using the Maastricht 7 steps method as described above design methodologies, analytical methodologies,

Lecture		Laboratory	
Seminar	x	Workshop/design studio	x
Excursion		Work Experience	
Self-Study		Exam Preparation	

Best Practices

Questions and Typologies are to be defined, The Methodology is used to focus and clarify the questions posed, some examples:

Question

Why can a building listed as heritage be demolished? Why can the protected position be ignored in favor of investors? Which arguments does a municipality have to protect its identity and history?

Case/Practise:

In the centre of Hamburg, the ensemble of the City-Höfe is located in the close neighbourhood of the Kontor- hausviertel, an area, which is UNESCO world heritage since 2015. The complex of the City-Höfe, will be demolished during the summer of 2018, although it is as well listed as a protected building.

An intense discussion has been started about the pros and cons of a possible preservation of the building ensemble. What would be meaningful for the municipality | people living and visiting the city | the skyline | the history if the city?

Question:

The way of declaring a building as heritage is different worldwide. Is there a possibility to implement similar values and concepts of preservation around the globe or should there be many different ways of dealing with heritage?

Cases:

Why are certain landmarks preserved and others not?

Described by Queen Elizabeth as 'one of the modern wonders of the world', the Barbican Estate in London is one of the largest examples of the Brutalist style and represents a utopian ideal for inner-city living.

The architects Peter Chamberlin, Geoffry Powell and Christoph Bon sought to create a complex that

created a clear distinction between private, community and public domains, but that also allowed pedestrians as much priority as cars.

In contrast to that, Kowloon Walled City was demolished - not just the architecture. By destroying the genius loci of the area, the history of the place is disguised.

How

Literature

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And

- https://www.youtube.com/watch?time_continue=260&v=cMtLXXf9Sko

Methodology Title	Workshop Methodologies
Relation with Curriculum Module Number	RMB 7, 10 and 13- Design Studio
Methodology Responsibility	Prof. Francisco Teixeira Bastos (Assistant Professor)
Status	Mandatory Module x Optative Module
Semester	1th, 2 nd , 3 rd Semester
Methodology Goals	<p>The goal of the Intensive Workshop is to challenge students with a non-conventional architectural design problem within the specific content of re-use of modern site/building. It is grounded on a project-based learning strategy aiming at developing student's skills and design thinking capacities, namely the ability to critically reflect on the implications and potentials of their proposals and applying knowledge in creative and socially meaningful responses to challenging design problems.</p> <p>The workshop rationale leads all the participants (students and instructors) in a reflexive process while preserving the groups own approaches to architectural design and problem-solving strategies. This also allows to learn valuable lessons regarding the learning/teaching methodological approaches on <i>experiential learning</i>.</p> <p>This intense work week promotes students to improve their competences and skills on:</p> <ul style="list-style-type: none"> - Architectural practice through the confront with complex architectural design problems; - Understanding the complexity of architectural practice, by fostering research on spatial-functional, construction, environmental, technological economic and sociological issues; - Organizing architectural form as part of a larger set of technical specialties that influence the project of architecture; - Developing the study of theoretical and methodological issues concerning modern housing or equipment design (morphologies, typologies, quality of living) to produce a conceptual informed approach; - Exercising the ability to assess decisions and their implications, in every stage of development; - Learn to deal with the problem, the expression of ideas, control of time and of personal differences to achieve a good quality final product of design. - Developing graphical expertise, together with written and oral presentation and communication skills.
Methodology Description	<p>The workshop acts as a comprehensive unit, in which students are invited to put into practice theoretical and technical knowledge acquired in other units, such as History and theory of modern architecture and its rehabilitation, functional and constructive behaviour, environmental evaluation, typology, technology.</p> <p>Following the experiential learning methodology developed by Kolb (1984), this workshop entails the construction of mental structures - reflexive processes - from experience and provides additional training in studio-related project and skill refinement related to architectural design issues.</p>

The methodological approach leads the students from analysis to the proposal along 5 stages. The three first ones take place on the first week: 1) Site and problem analysis; 2) Ideas/Program; 3) Strategy. The second week is dedicated to develop 4) Proposal. Finally, the last stage, 5) communication, occupies the third week, with presentation, delivery of Copies and papers on digital media (via ILIAS) and public exhibition.

Students will develop these capacities through learning and applying conceptual knowledge in order to contribute to the understanding of the knowledge production process:

- understanding of theory (modern architecture: global thinking and local practice);
- getting in contact with best practices (successful re-use of modern buildings - housing or equipment);
- practicing reflection-in-action (along the workshop) on developing exercises based on case studies;

Course contents are orientated to 4 main topics that matches the 4 presentation/discussion moments with teachers/instructors..

