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Numbering code					
Course title <English>	工業数学 C Engineering Mathematics C		Affiliated department, Job title,Name	Disaster Prevention Research Institute Associate Professor.NISHIJIMA KAZUYOSHI Part-time Lecturer.KOSAKA ATSUSHI	
Target year	2nd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Wed.3	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.5times, .1time, .5times, .3times, .1time,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

工学倫理(2)	

<p>medicines and food productions. Associated with it, problems of their safety and ethics are arising, which should be addressed by our societies. In this class, the recent progress in biology-related techniques, and problems we have and will have in near future are described. (M. Shirakawa: Industrial Chemistry)</p> <p>Patents and ethics (Part 1). (6/6) 1time. This course will teach the students about 1) patent systems which protect inventions and research results and 2) ethical issues in patents. The first class, in preparation for the next subject of patent ethics, introduces Japan's patent system with comparisons to the patent systems in the world's major countries and international framework. (M. Nakagawa: Electrical and Electronics Engineering)</p> <p>Patents and ethics (Part 2). (6/13) 1time. Students, equipped with the basic knowledge of patent systems by the previous lecture, will get familiar with actual case studies on ethical and legal issues in patents. (M. Nakagawa: Electrical and Electronics Engineering)</p> <p>Ethics required for advanced science. (6/27) 1time. Engineers and researchers are at the forefront of preventing harm caused by advanced chemistry. Think about social roles and ethics required by engineers and researchers through relationships between chemical substances and environmental problems, efforts to avoid hazards of nanomaterials. (K. Miura: Industrial Chemistry)</p> <p>Ethics in press release. (7/4) 1time. Press Release is an essential process for introducing the research to our society through various medias. In this lecture, issues related to Press Release in University are addressed and discussed. (K. Umeno: Informatics and Mathematical Science)</p> <p>Failure accidents and inspection/maintenance (7/11) 1time. On the occasions of failure accidents of vehicles and plants, the appropriateness of inspection/maintenance of their structures is often questioned. Some actual failure accidents are reviewed to discuss the importance of inspection/maintenance together with the relation to engineering ethics. (S. Biwa: Engineering Science)</p> <p>Ethics in nuclear engineering. (7/18) 1time. Discussion on engineering ethics in the TEPCO accident from view point of Tsunami evaluation by the Japanese government. (I. Takagi: Engineering Science)</p> <p>Ethical issues on sound design. (7/25) 1time. Every working things consuming energy emits acoustic sound. Even a small sound energy affect human as noise and may create annoyance and health problems. Sound problems of various things are introduced in the lecture. Ethical issues, which shall be considered during design and operation environment, will be discussed. (Y. Takano: Architecture)</p>	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
Class participation and reports.	
[Textbook]	
Lecture materials will be distributed.	
[Reference books, etc.]	
(Reference books)	
<p>♯ Omnibus Engineering Ethics ♯ (Kyoritsu Shuppan Co., Ltd.) ISBN:978-4320071964</p> <p>♯ Practical Engineering Ethics - A Short Course, New Edition ♯ (Kagaku-Dojin Publishing Company,INC) ISBN:9784759811551</p> <p>♯ Engineering Ethics (Revised Edition) ♯ (CORONA PUBLISHING CO.,LTD.) ISBN:978-4-339-07798-8</p> <p>♯ World of Engineering Ethics (3rd Edition) ♯ (Morikita Publishing Co., Ltd.) ISBN:978-4-627-97303-9</p>	

Continue to 工学倫理(3)	

Numbering code					
Course title <English>	工学倫理 Engineering Ethics		Affiliated department, Job title,Name	Graduate School of Energy Science Professor.TAKUDA HIROHIKO Graduate School of Engineering Professor.ATOMI HARUYUKI Graduate School of Engineering Senior Lecturer.KANEKO KENTAROU	
Target year	4th year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Thu.3	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
Modern ethics based on engineering aspect are becoming essential to present engineers and scientists. Instructors from various faculties give lectures about ethics in their research fields.					
[Course Goals]					
The goal of this class is to understand engineering ethics, and to develop the ability to judge by yourself when you encounter ethical issues.					
[Course Schedule and Contents]					
Significance to learn engineering ethics. (4/11) 1time. As an introduction to this course, the meaning of engineering ethics and the significance to learning it are explained. Examples are shown in building engineering area on daily disastrous accidents and fire event. The significances of engineering ethics to those examples are discussed. (K. Harada: Architecture)					
Geotechnical engineering and engineering ethics. (4/18) 1time. Geotechnical Engineering is indispensable in discussing the underground public use, slope stability, geo-sequestration of byproduct for the energy generating. Introducing some examples of natural disasters and construction accidents, geotechnical engineering and engineering ethics will be discussed. (K. Kishida: Global Engineering)					
Engineering ethics as an applied ethics. (4/25) 1time. In this lecture, I will show the basic Idea of Engineering Ethics by comparing with the other fields of Applied Ethics. And show its unique character in the age of information technology. (M. Mizutani: Graduate School of Letters)					
Ethical theories for engineering ethics. (5/2) 1time. This lecture focus on various ideas in ethics (utilitarianism, deontology, virtue ethics, professional ethics etc.) which will be useful for thinking about particular ethical problems in engineering ethics. (T. Iseda: Graduate School of Letters)					
Art-view concept for engineering. (5/9) 1time. Concept of "quality of life" is required for human related engineering. Some practical examples in medical-care and welfare fields will be introduced, and problem of the QOL-evaluation will be discussed from both function-optimizing view point and art view point. (N. Tomita: Engineering Science)					
Ethics of biotechnology and stem cell research. (5/16) 1time. With the rapid development of genome editing technology and stem cell engineering, editing of the human genome that goes beyond generations has become possible, at least technically. In this lecture, I will introduce these latest technologies and think about ethical problems accompanying technological development. (G. Eiraku: Industrial Chemistry)					
Research and engineering ethics. (5/23) 1time. It is said that He that will do no ill, must do nothing that belongs thereto. The sense of ethics necessary to whom conducts research and engineering work in society is discussed in terms of the importance of equitability and fair evaluation to anyone involved in each area of research or engineering. (H. Mikada: Global Engineering)					
Ethics in biomedical engineering. (5/30) 1time. Recent dramatic progress in biology-related techniques, such as reproductive medicine, genome editing, and clone-animal techniques, is causing revolutions in the fields of					
----- Continue to 工学倫理(2)					

工学倫理(3)	

[Regarding studies out of class (preparation and review)]	
The assignment of the report will be given for each lesson.	
(Others (office hour, etc.))	
The class order is subject to change.	
*Please visit KULASIS to find out about office hours.	

