SUSTAINABILITY IN CONTEMPORARY JAPANESE ARCHITECTURE

1. Course objectives. Overview. 授業の目標、概要

This course intends to introduce students to the notions of sustainability in architecture and urban design within the Japanese context from the viewpoint of the cultural exchange between Japan and the World. The students will read and analyze written and audiovisual materials provided by the instructor to engage in in-class discussions. The course is organized into 4 main thematic areas; we will hold two workshops in class where students will discuss on a given topic and then submit a short reflection Prior knowledge of architecture and/or urban planning is not necessary, but you should be curious and proactive. Active learning, in-class work, and peer review are essential parts of this course; thus, students are expected to actively participate during class time.

Four main areas and learning goals:

① Recognize the basic elements of traditional Japanese architecture and its relationship with the natural environment (Weeks 01-03)

② Describe the main aspects of the culture exchange between Japan and other countries that have shaped the concept of sustainability in contemporary Japanese architecture (Weeks 04-06)

③ Identify and discuss the main environmental problems in contemporary Japanese architecture (Weeks 07-09)

④ Interpret selected works of representative contemporary Japanese architects with regards to sustainability (Weeks 10-13)

2. Keywords. 授業のキーワード

Japan, sustainability, architecture, urban planning. 日本、サステナビリティ、建築、都市計画。

3. Course schedule. 授業計画

The syllabus is subject to change depending on the number of students who enroll in the course, the students´ needs, and the situation regarding COVID-19. The detailed schedule for the course is detailed in the table below.

WEEK	CLASSWORK. CONTENTS	ASSIGNMENTS
W01	Presentation. Course syllabus. Introduction to Japanese architecture.	Reading: Traditional Japanese architecture timeline from "What is Japanese architecture? Introduction and architectural chronology.
W02	Traditional Japanese architecture.	Video: Climate Consultant.
W03	Architecture and environment. The basics of sustainable architecture.	Reading: Gloaguen, Y. (2016). Antonin Raymond, an Architectural Journey from Bohemia to Japan in the Early 20th Century. The friends of Czech Heritage. Newsletter. 16. 9-13. Reading: Raymond, A. (1973). Antonin Raymond: An autobiography, *More works, clients, people in Japan. Karuizawa summer house (pp. 130-134)*. Tuttle Pub.
W04	The discovery of Japan by Western architects. Antonin Raymond and the Karuizawa summer house.	Reading: Taut, B. (1958). Houses and people of Japan. *Sun and glowing Coal (pp. 73-94)*. Sanseido Co., LTD. Tokyo.
W05	Orientalism and environmentalism: East-West cultural exchange. The experience of Bruno Taut.	**Submit your report for workshop 01 (*)**
W06	**WORKSHOP 01: Analyze one building with respect to the materials seen in class (*)**	Reading: Pernice, R. (2007). Urban sprawl in postwar Japan and the vision of the city based on the urban theories of the Metabolists′ projects. Journal of Asian Architecture and Building Engineering, 6(2), 237-244. https://doi.org/10.3130/jaabe.6.237
W07	The build of modern Japan: The birth of the megalopolis.	Reading: Murakami, S., Levine, M. D., Yoshino, H., Inoue, T., Ikaga, T., Shimoda, Y., Miura, S., Sera, T., Nishio, M., Sakamoto, Y., & Fujisaki, W. (2009). Overview of energy consumption and GHG mitigation technologies in the building sector of Japan. Energy Efficiency, 2(2), 179-194. https://doi.org/10.1007/s12053-008-9040-8
W08	Environmental concerns towards contemporary Japanese architecture.	Reading: Fiber city / Tokyo 2050.
W09	Challenges of contemporary architecture and urban planning in Japan.	Reading: Simon Guy & Graham Farmer (2001) Reinterpreting Sustainable Architecture: The Place of Technology, Journal of Architectural Education, 54:3, 140-148, DOI: 10.1162/10464880152632451
W10	The concept of sustainability in architecture. Evolution during the 20th and 21st Century.	Reading: Ban, S. KEIO University SFC Ban Laboratory. (2010). Voluntary Architects' Network. *Foreword (pp. 4-9)*. INAX. Reading: Ban, S. (2017). Shigeru Ban. Material, Structure and Space. *Disaster relief (pp. 288-291)*. TOTO.
W11	Views on sustainability from contemporary Japanese architects (I). Kuma Kengo.	Reading: Ando, T. (2012). Tadao Ando: Conversations with students. *Regionalism (pp. 28-45)*. Princeton Architectural Press.
W12	Views on sustainability from contemporary Japanese architects (II). Ando Tadao.	**Submit your report for workshop 02 (*)**
W13	**WORKSHOP 02: Analyze one building with respect to the materials seen in class (*)**	**Submit your final portfolio (*)**

4. Teaching methods. 授業の方法

This course is based on the Team Based learning methodology. Homework will mainly consist of readings and video presentations that will prepare students for class. During class time students will take part in short quizzes, debates, and application activities in small groups.