1stWeek, Lecture 1: Introduction to site, problem and methodology, developing of an IDEA and a Strategy to intervention

General introduction Historical overview on reuse of buildings, applied to the cultural and program specificity of the place.

Good Practice examples with reasons for the adaptable reuse

General introduction contextual overview on the territory of intervention with a Specific focus on modernism on Spatial qualities.

Project research and selections of cases+ description of the focus (Why interesting) + general project data (Building type/Climate zone/Context (City/Country)), upload and compare/discuss in webinar

Development of an IDEA:

- Identify and formulate the problem and its own nature (theoretical, spatial, formal, technical, typological, sociological and environmental), enunciate the conceptual paths to its resolution;

Development of a STRATEGY:

- Development of the first test of concepts, based on informed judgments that allows teams to build knowledge and arguments to conduct conceptual statement into an architectural project. Develop a group working method in a way that integrates different complementary inputs for setting project paths. it implies:
 - a) To find, evaluate and synthesize information collected from first day theme presentations and site tutored visit;
 - b) To know how to characterise existing structures (architectural condition – in time, theme, tendency, line of thought –, contextual condition – neighbourhood, ensemble –, functional and constructive condition – its actual behaviour in both aspects.
 - c) To know how to communicate by schemes and diagrams, but also by technical drawing, the synthesis embryo of a project;

2nd Week, Lecture 2: Development of a Project

Introduction of Specific focus on modernism on Techniques and Materials.

Development of a PROJECT,

- Development of collective critical thinking to inform the design process and how to express it in architecture proposals, taken from previous team design decisions determined on STRATEGY.
- Development of project methods revealing the importance of working with the right tools: technical drawings and models, both physical and digital and simulation tools.

3thWeek: Communication skills

- FINAL PROPOSALS:
- Delivery of a final product, i.e., PROJECT or DESIGN SOLUTION, and make effective use of visual, oral, written, and other forms of communication to critique, negotiate, create and communicate understanding.
- Create an exhibition of the results

Methodology Tools

Physical Collage

Physical Models

Sketching

Methodology Type

Experiential learning methodology

Pedagogical activity

Lecture	X	Laboratory	
Seminar		Workshop/design studio	
Excursion		Work Experience	X
Self-Study		Exam Preparation	

Best Practices

These methodologies were developed through practical assignments (work experience), undergraduate students in Architecture and Interior Architecture of IST, Liverpool and RMB Project Partners, in Workshops taught by the teacher, both RMB and IST as well as London and Liverpool Workshops



<http://www.rmb-eu.com/studentworkshops/1st-studentworkshop/>

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Methodology Title	Documentation and Evaluation
Relation with Curriculum	RMB 12 - House and Housing: Modern Movement
Module Number	
Methodology Responsibility	Prof. Ana Tostões
Status	Mandatory Module x Compulsory Module x
Semester	3
Methodology Goals	<p>To deepen the knowledge and the architectural theory context in the global framework of the contemporary culture, with a focus on the housing issue in its relationship with the city.</p> <p>To study, document and evaluate local situations (case studies), and paralleled, to comprehend the general line on the principles and the development of housing and modernism.</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • understand and distinguish the historical context of a case • write about the historical content relevant for a case • recognize the most important elements of modern architecture
Methodology Description	<ol style="list-style-type: none"> 1. Guided literature review. Promotion of independent research and analyse of scientific documents and archival documents on the history and architectural theory from a critical analysis based on the binomial: architecture and city. 2. Lectures and Online seminars. 3. Group work with case studies analysis. Identify the multiple evolution stages, relating them with several urban fabric and layouts, with ordinary or exceptional programs. 4. Production of a Scientific Paper. Development of the critical ability of the students as a form of research. Focus on the analysis of key works taken as case studies likely to stimulate reflection and discussion on the shape and life of architecture and cities.
Methodology Tools	<p>Case Studies (group work)</p> <p>Seminars and lectures</p> <p>Excursions</p> <p>Literature study of:</p> <ul style="list-style-type: none"> • Case study handbook • Data base with original plans and publications on case studies • Papers • Books <p>Paper production, presentation and discussion</p>
Methodology Type	<p>Literature study</p> <p>Group assignments</p> <p>Design reviews</p> <p>archive surveys</p>

Field study trips (Excursions)

Visual/presencial inspections

Pedagogical activity

Lecture	x	Laboratory
Seminar	x	Workshop/design studio
Excursion	x	Work Experience
Self-Study	x	Exam Preparation

Best Practices

This methodology has been used with the Bachelor and Master students in Architecture at IST-University of Lisbon.