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Numbering code					
Course title <English>	工学序論 Introduction to Engineering	Affiliated department, Job title,Name	Graduate School of Engineering Senior Lecturer,MAEDA MASAHIRO Graduate School of Engineering Senior Lecturer,MATSUMOTO RIYOUSUKE Graduate School of Engineering Senior Lecturer,YOROZU KAZUAKI Graduate School of Engineering Senior Lecturer,KANEKO KENTAROU Graduate School of Engineering Senior Lecturer,ASHIDA RIYUICHI		
Target year	1st year students or above	Number of credits	1	Course offered year/period	2019/Intensive, First semester
Day/period	Intensive	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
1~2times, 6times,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

G L セミナー I (企業調査研究) (2)					
[Reference books, etc.]					
(Reference books)					
(Related URLs)					
http://www.glc.t.kyoto-u.ac.jp/ugrad					
[Regarding studies out of class (preparation and review)]					
Investigating companies in advance. Analyzing the result from hands-on training. Preparing presentation.					
(Others (office hour, etc.))					
How to register will be announced later. Students who want to join this course is requested to attend the first class. Students are prohibited to skip hands-on training. Evaluation will be based on presentation.					
*Please visit KULASIS to find out about office hours.					

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Numbering code					
Course title <English>	G L セミナー I (企業調査研究) Global Leadership Seminar I	Affiliated department, Job title,Name	Graduate School of Engineering Senior Lecturer,YOROZU KAZUAKI Graduate School of Engineering Senior Lecturer,MAEDA MASAHIRO		
Target year	2nd year students or above	Number of credits	1	Course offered year/period	2019/Intensive, year-round
Day/period	Intensive	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
The purpose of this course is to study about how worldwide leading company, institute, etc. make proposals and find solutions for expanding their own technologies to the international market. Throughout hands-on training on their laboratory, students investigate the methodology of team organization, proposal, market prediction and conception ability by group works. After the investigation, students are expected to improve their comprehension and explanation capability. As extended exercise subject of this course, the Global Leadership Seminar II is opened in the second semester.					
[Course Goals]					
The goal of this course is to improve student's comprehension and explanation capability for processes of proposal and expansion on the international market investigating worldwide leading companies by group work.					
[Course Schedule and Contents]					
Week 1, Guidance Week 2-13, Hands-on training Week 14, Pre-presentation Week 15, Final presentation					
[Class requirement]					
How to register will be announced later. Students who want to join this course is requested to attend the first class.					
[Method, Point of view, and Attainment levels of Evaluation]					
Students are prohibited to skip hands-on training. Evaluation will be based on presentation.					
[Textbook]					
Not used					
Continue to G L セミナー I (企業調査研究) (2)					

Numbering code					
Course title <English>	工学部国際インターンシップ 1 Faculty of Engineering International Internship 1	Affiliated department, Job title,Name	Approved		
Target year	3rd year students or above	Number of credits	1	Course offered year/period	2019/Intensive, year-round
Day/period	Intensive	Class style	Seminar	Language	Japanese and English
[Outline and Purpose of the Course]					
Acquisition of international skills with the training of foreign language through the internship programs hosted by the University, the Faculty of Engineering, or the undergraduate school the applicant belongs to.					
[Course Goals]					
The acquisition of international skills with the training of foreign language through the to internship programs hosted by the University is the major expectation to the students.					
[Course Schedule and Contents]					
Overseas Internship,1time,The contents to be acquired should be described in the brochure of each internship program. Final Presentation,1time,A presentation by the student is required followed by discussion among participants.					
[Class requirement]					
Described in the application booklet for each internship program. The registrant is requested to have enough language skills for the participation.					
[Method, Point of view, and Attainment levels of Evaluation]					
Merit rating is done based on the presentation or reports after each internship program. Each Department responsible to identify if the credit earned by this subject to be included as mandatory ones or not. If the credit is not included in the undergraduate school in which the participant belongs to, the credit is granted by the Global Leadership Education Center as an optional credit. The number of credits, either 1 or 2, will be determined depending on the contents and the duration of the program that the participant has participated in.					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
It is required for students to check if the internship program to participate in could be evaluated as part of mandatory credits or not and could earn how many credits before the participation to the undergraduate school or educational program the student is enrolled. If the credit could not be treated as mandatory ones, get in touch with the Global Leadership Engineering Education Center.					
*Please visit KULASIS to find out about office hours.					