Short readings in the form of book chapters, research manuscripts or other kinds of materials are distributed to the students before class. Class activities include short lectures that reinforce and expand the content of the handouts. After this, students engage in activities, such as discussion groups or small workshops to further develop the theoretical contents. Additional materials are also available to assist them in this process.

5. Grade evaluation 成績評価方法

5.1. Grading policy

- 40%: Active participation and engagement with the course activities: Assignments and class activities, which may include short quizzes, tests, application exercises, and short reflections on the class contents.

- 40%: Portfolio: Written reports on the 2 workshops, and a final written reflection on the course contents. The reports will be graded using a rubric, which will be disclosed to the students beforehand.

- 20%: Participation in the discussion and debates during the 2 workshops. Information about the grading criteria for these debates will be disclosed to the students beforehand.

5.2. Lateness and absence policy

- Four or more unjustified absences automatically means a failing grade (不可).

- Justified causes for absence include illness among other reasons. In case of illness, students need to provide with a certificate from the doctor.

- Consult your instructor if you need to be absent and I will try to reschedule your assignments when possible.

- Absences may have an impact on your final grades, as you will not be able to participate in class activities.

- Students are not allowed to be late for class. If a student is more than 10 minutes late, this will count as an unjustified absence. Besides, the lateness may have an impact on the grade for that day´s class activities.

5.3. COVID-19 related absence

- Following the University policy, as much consideration as possible will be given to students infected with COVID and registered as Corona absentees.

- The most important point to keep in mind is your **physical and psychological wellbeing.**

- If you are infected with COVID, please inform your instructor as soon as possible. Depending on your health condition and the course schedule I will make arrangements to reschedule some activities; these may include the extension of the deadline for assignments, online classes, and handouts, among others.

- In case your teacher is infected with COVID, you will be notified as soon as possible, and arrangements will be made to move to online classes or reschedule some activities if necessary.

5.4. In class

- Students are not allowed to use their smartphones and computers during on-line class for other purposes apart from the academic.

- Penalties will be imposed to those who are absent from their computers during class time.

5.5. Deadlines for assignments and classwork.

- All assignments must be submitted to pass the course. Late submissions of assignments will be penalized.

- There are assignments that must be mandatorily submitted on time to be eligible for a final grade. These assignments **are marked with an asterisk (*)** on the course schedule.

- Unless otherwise specified, the deadline for classwork submissions is **the midnight of the class day.**

- Unless otherwise specified, the deadline for assignment submissions is t**he midnight before the next class.**

6. Contacting your teacher. 教員の連絡先

- You can contact me anytime at jpulido@g.ecc.u-tokyo.ac.jp. I usually reply to emails within 48 hours, if I do not reply within two days, please send me a reminder. If I cannot clarify your doubts by email, I may ask you to have an online meeting.

- Please do not contact me through Google Classroom, as I do not get notified of incoming messages and therefore will not be able to attend your request in a timely manner.

- My office is in the KIBER Building (駒場国際教育研究棟), 4th floor, room 412.

- Office hours: Fridays 10:30-12:00. If you cannot meet me during that time, email me and I will do my best to schedule a meeting at other times.

7. Plagiarism. 剽窃

- All writing that you do for this class must be your own original writing.

- Plagiarism has very serious consequences not only for students, but also for researchers and other professionals, so it will be dealt with stringently according to University Regulations.

8. Required textbooks. 教科書

There are no required textbooks. The teacher will provide with the necessary materials during the course.

9. Reference book. 参考書

There are no reference books. The teacher will provide with the necessary materials, along with a non-exhaustive list of research articles, books, reports, and book chapters. All reading materials are provided under the "fair use policy" for educational purposes within the scope of this course. The original sources are available in the University of Tokyo library or through the institutional access to academic databases. Please do not share these materials to anyone outside this class.