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Methodology Title	Assessment of Modern Buildings in Use
Relation with Curriculum	Assessment of Modern Buildings in Use
Module Number	RMB 8
Methodology	Prof. Teresa Heitor
Responsibility	Prof. Alexandra Alegre
Semester	2
Methodology Goals	<p>The course follows a qualitative case study research methodology. It includes designing a case study, collecting the study's data by means of POE techniques, analyzing the data, and presenting and reporting the results.</p> <p>Different POE techniques – indicative; investigative and diagnostic – are applied in order to: 1) assess the level of effectiveness of a space, i.e. how suitable for purpose is the space; and 2) to create design strategies for supporting its rehabilitation or reconversion.</p> <p>POE methods requires: i) a research question ii) a research strategy and plan to identify the types and extent of data that will be collected; iii) the sampling cohort (the group or individuals to be surveyed); iv) the survey method(s) to be used; and v) the method by which data will be analyzed.</p>
Methodology Description	<p>Survey and analysis of detailed data related with a facility (case study) life-cycle (single building or a building complex/precinct) combined with informed feedback from a set of stakeholders and comparative analysis of other buildings of the same type (benchmarking).</p> <p>Survey methods should include design reviews and archive surveys, visual inspections and records and observational walkthroughs with interest groups</p> <p>STEP 1: SPACE PROFILE</p> <p>General characterization of the space considering the description of:</p> <ol style="list-style-type: none"> 1. Setting (location; site and surroundings; building; relationship with other spaces); 2. Spatial layout (dedicated spaces; zoning; spatial relationships; related activities); 3. Constructive features (type of construction, main construction systems; Building Envelope (Roofs; Walls; Windows and Doors; Floors and Ceilings), finishing (appearance, materials, colours); 4. Mechanical and Electrical systems Plumbing Heating, Ventilation and Cooling; Lighting, Emergency Lighting, Fire Alarm 5. furniture 6. Physical conditions –Building Envelope (Roofs; Walls; Windows and Doors; Floors and Ceilings finishing, appearance, materials, colours) 7. Environmental conditions: light, ventilation, acoustics, air quality (humidity, temperature); 8. Safety Conditions: Circulation; Walls; Glazing; Signs; Floors; Pool tank; Diving pool <p>STEP 2: STAKEHOLDERS & FORMER USERS' FEEDBACK</p> <p>Face-to-face interviews (individual or group) administered to a stratified sample of stakeholders and former users/occupants</p> <p>STEP 3: COMPARATIVE ANALYSIS</p>

Survey of exemplar facilities (buildings or complex) (benchmarking)

STEP 5: GENERAL DIAGNOSIS

General assessment of the overall facility condition (observable components and systems)

Good – Component or system is sound and performing its function. Although it may show signs of normal wear and tear commensurate with its age, some minor remedial work may be required.

Fair - Component or system is performing adequately at this time but exhibits deferred maintenance, evidence of previous repairs, and workmanship not in compliance with commonly accepted standards, is obsolete, or is approaching the end of its typical life cycle. Repair or replacement is required to prevent its further deterioration, restore it to good condition, prevent its premature failure, or to prolong its life cycle. Component or system exhibits an inherent deficiency the cost of which to remedy is not commensurate with the deficiency but that is best addressed by a program of increased preventive maintenance or periodic repairs.

Satisfactory - Component or system is performing adequately at this time but exhibits normal wear and tear expected for: the specific type of material, component, or equipment; the Subject's use; and exposure to the elements for the given locale, if applicable. Other than routine preventive maintenance, no repairs or improvements are required at this time.

Poor - Component or system has either failed or cannot be relied upon to continue performing its original function as a result of: having realized or exceeded its typical life cycle, excessive deferred maintenance, a state of disrepair, an inherent design deficiency or workmanship. Present condition could contribute to or cause the deterioration of contiguous elements or systems. Repair or replacement is required. The Buildings observed in poor condition should be monitored by, annual or bi-annual inspection, should not all of the deficiencies identified be addressed in that same time interval.

Acceptable - Component or system is basically performing its original function in consideration of its age, overall quality of the asset, and any inherent design and/or construction defects. Such inherent defects coupled with normal wear and tear do not warrant the component to be classified as either in good or fair condition.

Serviceable - Component or system can accommodate either repairs or an increased level of proactive preventive maintenance so as to either realize or extend its life cycle

STEP 6: RECOMMENDATIONS & DESIGN STRATEGIES

DELIVERABLES

The primary deliverable is an illustrated report, complemented by a concise oral presentation.