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Numbering code					
Course title <English>	G L セミナー I I (課題解決演習) Global Leadership Seminar II		Affiliated department, Job title,Name	Graduate School of Engineering Senior Lecturer,MAEDA MASAHIRO Graduate School of Engineering Senior Lecturer,KANEKO KENTAROU	
Target year	2nd year students or above	Number of credits	1	Course offered year/period	2019/Intensive, Second semester
Day/period	Intensive	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
This course is a small-group workshop program where students are supposed to extract or set up challenges by themselves aiming at creating new social values. In concrete, abilities of planning and problem-solving are trained through group works in residential training and skills of presentation and communication are enhanced through oral presentations regarding contents of the proposal at each step of the process from a preliminary draft to its completion.					
[Course Goals]					
Ability of planning, from extraction or setting up challenges to proposal of solutions aiming at creating new social values, is trained through group works.					
[Course Schedule and Contents]					
Orientation,1time,A brief overview and a schedule of the course are explained and working groups are organized. Lectures,2times,Lectures by experts are given. Group works,3times,Setting up challenges, extraction of problems, collecting information, and group works are done. Residential training,7times,Through intensive group works based on discussion, a proposal for solving problems is planned, a draft report is made, and a few presentations are made. Preliminary review meeting,1time,A preliminary review meeting is held and discussions are made. Report meeting,1time,Final presentations are made and reports are submitted.					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
It is required to join the residential training. A report meeting is held and comprehensive evaluation concerning abilities in group discussion to extract or set up challenges and to propose solutions for achieving a goal is made through presentation of the proposal as well as a submitted report.					
[Textbook]					
Will be indicated as necessary.					
----- Continue to G L セミナー I I (課題解決演習) (2)					

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Numbering code					
Course title <English>	工学部国際インターンシップ2 Faculty of Engineering International Internship 2		Affiliated department, Job title,Name	Approved	
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Intensive, year-round
Day/period	Intensive	Class style	Seminar	Language	Japanese and English
[Outline and Purpose of the Course]					
Acquisition of international skills with the training of foreign language through the participation to the international internship programs held by the Faculty of Engineering or its subsidiary bodies.					
[Course Goals]					
The acquisition of international and foreign language skills through the participation to international programs is expected. Detailed objectives of the participation should be identified by each program.					
[Course Schedule and Contents]					
Overseas Internship,1time,The contents to be acquired should be described in the brochure of each internship program. Final Presentation,1time,A presentation by the student is required followed by discussion among participants.					
[Class requirement]					
Described in the application booklet for each internship program. The registrant is requested to have enough language skills for the participation.					
[Method, Point of view, and Attainment levels of Evaluation]					
Merit rating is done based on the presentation or reports after each internship program. Each Department responsible to identify if the credit earned by this subject to be included as mandatory ones or not. If the credit is not included in the undergraduate school in which the participant belongs to, the credit is granted by the Global Leadership Education Center as a optional credit. The number of credits, either 1 or 2, will be determined depending on the contents and the duration of the program that the participant has participated in.					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
It is required for students to check if the internship program to participate in could be evaluated as part of mandatory credits or not and could earn how many credits before the participation to the undergraduate school or educational program in enrolled. If the credit could not be treated as mandatory ones, get in touch with the Global Leadership Engineering Education Center.					
*Please visit KULASIS to find out about office hours.					

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G L セミナー I I (課題解決演習) (2)					
[Reference books, etc.]					
(Reference books) Will be indicated as necessary.					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
Course open period: October to January How to register the course will be instructed. *It depends on divisions which students belong to whether the earned credits are admitted as credits required for graduation. Please refer to the syllabus of your division. *Please visit KULASIS to find out about office hours.					

Numbering code					
Course title <English>	地球工学総論 Introduction to Global Engineering		Affiliated department, Job title,Name	Graduate School of Engineering Professor,MIKADA HITOSHI Graduate School of Energy Science Associate Professor,HAMA TAKA YUKI Graduate School of Engineering KANKEI KYOIN	
Target year	4th year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Wed.4	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
0					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

Numbering code					
Course title <English>	建築計画学 I Architectural Planning I	Affiliated department, Job title, Name	Graduate School of Engineering Associate Professor, YOSHIDA TETSU		
Target year	End year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Fri.3	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
Lecture on the basic knowledge on dimensional planning, scale planning, flow lines, etc. necessary for planning and designing the architecture, as well as the interpretation and the process of establishment of functions and programs, building types. In addition, we will give a lecture on the basis of positive (explanatory) theory to explain human psychology and behavior in built environment.					
[Course Goals]					
Understand the fundamental matters of the planning and design of architecture and the theories to understand human psychology and behavior in built environment. [corresponding learning / educational goal] B. Expertise and basic knowledge B2. Ability to understand the design and planning aspects of architecture					
[Course Schedule and Contents]					
Target area of architectural planning studies, 1time, After outlining the genealogy of architectural planning studies, explain the concept of planning in architecture and its transition, and show the areas to be covered by architectural planning studies.					
Dimensional planning, 1 time, Understand the concept of the unit space of buildings and deepen their understanding of the measure of human body, dimension of motion required for designing, dimensional planning of unit space and so on.					
Planning of capacity and size, 1time, Understand the planning of capacity and size of regional facilities and prediction of population fluctuation, fluctuation in the number of people using facility and the overflow method.					
Evaluation, 1time, Lecture on evaluations and living environment evaluations done in the planning and design process of the building and deepen their understanding of the weight determination method and the evaluation method such as max-min principle and so on.					
Durability planning, 1time, Lecture on durable planning of space building. Understand the social durable years and conversion etc of buildings.					
Facility Management, 2times, Mainly focusing on facility management in the office, review the transition of facility management and the POE survey.					
Building type, 3times,					
----- Continue to 建築計画学 I (2)					

建築計画学 I (3)					
(Others (office hour, etc.))					
[Grading evaluation] Examination. [Office Hour] (reception of questions, etc.) Friday 12: 00-13: 00					
*Please visit KULASIS to find out about office hours.					