List of necessary reference materials (Preclass-reading assignments):

- Nishi, K., Hozumi, K. (2012). *What is Japanese architecture?* Kodansha.

- Raymond, A. (1973). *Antonin Raymond: An autobiography*. Tuttle Pub.

- Ōshima, K. T. (2009). *International architecture in interwar Japan: Constructing Kokusai Kenchiku*. Seattle : University of Washington Press.

- Ando, T. (2012). *Tadao Ando: Conversations with students.* Princeton Architectural Press.

- Gloaguen, Y. (2016). Antonin Raymond, an Architectural Journey from Bohemia to Japan in the Early 20th Century. *The friends of Czech Heritage. Newsletter.* 16. 9-13.

- Pernice, R. (2007). Urban sprawl in postwar Japan and the vision of the city based on the urban theories of the Metabolists′ projects. *Journal of Asian Architecture and Building Engineering*, 6(2), 237-244. https://doi.org/10.3130/jaabe.6.237

- Taut, B. (1958). *Houses and people of Japan*. Sanseido Co., LTD. Tokyo.

- Ohno, H. et.al. (2006). Fiber city / Tokyo 2050.

- Simon Guy & Graham Farmer (2001) Reinterpreting Sustainable Architecture: The Place of Technology, Journal of Architectural Education, 54:3, 140-148, DOI: 10.1162/10464880152632451

- Kuma, K. (2012). Kengo Kuma: 2006-2012. A.D.A. EDITA Tokyo.

- Murakami, S., Levine, M. D., Yoshino, H., Inoue, T., Ikaga, T., Shimoda, Y., Miura, S., Sera, T., Nishio, M., Sakamoto, Y., & Fujisaki, W. (2009). Overview of energy consumption and GHG mitigation technologies in the building sector of Japan. *Energy Efficiency*, *2*(2), 179-194. https://doi.org/10.1007/s12053-008-9040-8

- Ban, S. KEIO University SFC Ban Laboratory. (2010). Voluntary Architects' Network. INAX.

- Ban, S. (2017). Shigeru Ban. Material, Structure and Space. TOTO.

Other materials useful for completing the course:

- Artstor: Public images of the Imperial Hotel (Tokyo, Japan). (n.d.). Artstor. https://library.artstor.org/#/search/arttitle:(%22drawing%20number%201509%22)%20AND%20artcurrentrepository:(Avery);size=72;page=1;sort=1

- Lin, Z. (2010). *Kenzo Tange and the Metabolist movement: Urban utopias of modern Japan.* Routledge.

- Smith, K. (1985). *Frank Lloyd Wright and the imperial hotel: A postscript.* The Art Bulletin, 67(2), 296. https://doi.org/10.2307/3050913

- Nute, K. (2000). *Frank Lloyd Wright and Japan: The role of traditional Japanese art and architecture in the work of Frank Lloyd Wright*. Psychology Press

- Tanizaki, J. (1977). *In praise of shadows*. Leete´s Island Books, Inc.

- Watsuji, T. (1988). *Climate and culture: A philosophical study*. Greenwood.

- Ohno, H. (2016). *Fibercity: A vision for Cities in the Age of Shrinkage*. University of Tokyo Press.

- Pernice, R. (2006). The transformation of Tokyo during the 1950s and early 1960s projects between city planning and urban utopia. *Journal of Asian Architecture and Building Engineering,* 5(2), 253-260. https://doi.org/10.3130/jaabe.5.253

10. Notes on taking the course. 履修上の注意

Prerequisites: Interest in architectural design, urban planning, and building engineering. Contact you teacher if you need more information.

There may an additional activity, which is completely optional and has no influence in the final grade, consisting of the visit to some selected buildings representative of Japanese architecture located around Tokyo area. Tentatively, the visits are scheduled as follows.

- Around mid-November: Edo-Tokyo Open Air Architectural Museum.

- Around mid-January: Odaiba area.

11. Language used in class. 授業使用言語

English, 英語

12. Relation between instructor practical work experience and the course. 実務経験と授業科目の関連性

The instructor is a Licensed architect in his home country and holds a Ph.D. on environmental design. He has experience in designing buildings, conducting research, organizing scientific events and publishing research in the field of building engineering in Spain, Chile, Japan and The Philippines. His recent line of research focuses on the effect of climate change in the building industry, with a special interest in the energy consumption of buildings, the resilience of vernacular architecture, and the thermal comfort of building users.