	During the presentation students will provide feedback on other groups' presentations.		
Methodology Tools	Qualitative Observation Interviews Focus group Visual surveys Walk through of buildings Workshops Questionnaires Measurement Benchmarks		
Methodology Type	Process, Functional and Technical performance design reviews archive surveys visual inspections records and observational walkthroughs with interest groups		
Pedagogical activity	Lecture	x	Laboratory
	Seminar		Workshop/design studio
	Excursion		Work Experience x
	Self-Study		Exam Preparation
Best Practices	These methodologies were developed, through the accomplishment of practical work (work experience), by master students in Architecture, in courses taught by the teachers.		
Literature	<ul style="list-style-type: none"> - Baird, George et al. <u>Building Evaluation Techniques</u> (Centre for Building Performance Research, Victoria University of Wellington). New York: McGraw-Hill, 1996. - Brand, Stewart. <u>How Buildings Learn: What Happens After They're Built?</u> New York, NY: Viking, 1994. - Friedmann, Arnold, Zimring, Craig, & Zube, Ervin. <u>Environmental Design Evaluation</u>. New York: Plenum, 1978. - Kernohan, David, et al. <u>User Participation in Building Design and Management</u>. Oxford: Butterworth, 1992. - Preiser, Wolfgang FE. <u>Improving Building Performance</u>. Washington, DC: NCARB, 2003. - Preiser, Wolfgang FE, Rabinowitz, Harvey Z, & White, Edward T. <u>Post-Occupancy Evaluation</u>. New York: Van Nostrand Reinhold, 1988. - Preiser, Wolfgang FE, & Vischer, Jacqueline C (Eds.). <u>Assessing Building Performance</u>. Oxford: Elsevier Butterworth-Heinemann, 2005. - Preiser, W, Davis, A., Salama, A, Hardy, A (2015) <u>Architecture beyond criticism. Expert judgment and performance evaluation</u>, Routledge, Uk - Groat, Linda, & Wang, David. <u>Architectural Research Methods</u>. New York: Wiley, 2002. - Van der Voordt, Theo JM, & Van Wegen, Herman BR. <u>Architecture in Use: An Introduction to the Programming, Design, and Evaluation of Buildings</u>. Amsterdam: Elsevier, 2005. - Zeisel, John. <u>Inquiry by Design</u> (rev ed.). New York: Wiley (in press). 		

Methodology Title	Communication techniques to teach embodied architectural knowledge in the design studio
Relation with Curriculum Module Number	RMB7, RMB10, RMB 13 Design Studio 1, 2, 3
Semester	1, 2, 3
Methodology Goals	<p>The goal of the methodology is to support the pedagogical practice of the aesthetic judgement during the dialogue between the teacher and the student, which takes place in the design studio.</p> <p>In general the studio is understood as the place where students learn to design. A part of the educational methods is described as <i>learning by doing</i> - the students learn through the execution of design assignments, but also by discussing the design solutions with their teacher and peers: they <i>learn by interacting with their culture</i>.</p> <p>In this dialogue much is discussed. On the one hand, they talk about functional problems within the design of the student, or about technical problems, organizational or economic issues. These objective issues are very clear and very explicable. The teacher can give the student criteria and standards to deal with these issues. Rules or criteria which the student can implement in his design and which help the student to perform better and improve his design skills.</p> <p>But on the other hand, they talk about more intangible or subjective aspects of architectural projects, such as proportions, form, materiality, meaning, ..., things that depend on our appreciations and of which we judge that the design is of good quality. These aspects are more difficult to deal with in an educational context. The teacher can talk about these things, but it is difficult for the teacher to estimate if the student understands what he means. The teacher cannot give the student any criteria and rules which the student can use during his design process to come to a design of good quality. It is actually the aesthetic judgment that enables us to make the best design decisions and to produce interesting designs. Our aesthetic judgment allows us to make the best decisions in a specific design situation involving numerous constraints and uncertainties, conforming to the aesthetic values of the culture of the design studio, or broader, of the architectural community. Training the student in making good designs is to support the student in developing his aesthetic judgment. Aesthetic education enables the students to interpret in the first place the culture to which they want to belong and, on the other hand, to act within this culture.</p> <p>References:</p> <p>Michels M. (2018). <i>A sentiment for architecture. Teaching and learning embodied architectural knowledge during the dialogue in the design studio</i>. Doctoral dissertation. University of Antwerp</p>
Methodology Description	<p>The research findings of the doctoral research of Marjan Michels provide tools and instruments that can be used to facilitate the educational process of the aesthetic judgement during the dialogue in the design studio.</p> <p>(1) <i>The architectural meaning</i></p>

In order to be able to educate the aesthetic judgement, it is essential that the student and the teacher talk about the design proposal of the student in a meaningful way. This means that there is a conscious and linguistic reflection on the three constituent elements of a good aesthetic judgement: the architectural stimuli that form the spatial quality of the design (which spatial elements play an important role in the design), the associated architectural values (why are they important), and the appropriate emotional responses (how do I feel about it).