建築計画学 I (2)					
----- Lecture on the type of daily behavior, room type / building type, type of combination / division of space, concept of flow line etc. Also, lecture on the process of establishment of representative building types such as schools and hospitals since modern times and deepen their understanding					
Function, Program, 2times, Lectures on concepts and changes of functions and programs in architectural design.					
Environmental psychology, 1time, Focus on environmental psychology, positive (explanatory) theory to explain human psychology in the environment and give lecture on the spread of the object, and outline affordance and others.					
Proximity, Privacy, Security, 1time, Lecture on the concept of proximity studies (proxemics) from animal behavioral theory, cultural anthropology and how they are applied to architectural planning studies such as privacy awareness and crime prevention etc.					
Final exam/Confirmation of learning achievement, 1time, Confirm the proficiency level of lecture content.					
Feedback, 1time					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
Examination					
[Textbook]					
Distribute original documents every time and help to understand using projector projection slide.					
[Reference books, etc.]					
(Reference books) Introduced during class Introduce reference book at every lesson					
[Regarding studies out of class (preparation and review)]					
Please carefully read the materials distributed in the lesson and review the content of the lesson. It would be good enough, if you could get an understanding that "plan" thought to be general can change throughout the lesson. To this end, it is recommended obtaining information on the planning and operation of each type of new architecture and building from newspapers, television, and the internet.					
----- Continue to 建築計画学 I (3)					

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Numbering code					
Course title <English>	住居計画学 Living and Housing Design	Affiliated department, Job title, Name	Graduate School of Engineering Associate Professor, YANAGISAWA KIYAMU		
Target year	End year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Wed.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
,1time, ,1time, ,2times, ,1time, ,1time, ,3times, ,2times, ,3times, ,1time,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

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Numbering code					
Course title <English>	設計演習 I Atelier Practice of Architectural DesignI	Affiliated department, Job title,Name	Graduate School of Engineering Professor,TAKEYAMA KIYOSHI Graduate School of Engineering Professor,KANKI KIYOKO Graduate School of Engineering Associate Professor,TAJI TAKAHIRO		
			Part-time Lecturer,UOYA SHIGENORI Part-time Lecturer,ONISHI MAKI Graduate School of Engineering Assistant Professor,太田 裕通		
Target year	2nd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Fri.3,4,5	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
,, ,7times, ,7times, ,1time, ,,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
----- Continue to 設計演習 I (2)					

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Numbering code					
Course title <English>	設計演習II Atelier Practice of Architectural DesignII	Affiliated department, Job title,Name	Graduate School of Engineering Professor,TAKEYAMA KIYOSHI Graduate School of Global Environmental Studies Professor,KOBAYASHI HIROHIDE Graduate School of Engineering Professor,HIRATA AKIHISA Graduate School of Engineering Associate Professor,TAJI TAKAHIRO Graduate School of Engineering Associate Professor,YOSHIDA TETSU Graduate School of Engineering Associate Professor,YANAGISAWA KIWAMU Graduate School of Engineering Assistant Professor,太田 裕通		
Target year	2nd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Mon.4,5	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
,, ,7times, ,7times, ,1time, ,,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
----- Continue to 設計演習II(2)					

設計演習 I (2)
[Reference books, etc.]
(Reference books)
[Regarding studies out of class (preparation and review)]
(Others (office hour, etc.))
*Please visit KULASIS to find out about office hours.

設計演習II(2)

[Regarding studies out of class (preparation and review)]
(Others (office hour, etc.))
*Please visit KULASIS to find out about office hours.

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Numbering code					
Course title <English>	建築環境工学 I Environmental Engineering of Architecture I		Affiliated department, Job title, Name	Graduate School of Engineering Professor.HARADA KAZUNORI Graduate School of Engineering Professor. OGURA DAISUKE	
Target year	End year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Wed.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
B1) scientific ability to solve problems, B4) understanding of environmental engineering aspects in architecture, C1) ability to realize architectural projects					
[Course Schedule and Contents]					
building and climate,3times, thermal comfort and environment,2times, heat transfer in buildings,3times, air quality and ventilation,4times,Sources of indoor air pollution, required ventilation rate, mechanism of ventilation, planning and calculation methods of buoyancy ventilation and wind-driven ventilation. thermal radiation heat transfer,2times,Principle of thermal radiation, utilization of thermal radiation to buildings evaluation of achievements, 1 times,Achievement on above items will be evaluated.					
[Class requirement]					
None specified.					
[Method, Point of view, and Attainment levels of Evaluation]					
Score is evaluated based on end-term examination and other materials.					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
Shuichi Hokoi, Teturo Ikeda, Katsumichi Nitta, Kenchiku Kankyo Kougaku II (Environmental engineering in Architecture II, in Japanese), Asakura Shoten isbn { } {4254268637}					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
[Office hour] No specific time is to be specified. Those who want to make questions can make an appointment with lecture staff.					
*Please visit KULASIS to find out about office hours.					

建築環境工学II(2)					
Student Assessment - 1 class: Assessment of students' understanding and application of course material.					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
Evaluation will be based on final examination scores.					
[Textbook]					
松浦邦男、高橋大式 『エース建築環境工学I(日照・光・音)』(朝倉書店) ISBN:4254268629 (in Japanese)					
[Reference books, etc.]					
(Reference books)					
To be introduced during the course.					
[Regarding studies out of class (preparation and review)]					
Students are required to prepare by reading textbook sections prior to each lecture. Additionally, students shall deepen their understanding by reviewing material covered after each lecture and ask their instructors about any points that are unclear.					
(Others (office hour, etc.))					
Questions will be taken as appropriate. Students are to make an appointment with the relevant teacher.					
*Please visit KULASIS to find out about office hours.					