(2) Communicating during the dialogue is negotiating through argumentation about the architectural meaning of the design proposal

The architectural meaning that is both created and shared during the dialogue, is the design knowledge which the student has to acquire in order to form a good aesthetic judgement. The desired mode of communication is therefore one of negotiating based on a clear argumentation about the meaning of the design proposal. This presupposes two equal conversation partners who speak this specific language (= naming the three constituent elements of a good aesthetic judgement).

To make the dialogue an effective learning process, it is important that on the one hand continuity in learning is pursued (i.e. accumulating knowledge in an appropriate direction) and that on the other hand, the dialogue starts from the student's current knowledge and competences. In this way the student feels motivated: he or she sees the next step in his or her learning process as feasible.

(3) Autonomy

Both substantively discussing the architectural meaning as ensuring continuity and alignment with the potential of the student is made possible by increasing the student's autonomy during the dialogue. Students who take their learning process into their own hands can formulate more precisely where they stand, know better where their needs lie and can manage their learning process more effectively during the dialogue. The ultimate goal is for the student to go through the emotional and cognitive processes in which he develops his aesthetic judgement.

The teacher can increase the autonomy of the student by giving him an equal role in the dialogue, by talking in a meaningful way and thus teaching him a language in which the student can think, act and look. He can offer him resources (value references) and give appropriate design instructions to continue working and learning after the dialogue.

(4) The structure of the dialogue

Whether and how the student can act autonomously - and thus be able to develop his aesthetic judgement effectively, can be facilitated by the structure of the dialogue.

First of all, the dialogue consists of a structure of three parts - a start (a), a middle part (b) and an end (c)- in which the autonomy of the student always has a different role.

Subsequently, the way in which the design proposal is discussed determines the extent and the way in which the student's autonomy is addressed. Regarding the beginning, I discovered 9 different ways to start the dialogue. As for the middle part, I discovered different characteristics and for the end of the dialogue I saw three types of endings. Each type or characteristic influences the autonomous role of the student in a different way and will then contribute to the development of the aesthetic judgement differently. Depending on the ability

and the needs of the student the communication mode can be adjusted accordingly.

Finally, the mode of communication in one part often continues in the next part and the beginning of the dialogue can set the tone. The student's autonomy therefore also depends on the relationship between the parts themselves.

The diagram shows a list of 26 dialogues with 9 different ways to start the dialogue (quality start, canon start, ...), different characteristics of the middle part and 3 types of endings, detected in the PhD research.

STRUCTURE			
START	MIDDLE		END
	PHASE	LEVEL	
QUALITY	HYPOTHESEGESPRESK	ALGEMEEN/METHODOLOGISCH	OPEN ENDING
QUALITY	HYPOTHESEGESPRESK	ALGEMEEN/METHODOLOGISCH	CONSUMMATION ENDING
QUALITY	HYPOTHESEGESPRESK	ALGEMEEN/METHODOLOGISCH	CONSUMMATION ENDING
CRITERIA	HYPOTHESEGESPRESK	ALGEMEEN/METHODOLOGISCH	CONSUMMATION ENDING
CRITERIA	HYPOTHESEGESPRESK	ALGEMEEN/METHODOLOGISCH	CONSUMMATION ENDING
CRITERIA	HYBRIDE GESPRESK	ALGEMEEN/METHODOLOGISCH	OPEN ENDING
CANON	HYBRIDE GESPRESK	ALGEMEEN/METHODOLOGISCH	OPEN ENDING
CANON	HYBRIDE GESPRESK	ALGEMEEN/METHODOLOGISCH	OPEN ENDING
VARIANT	HYPOTHESEGESPRESK	ALGEMEEN/METHODOLOGISCH	OPEN ENDING
DECISION	HYPOTHESEGESPRESK	ALGEMEEN/METHODOLOGISCH	OPEN ENDING
DECISION	HYBRIDE GESPRESK	CONCREET --> ALGEMEEN	OPEN ENDING
CONCEPT	HYPOTHESEGESPRESK	CONCREET --> ALGEMEEN/METHODOLOGISCH	OPEN ENDING
CONCEPT	HYPOTHESEGESPRESK	CONCREET	CLOSED ENDING
CONCEPT	HYPOTHESEGESPRESK	CONCREET / METHODOLOGISCH	CLOSED ENDING
CONCEPT	HYPOTHESEGESPRESK	CONCREET	CLOSED ENDING
CONCEPT	HYBRIDE GESPRESK	ALGEMEEN/METHODOLOGISCH	OPEN ENDING
CONCEPT	HYBRIDE GESPRESK	CONCREET	CONSUMMATION ENDING
DESCRIPTION	HYBRIDE GESPRESK	CONCREET	CONSUMMATION ENDING
DESCRIPTION	HYPOTHESEGESPRESK	ALGEMEEN	OPEN ENDING
DESCRIPTION	PROBLEEMGESPRESK	CONCREET	CLOSED ENDING
DESCRIPTION	PROBLEEMGESPRESK	CONCREET	CLOSED ENDING
READING	PROBLEEMGESPRESK	CONCREET	CLOSED ENDING
READING	PROBLEEMGESPRESK	CONCREET	OPEN ENDING
READING	HYBRIDE GESPRESK	CONCREET --> ALGEMEEN	OPEN ENDING
SEARCHING	EXPERIMENTENGESPRESK	CONCREET	CLOSED ENDING
SEARCHING	EXPERIMENTENGESPRESK	CONCREET --> ALGEMEEN/METHODOLOGISCH	OPEN ENDING