Numbering code					
Course title <English>	建築環境工学II Environmental Engineering of Architecture II		Affiliated department, Job title, Name	Graduate School of Engineering Professor.TAKANO YASUSHI Graduate School of Engineering Associate Professor.ISHIDA TAIICHIROU Graduate School of Engineering Associate Professor.OOTANI MAKOTO	
Target year	End year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Fri.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
This course covers basic physical characteristics of lighting, color, and acoustic, as well as their analysis and prediction methods that are required during architectural design process to achieve safe and comfortable environment. The course will also cover the psychological and physiological effects of such environmental factors and their evaluation methods.					
[Course Goals]					
Students will learn the fundamentals relating to lighting, color, and acoustics that need to be considered during architectural design process and their application. Of the learning and education objectives listed by the department: B. Expertise and Basic Knowledge, B4. An understanding of the environmental side of architecture.					
[Course Schedule and Contents]					
Vision and Photometry- 2 classes: These lectures will consider how the human visual system responds to the light environment, explain how to derive photometric quantities (the basis of light measurement), and provide relevant definitions. The lectures will cover the structure of the eye and retina, sensation of light through rods and cones, adaptation of the eye to the light environment, spectral luminous efficiency, radiometric quantities and photometric quantities, luminous flux, light intensity, illuminance, and luminance. Architectural Lighting, Calculation of direct illuminance - 2 classes: These lectures will explain how to measure illuminance, the basis of architectural lighting, and its application in architectural lighting. The lectures will cover computation of the direct illuminance by a point light source, reflection and transmission of light, uniform diffusion, direct illuminance by a surface light source, and configuration factors. Daylighting, 1 class: The lecture will explain how to obtain a position of the sun and the sun shadow region of a building. Color System Basics - 2 classes: Beginning with the mechanism through which people perceive color, this lecture will explain the color system for quantitative descriptions of colors. This lecture will cover the mechanism of color vision, the three attributes of color, the Munsell color system, and the CIE XYZ color system. The Nature of Sound and its Physiological and Psychological Effects - 3 classes: Radiated acoustical wave from a source is affected by various objects that exists along its propagation path, until it reaches human ears and is perceived as sound. These lectures will outline the nature of sound propagation, the function of the human auditory system, and physiological and psychological human responses to sound. The Physics of Vibration and Sound: Foundations of Acoustic Design - 4 classes: These lectures will explain basic topics relating to the physics of vibration and sound#8211 the foundation of all acoustic design#8211 with the objective of creating a comfortable acoustic environment within and outside of building structure. In addition, wave propagation theory, physical indices of sound, and basic theory for acoustic design will be outlined.					
Continue to 建築環境工学II(2)					

Numbering code					
Course title <English>	建築構造力学 I Mechanics of Building Structures I		Affiliated department, Job title, Name	Graduate School of Engineering Professor.OOSAKI MAKOTO Graduate School of Engineering Associate Professor, Graduate School of Engineering Assistant Professor.KIMURA TOSHIAKI	
Target year	End year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Fri.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
This course presents the fundamentals on the shapes, elements, and design of building structures. Mechanical models, basic concepts and theories, and their applications are shown. Definitions of stress and strain, mechanical properties of structural materials, stress resultants and deformation of bars, theory and application of statically determinate beams are also given.					
[Course Goals]					
To study fundamentals of mechanics of building structures, which form the basis of studying mechanics of building structures 2 and 3.					
[Course Schedule and Contents]					
1. Introduction and guidance of the course. Role of structural mechanics and fundamentals of statics, (Ohsaki) 2. Displacement, strain, force, moment. Equilibrium equations of free body. (Ohsaki) 3. Deformation process of structural materials, e.g., steel and concrete, under external forces. Definition of elasticity, plasticity, and viscosity. (Ohsaki) 4. Definition of stress and strain. Stress-strain relationship. (Ohsaki) 5. Basic equations for frame analysis. Assumptions and approximations for elementary analysis. (Ohsaki) 6. Definition of stress resultants of beams. (Ohsaki) 7. Statically determinate beams. Methods for finding reaction forces and stress resultants using equilibrium equations for free bodies. (Ohsaki) 8. Derivation of differential equations for beams. Diagrams for axial forces, shear forces, and bending moments. (Ohsaki) 9. Exercise for classes 1-8. (Kimura) 10. Assumption of plane sections. Axial stress due to axial force and bending moment. (Ohsaki) 11. Shear stress due to bending. Shear stress due to torque. (Ohsaki) 12. Section properties and coordinate transformation. (Ohsaki) 13. Stresses in the inclined section. Method using Mohr's circle. (Ohsaki) 14. Exercise for classes 10-13. (Kimura) 15. Final examination/ Learning achievement evaluation. (Ohsaki)					
Continue to 建築構造力学 I (2)					

建築構造力学 I (2)
[Class requirement]
None
[Method, Point of view, and Attainment levels of Evaluation]
Term examination
[Textbook]
中村恒善 『構造力学 図説・演習I』 (丸善) ISBN:4-621-03965-2
[Reference books, etc.]
(Reference books)
[Regarding studies out of class (preparation and review)]
Explained during the class.
(Others (office hour, etc.))
*Please visit KULASIS to find out about office hours.

建築構造力学II(2)
[Method, Point of view, and Attainment levels of Evaluation]
Term examination
[Textbook]
T.Nakamura (ed.);Mechanics of building structures I: Illustrative description and exercises; Maruzen. isbn{4621039652}
[Reference books, etc.]
(Reference books)
[Regarding studies out of class (preparation and review)]
Solve the exercise problems at the end of chapters of the text.
(Others (office hour, etc.))
Office hour: Before and after the class.
*Please visit KULASIS to find out about office hours.

Numbering code			
Course title <English>	建築構造力学II Mechanics of Building Structures II	Affiliated department, Job title, Name	Graduate School of Engineering Professor.TAKEWAKI IZURU Graduate School of Engineering Professor.HAYASHI YASUHIRO Graduate School of Engineering Associate Professor.KOHEI FUJITA
Target year	End year students or above	Number of credits	2
Course offered year/period	2019/Second semester		
Day/period	Fri.1	Class style	Lecture
Language	Japanese		
[Outline and Purpose of the Course]			
Axial deformation of a bar and bending deformation of a beam. Statically determinate truss and moment-resisting frame. Theory of statically indeterminate beams and buckling of columns. The force method and the displacement method (stiffness method) are described in the theory of statically indeterminate beams. Exercises are given for each subject.			
[Course Goals]			
Study analysis method of bending deformation of beams and theory of statically indeterminate beams. In addition study the theory of statically determinate truss and moment-resisting frame and the theory of buckling of columns.			
[Course Schedule and Contents]			
Axial deformation of a bar and bending deformation of a beam, 1 class, Differential equation for deflection curve of a beam and Mohr's theorem for deflection analysis.			
Theory of statically indeterminate beams 1, 3 classes, Force method in terms of unknown stress resultants and reactions.			
Theory of statically indeterminate beams 2, 3 classes, Displacement method in terms of unknown displacements.			
Statically determinate truss and frame, 4 classes, Analysis of stress resultants in statically determinate trusses and moment-resisting frames.			
Buckling of column, 3 classes, Governing equation for a buckling problem of a column. Eigenvalue analysis. Slope-deflection method for buckling analysis.			
Feedback using term exam, 1 class, Conduct feedback using term exam through KULASIS			
[Class requirement]			
None			
Continue to 建築構造力学II(2)			

Numbering code			
Course title <English>	建築材料 Building Materials	Affiliated department, Job title, Name	Graduate School of Engineering Professor.KANEKO YOSHIO Graduate School of Engineering Professor.HAYASHI YASUHIRO
Target year	End year students or above	Number of credits	2
Course offered year/period	2019/Second semester		
Day/period	Mon.2	Class style	Lecture
Language	Japanese		
[Outline and Purpose of the Course]			
Lectures will be given on the properties of the materials making up a building. In this lecture, the manufacturing method, basic physical properties, mechanical properties, usage examples in buildings, and so forth will be explained regarding concrete, steel, wooden materials, finishing materials in general building materials, and others.			
[Course Goals]			
Learning the manufacturing method, material characteristics, examples of use in buildings, and so forth regarding construction materials such as concrete, steel, woody materials, and the finishing materials that make up buildings. Among the learning and educational goals listed by the department, the goals are B. expertise and basic knowledge, and B3. the ability to understand structural aspects of architecture.			
[Course Schedule and Contents]			
Guidance (1 time): The content of this lecture (composition of lesson, contents of whole lecture, etc.) and the learning target will be described.			
Concrete (4 times): Production method and properties of cement, properties of aggregate/admixture, method for producing concrete, compounding design, properties of fresh concrete/test method, and mechanical and physical properties of hardened concrete will be explained.			
Steel material (3 times): Raw materials of steel, steel making technology and its history, classification and chemical composition of steel materials, physical properties and the stress/strain relation of steel materials, and the test methods of physical properties will be explained.			
Wooden/timber structure (4 times): Regarding material properties, such as the strength of wood as the structural materials of wooden buildings, the deterioration of wood, durability, fire resistance, the structural form, construction method, and the structure design of wooden buildings will be explained, and the focus will be on reflecting on wooden building design, construction, maintenance, and management based on the correct recognition of timber.			
Finishing material (2 times): The differences between structural materials and finishing materials, as well as material properties to be utilized, examples of use in buildings, and so forth will be discussed.			
Final Exam. (1 time):A feedback class, including posting example model answers on KULASIS, will be conducted.			
[Class requirement]			
Nothing in particular			
Continue to 建築材料(2)			

建築材料(2)
[Method, Point of view, and Attainment levels of Evaluation]
Grades will be evaluated by a final exam, and the achievement level of the course will be confirmed.
[Textbook]
Not used Not used
[Reference books, etc.]
(Reference books) Introduced during class To be introduced during class
[Regarding studies out of class (preparation and review)]
To be indicated during the lecture
(Others (office hour, etc.))
[Office hours] (reception of questions, etc.) To be indicated during the lecture *Please visit KULASIS to find out about office hours.

建築設計論(2)
[Regarding studies out of class (preparation and review)]
(Others (office hour, etc.))
*Please visit KULASIS to find out about office hours.

Numbering code	
Course title <English> 建築設計論 Architectural Design Method	Affiliated department, Job title, Name Graduate School of Engineering Professor,HIRATA AKIHISA Graduate School of Engineering Senior Lecturer,MAEDA MASAHIRO
Target year 2nd year students or above	Number of credits 2 Course offered year/period 2019/First semester
Day/period Mon.2	Class style Lecture Language Japanese
[Outline and Purpose of the Course]	
Practitioners of architectural design must have the architectural creativity to bring together knowledge from various fields in an integrated manner and present a complete, new picture. At the same time, creative thinking is needed to position architecture within a dynamic relationship with reality and turn concepts into reality. This course will discuss ways of thinking and examples that underly these capabilities from three perspectives of architectural design: frameworks/reality/actuality.	
[Course Goals]	
B. Expertise and Basic Knowledge, B2. The ability to understand the design and planning aspects of architecture	
[Course Schedule and Contents]	
Architectural Design Frameworks - 5 classes: We will untie the ideas and heuristic viewpoints behind architecture using various examples, including non-architectural examples. Reality in Architectural Design - 5 classes: We will discuss occurrences in actual architectural design and at the construction site, with abundant examples. Actuality in Architectural Design - 4 classes: We will consider what architectural design is capable of bringing about in the real world, based on real world examples. Student Assessment - 1 class: Assessment of learning achieved.	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
Based on attendance and evaluation of written reports	
[Textbook]	
『建築とは からまりしろ をつくることである』(LIXIL出版社)	
[Reference books, etc.]	
(Reference books) 『Discovering New 平田晃久建築作品集』(TOTO出版) 『JA108 Akihisa HIRATA 2017-2003』(新建築社) 『20XXの建築原理へ』(INAX出版) 『建築家の読書術』(TOTO出版) 『ここに、建築は、可能か』(TOTO出版)	
Continue to 建築設計論(2)	

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Numbering code	
Course title <English> 都市設計学 Urban Planning	Affiliated department, Job title, Name Graduate School of Global Environmental Studies Professor,KOBAYASHI HIROHIDE Graduate School of Global Environmental Studies Associate Professor,OCHIAI CHIHO
Target year 3rd year students or above	Number of credits 2 Course offered year/period 2019/First semester
Day/period Mon.3	Class style Lecture Language Japanese
[Outline and Purpose of the Course]	
[Course Goals]	
[Course Schedule and Contents]	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
[Textbook]	
[Reference books, etc.]	
(Reference books)	
[Regarding studies out of class (preparation and review)]	
(Others (office hour, etc.))	
*Please visit KULASIS to find out about office hours.	