9 start types (a): quality start, description start, reading start, variant start, decision start, searching start, canon start, criteria start

characteristics of middle (b): problem conversation, hypothesis conversation, hybrid conversation (problem & hypothesis), concrete, general, methodological, spontaneous or conducted

3 types of endings (c.): end of consumption, closing end, open end.

Methodology Tools

- The **dialogue** in the studio between teacher and one or more students better known as the critique sessions

- The **artefacts** the students bring to the critique sessions like plans/ models/ sketches/ references/ images/...

Methodology Type

Communicating methodology in the design studio

Pedagogical activity

Lecture		Laboratory	
Seminar	X	Workshop/design studio	X
Excursion		Work Experience	
Self-Study		Exam Preparation	

Best Practices

Pedagogical Experiences

RMB studio in Detmold (May 2019)



Communication with tutors and among students.



Communication during presentation moments.

Literature

- Michels M. (2018). *A sentiment for architecture. Teaching and learning embodied architectural knowledge during the dialogue in the design studio*. Doctoral dissertation. University of Antwerp
- Michels M., Meeus W., De Walsche J. (2016). Sentiment : the basis for developing aesthetic judgment, *Asian education studies* , 1, 69-74.

Methodology Title	Action Research
Relation with Curriculum	RMB 6, RMB 13
Module Number	Design Studio 1, 2, 3
Methodology Responsibility	Prof. Michel melenhorst
Semester	1, 2, 3
Methodology Goals	The goal of the methodology is to support the notion of analysis and design as an inseparable twins, an action in space without any other medium in between. The design is directly made and tested in the reusable space

Methodology Description	<p>Action Research</p> <p>In the past few decades, research has become increasingly important in architecture. There has been a movement from 'search' to 'research'¹. Research by design and design by research, often used in a back and forth manner, have become well-known concepts. The professional practice changed quite a bit; architects are doing research! The research can support a design assignment or be experimental, fundamental, problem-solving, advisory, descriptive or artistic research. Many are trying to figure out what research within architecture is. Is it different? Unique? Research into research has become almost as big as the research itself.</p> <p>Architecture education stimulates this investigative tendency; many schools develop strategies for the future of research in education. Introducing scientific methods attempts to get a firmer grip on the design, making it less intuitive and easier to describe, classify and even be reproducible as a method. Developing and disseminating knowledge gained in research, architecture as a spatial language can answer societal questions. Research, from academic to artistic, has found a place within education. A side effect of this is scientification and restriction through obligatory methodologies. The importance of using intuition and direct sensory, subjective experiences and experiments as important drivers to feed a design is easily forgotten.</p> <p>Let's not kill spatial curiosity or neglect 'other kinds of research'. Architecture's strength lies in the fieldwork, inside space itself. It is not scholarly, lab-type or library research but active research, or better 'action research'. It is on a 1:1 scale, intentionally personal and possibly subjective, using direct experiences instead of sources sublimated over text or drawing. It is a compelling way of exploring, being persé in direct communication with existing spaces. However, there is no real novelty here; architects have always loved to go out. Diogenes did, and possibly under the influence of some mind-expanding little helpers, Haus-Rucker-Co did, to name two outdoor architect representatives closer and further back in history. Within education, the experiments at Corpo-real Master at Artez² explore in the same direction. The principles are not so different from other kinds of research: There is a presumption, you collect evidence to understand the presumption or find proof for it, the results of the investigation and the methodology used are made accessible and transparent to a larger audience, and this gives input for next steps. The great thing about action</p>
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¹ Weiner, F. H. (2006). The Emergence of Research and the Decline of Search in Architectural Education and Practice.”. In *Emerging Research + Design*, Temple University, Philadelphia, PA.