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Numbering code					
Course title <English>	建築設備システム Building Systems Systems			Affiliated department, Job title,Name	Graduate School of Engineering Professor,OGURA DAISUKE Graduate School of Engineering Associate Professor,ISHIDA TAIICHIROU Graduate School of Engineering Associate Professor,IBA CHIEMI
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Thu.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.4times, .3times, .2times, .3times, .2times, .1 times,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.] (Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

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Numbering code					
Course title <English>	鉄骨構造 I Steel Construction I			Affiliated department, Job title,Name	Disaster Prevention Research Institute Professor,IKEDA YOSHIKI Graduate School of Engineering Associate Professor,KOETAKA YUUII
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Thu.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.2times, .2times, .1time, .1time, .2times, .2times, .1time, .3times, .1time,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.] (Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

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Numbering code					
Course title <English>	鉄筋コンクリート構造 I Reinforced Concrete Structures I			Affiliated department, Job title,Name	Graduate School of Engineering Professor,NISHIYAMA MINEHIRO Graduate School of Engineering Associate Professor,TANI MASANORI
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Fri.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.2times, .3times, .3times, .3times, .3times, .1time,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.] (Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

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Numbering code					
Course title <English>	建築生産 I Construction Engineering and Management I			Affiliated department, Job title,Name	Graduate School of Engineering Professor,KANETA TAKASHI
Target year	2nd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Wed.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
Stakeholders and their roles in a building construction project will be explained, looking at the project process including project planning, architectural design, building construction, and maintenance.					
[Course Goals]					
To acquire the knowledge on building construction process. B-B2.					
[Course Schedule and Contents]					
1. Introduction Outline of construction engineering and management. Goals and scopes of the lectures. Textbook Chapter 1 2. Construction market Construction market of Japan and overseas. Activities and volumes of construction market. Textbook Chapter 2 3. Regulations and codes Regulations and codes for professionals in building construction. Textbook Chapter 3 4. Building system Stakeholders, regulations, standards, jobs and roles that are involved with building construction projects. Project delivery methods, contracts, procurement system. Textbook Chapter 4 5-6. Project management Outline of project management in building construction. Textbook Chapter 5 7. Project planning Project process and phases. Project planning, briefing, feasibility study, programming, development management. Textbook Chapter 6, 6.1 8-10. Design in project process Design, drawings and specification required in a construction project. Cost management, design review, concurrent engineering, quantity survey, value engineering. Textbook Chapter 6, 6.2-6.3 11. Engineering in design Engineering in design, for example, design review, concurrent engineering, collaboration in design, production design, value engineering. Textbook Chapter 6, 6.4 12. Cost management					
Continue to 建築生産 I (2)					

建築生産Ⅰ(2)	
Quantity survey and cost estimation. Cost control through design process. Textbook Chapter 6, 6.5 13. Procurement and contract Variety of procurement and contract for building projects. Supervision of construction and inspection. Textbook Chapter 6, 6.6-6.7 14. Maintenance Maintenance in the age of global ecology. Demolish and waste treatment. Reuse and recycle of material. Textbook Chapter 6, 6.8 15. Final examination/ Learning achievement evaluation 16. Feedback	
[Class requirement] Social science and economics taught in High School.	
[Method, Point of view, and Attainment levels of Evaluation] Absolute evaluation (raw score) Evaluation will be based on active participation and the examination.	
[Textbook] Shuzo FURUSAKA 『KENCHIKU-SEISAN』 (Riko Tosho) ISBN:978-4-8446-0863-9	
[Reference books, etc.] (Reference books) Introduced during class	
[Regarding studies out of class (preparation and review)] Read the text book before and after the lecture.	
(Others (office hour, etc.)) Contact to: kaneta@archi.kyoto-u.ac.jp *Please visit KULASIS to find out about office hours.	

建築構造力学Ⅲ(2)	
equation, fundamental theorem for plastic limit analysis, plastic limit analysis of moment resisting frame. Feedback using term exam, 1 class, Conduct feedback using term exam through KULASIS	
[Class requirement] None	
[Method, Point of view, and Attainment levels of Evaluation] Term examination	
[Textbook] T.Nakamura (ed.) 『Mechanics of building structures II: Illustrative description and exercises』, Maruzen.	
[Reference books, etc.] (Reference books)	
[Regarding studies out of class (preparation and review)] The exercise problems at the end of chapters of the text should be solved in parallel to the class advancement.	
(Others (office hour, etc.)) Office hour: Before and after the class *Please visit KULASIS to find out about office hours.	

Numbering code	
Course title <English> 建築構造力学Ⅲ Mechanics of Building StructuresⅢ	Affiliated department, Job title,Name Graduate School of Engineering Professor.TAKEWAKI IZURU Graduate School of Engineering Professor.OOSAKI MAKOTO Graduate School of Engineering Associate Professor, Graduate School of Engineering Associate Professor.KOHEI FUJITA Graduate School of Engineering Assistant Professor.KIMURA TOSHIAKI
Target year 3rd year students or above	Number of credits 4
Course offered year/period 2019/First semester	
Day/period Tue.2,Wed.2	Class style Lecture
Language Japanese	
[Outline and Purpose of the Course] Slope-deflection method and moment distribution method. Force method and displacement method (stiffness method). Matrix method for structural analysis. Principles of virtual work and energy methods. Fundamental theory of structural analysis and theory of plastic analysis of frames.	
[Course Goals] Study force method, displacement method (stiffness method) and matrix method for structural analysis. In addition study slope-deflection method and theory of plastic analysis of frames.	
[Course Schedule and Contents] Fundamental theory of structural analysis and slope-deflection method, 4 classes, Frame analysis model and governing equation for slope-deflection method. Moment distribution method, 1 class, Moment distribution method without nodal lateral displacement. Three-dimensional frame, 2 classes, Plane frames with equal horizontal displacements. Shear force distribution formula. Structural design of building frames. Displacement method and force method, 9 classes, Member stiffness matrix and system stiffness equation for truss and moment-resisting frame. Treatment of mid-span loads. Principles of virtual work, 5 classes, Principle of virtual displacement. Unit virtual displacement method and stiffness method. Principle of virtual force. Unit virtual force method. Principles of energy methods, 3 classes, Stationary and minimum principles of total potential energy and complementary energy. Plastic limit analysis and elastic-plastic analysis, 5 classes, Load-deformation curve for an elastic-perfectly plastic beam, plastic hinge, plastic collapse, virtual work	
Continue to 建築構造力学Ⅲ(2)	