² <https://corpo-real.artez.nl/in>

research is that these three steps –question, collect-result- combine in one act! How? Let's look at some historical action research.

The story goes that the once-famous architect Piet Blom liked to take an evening stroll around the sites and critically reflect on the day's results of buildings of his under construction. If dissatisfied with some beam, column or other parts, he would not hesitate to write an instruction in oil crayon on the offending component for the workers, such as 'perhaps better not' (a euphemism for remove!). For Blom, the architect who had coined the term 'structuralism', to design was to solve a puzzle, in which all the pieces should fit regardless of style. He crafted, planed and sliced on his own half-finished buildings. Whether new or existing, finished or unfinished, it made no difference to him. Blom kept looking, evaluating, changing and using the sensation of being in his space to continue his designs. The information this sensation gave him resulted in ongoing alterations in his plans, this, of course, to his clients' despair, not to speak the contractor. It is not a 'real' research situation. Still, it shows an ongoing dialogue with space and buildings and stresses the importance of 'deep' observation, having a fresh mind and taking nothing for granted.

It is quite a mental jump from Blom's structuralist anarchy to Bernard Tschumi and his search for a theoretical framework linking architectural concepts, use and actual space. Tschumi wrote about the tension between use and form that becomes visible in a building's changing appearance and spatial conditions over time.

In the preface of 'Architecture and Disjunction'³, Tschumi reflects on some of his earlier essays. He concludes what retroactively binds them is: 'While their common starting point is today's disjunction between use, form, and social values, they argue that this condition, instead of being a pejorative one, is highly "architectural". Architecture is 'a sometimes violent confrontation between spaces and activities'. Tschumi wanted to understand architectural change and the effect it might have on society and vice versa. To do so, he argues, it is necessary to go beyond the obvious and the known, because education and "the advice of experts" are means of maintaining the traditional structures, and questioning them is a necessary step towards any new approach'. In his text 'Architecture and transgression'⁴ he borrows the term 'transgression' from Georges Bataille to architecturally go beyond the obvious.

*Transgression opens the door into what lies beyond the limits usually observed, but it maintains these limits all the same. Transgression is complementary to the profane world, exceeding its limits but not destroying it.*⁵

To transgress, we need transgression tools to do so, but Tschumi needs to solve what he calls a paradox in architecture first. There is the experience of space, a real space that one can touch, we can move through it, but this space can never be at the forefront of architectural development. Then there is a concept of space. This space is in our mind, in words and drawings on paper. These are experiments in thought and form like the experimental and speculative spaces by Piranesi, Ledoux or Lebbeus Woods. Architecture misses either the reality or the concept'. Tschumi suggests taking a way around this paradox,' to refute the silence the paradox seems to imply, even if this alternative proves intolerable.'

He does so in three 'correspondences'.

³ Tschumi, B. (1996). *Architecture and disjunction* (1st MIT Press paperback ed.). Cambridge, Mass.: MIT Press

⁴ Tschumi, B., 1994. *Architecture and disjunction*. Cambridge Mass.: MIT Press.

⁵ Bataille, G., & DALWOOD, M. (1962). *[L'Érotisme.] Eroticism ... Translated ... by Mary Dalwood. [With plates.]*. John Calder: London

The first one is on eroticism. 'Architecture is the ultimate erotic object, because an architectural act, brought to the level of excess, is the only way to reveal both the traces of history and its own immediate experiential truth'. It is a bit clumsy, perhaps the erotic comparison, but I think he means we should have guts to try out architecture, space, buildings, not being too pious, as the only way to bring it further. Gordon Matta Clark's experiments from the seventies might come very close, as does the living lab situations of Theaster Gates and, in a very different manner, the work of RAAAF.

In the second on, decay and rot.

'In the paradox of architecture, the contradiction between architectural concept and sensual experience of space resolves itself at one point of tangency: the rotten point, the very point that taboos and culture have always rejected. This metaphorical rot is where architecture lies. Rot bridges sensory pleasure and reason.'

Tschumi convincingly illustrates his ideas on transgression in his 'Ads for Architecture'⁶, showing a photo of the Villa Savoye in a ruinous state, accompanied by the text: 'The most architectural thing about this building is the state of decay in which it is. Architecture only survives where it negates the form that society expects of it. Where it negates itself by transgressing the limits that history has set for it.' In the conclusive third correspondence, Tschumi states that the point where a building has collected traces over time, where it shows life and death, is where concept and real space might join; he explains the text used in the advertisement for architecture:

'Whether through literal or phenomenal transgression, architecture is seen here as the momentary and sacrilegious convergence of real space and ideal space. Limits remain, for transgression does not mean the methodical destruction of any code or rule that concerns space or architecture. On the contrary, it introduces new articulations between inside and outside, between concept and experience. Very simply it means overcoming unacceptable prevalences.'

Thus, time reveals the ultimate disconnection between form and use, the end of the concept, making clear that something new is needed in concept, building or both. I think we should not wait for transgression to happen when it can be provoked or experimentally sought for in action research! It is concept development in action, in existing buildings and spaces, experimenting with them to the max. It is about finding new uses, testing new concepts, challenging form versus use, including temporary use, occupation with guerrilla actions – such as Tschumi himself once practised – while constantly developing new tools and methods for transgressing the existing state of buildings. Therefore, action research is the perfect way to fuse, merge concept and reality, thus challenging the rules and nature of architecture and its role in society.

These examples show two ends of how research in action can function: the open mind rambles in Piet Blom Style, the theoretically underpinned discourse in Tschumi's work. Of course, there are many more inspirations: the exhaustive observations of George Perec⁷ or a bit further back Luis Aragon's⁸ strolls through Paris are action research as well. What they all have in common is a limitless curiosity and a great joy in observation, often the start for further explorations and a start to develop techniques provoking architecture beyond the limits of its

⁶ B TSCHUMI. *Advertisements for Architecture* [online] [viewed 8 March 2021]. Available from: <http://www.tschumi.com/projects/19/>

⁷ Perec, G. (2000). *Tentative d'épuisement d'un lieu parisien* [Nouveau tirage]. Bourgois.

⁸ Aragon, L., & Trutat, J. (1926). *Le paysan de Paris* (Nouveau tirage en 1945). libr. Gallimard; Éditions de la Nouvelle Revue française.

boundaries. This research is desperately needed. It might give answers to personal questions on how space works or help solve societal problems such as where the limits of re-using existing buildings lie.

Techniques and tools used in action research; finding the question, researching it, its notation and the dissemination can merge in one action. Performance and installation art can offer us help. In works from artists such as Marina Abramović, Rachel Whiteread, Anthony Gormley, we can find out how to measure, behave, question space and perhaps understand it. Not in the least using our own body as a measuring device. Film- and media art helps us work in real-time, to fixate time and experience, by registering it in live-action. We need to transgress the rules and boundaries in exploring architecture but need to do the same in notation and sharing this transgression results. The Japanese filmmaker Toshio Matsumoto heavily experiments and transgresses the boundaries the medium has set, for instance, in his films 'shift' and 'engram'. Matsumoto himself puts it this way:

'We have to do more to irritate and disturb modes of perception, thinking, or feeling that have become automatized in this way. I did several kinds of experiments from the 1970s to the 1980s that de-automatized the visual field. But when image technology progresses such that you can make any kind of image, people become visually used to that. That's why there's not much left today with a fresh impact. In this way, the problem is that the interpretive structure of narrating, giving meaning to, or interpreting the world has become so thoroughly systematized that one cannot conceive of anything else that is largely untouched. We have to de-systematize that.'⁹

Architecture research needs the down-to-earth Piet Blom Style, the will to provoke and transgress limits, a (large) pinch of Tschumi and Matsumoto and the conviction that architecture has its very own way of research. Teaching and researching architecture in an art school has the tremendous advantage of having many spatial and time-based disciplines under one roof. They are architecture-related but are not architecture, which is excellent for developing new insights and revelations within the individual fields transgressing mental, communicative and spatial boundaries. It is of little importance if this truly scientific; the science will come after the experiment. For, to paraphrase the Russian Writer Maxim Osipov in his story After Eternity¹⁰:

'Architecture is conditional art that presupposes experimentation.'

Methodology Tools

- Informal making of space with essay to use materials as cloth, cardboard, projection, found materials

Methodology Type

action methodology in the design studio

Pedagogical activity

Lecture		Laboratory	
Seminar	X	Workshop/design studio	X
Excursion		Work Experience	
Self-Study		Exam Preparation	

⁹ Aaron Gerow. *Documentarists of Japan # 9: Matsumoto Toshio*. <https://www.yidff.jp/docbox/9/box9-2-e.html> 08.03.2021

¹⁰ OSIPOV, M., 2019. *Rock, paper, scissors. And other stories*. New York, NY: New York Review Books. New York Review books classics.

Best Practices

React by Design ANTWERP 2017

RMB Workshop Horn Bad Meinberg sept 2019

Communication during presentation moments.

Literature

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