Numbering code	
Course title <English> 建築環境工学演習 Seminar of Practice in Architectural Environmental Engineering	Affiliated department, Job title,Name Graduate School of Engineering Professor.TAKANO YASUSHI Graduate School of Engineering Professor.HARADA KAZUNORI Graduate School of Engineering Professor. OGURA DAISUKE Graduate School of Engineering Associate Professor,ISHIDA TAIICHIROU Graduate School of Engineering Associate Professor,OOTANI MAKOTO Disaster Prevention Research Institute Associate Professor,NISHINO TOMOAKI Graduate School of Engineering Associate Professor,IBA CHIEMI Graduate School of Engineering Assistant Professor,NII DAISAKU
Target year 4th year students or above	Number of credits 2
Course offered year/period 2019/First semester	
Day/period Wed.1,2	Class style Seminar
Language Japanese	
[Outline and Purpose of the Course] This course is provided to enhance global understanding of the contents lectured in Environmental Engineering in Architecture I and II, and to develop capability in applying the knowledge to real projects. For each topic, examples of design problems are supplied. The participants are to solve the problems by their own skills while interacting with lectures.	
[Course Goals] The goal is to make global understanding of the elements in environmental engineering in architecture and their mutual relationships. Corresponding goals for education of department are; A: global capability, A2: Capability in understanding the value of architecture in multiple measures, C: Practical skills, C1: Capability in Realize Building Projects.	
[Course Schedule and Contents] heat conduction and condensation,3times, HVAC system,3times, Building acoustics,3times, lighting and color,1time, Solar characteristics and daylighting ,1time, ventilation and smoke control for evacuation,2times,(1) Basic subjects on ventilation design such as Velnouille#039s mula, pressure difference, friction coefficients, wind pressure coefficients, newtral plane height. (2) Smoke control design for escape from fire in a building ” special lecture and/or site visit,1time,Special lecture or site visit are to be planned to introduce design and construction of environmental control systems of real building projects. .1time,	
Continue to 建築環境工学演習(2)	

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建築環境工学演習(2)	
[Class requirement]	
The participants are required to study Building Systems Design (40180), Environmental engineering in Architecture I (40090) and II (40100) prior to join this course. In addition, the knowledge on Building Systems Design (40180), Urban Environment Engineering (40520), Lighting and Acoustics in Architecture (40320), Thermal Environment Design of Architecture (40600) is desirable.	
[Method, Point of view, and Attainment levels of Evaluation]	
Score is evaluated based on reports and participation.	
[Textbook]	
None specified. Practice sheet will be provided during the course.	
[Reference books, etc.]	
(Reference books)	
Textbooks and notebooks on the courses specified below are necessary for consultation. Function calculator must be provided by participants themselves.	
[Regarding studies out of class (preparation and review)]	
(Others (office hour, etc.))	
[Office hour] Office hours are not specified but opportunity for QampA will be arranged upon request. Contact the lecturer via mail with your name, student ID and time of your convenience up to three candidates.	
*Please visit KULASIS to find out about office hours.	

建築計画学II(2)	
[Textbook]	
Classes will make use of printed handouts and projected slides. Subjects will be given written reports to be completed outside class, with corresponding presentations in class. Appointments can be made by email.	
[Reference books, etc.]	
(Reference books)	
Introduced during class	
[Regarding studies out of class (preparation and review)]	
Subjects will be given written reports to be completed outside class, with corresponding presentations in class.	
(Others (office hour, etc.))	
Appointments can be made by email.	
*Please visit KULASIS to find out about office hours.	

Numbering code					
Course title <English>	建築計画学II Architectural Planning II	Affiliated department, Job title,Name	Graduate School of Engineering Professor,MIURA KEN		
Target year	4th year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Wed.3	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
To gain a basic understanding of and learn the methods related to architectural and environmental planning and design. In other words, this class provides an outline of methods for observing, recording, and evaluating the relationship between humans and their environment, and using that evaluation as the basis for the planning and design of a living environment (that includes architecture). After an initial overview of schools of thought in the theory and practice of architectural planning, we will explain a new approach to architectural planning based on the study of human-environment interaction (which incorporates disciplines such as the behavioral and cognitive sciences), and how to apply this approach to planning and research case studies #8211 taking a methodology that views architectural planning as the design of human-environment interaction.					
[Course Goals]					
To foster the practical ability to design architectural space based on the interactions of humans with their environment C. Practical skills C1. The ability to create buildings.					
[Course Schedule and Contents]					
Architectural Planning & Environmental Psychology - 1 class: This class will provide an explanation of the position of environmental psychology and environmental behavior research, after an overview of the social nature, role, and meaning of architectural planning. Students will also learn about the problems that exist in architectural planning by examining examples.					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
Based on written reports (50%) and final examination (50%)					

Continue to 建築計画学II(2)

Numbering code					
Course title <English>	建築生産II Construction Engineering and Management II	Affiliated department, Job title,Name	Graduate School of Engineering Professor,KANETA TAKASHI Part-time Lecturer,KIUCHI TOSHIO		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Tue.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
Planning and management method in building construction project will be explained. Construction management and construction technology, integrated with information and communication technology, will be also explained with the latest project reports.					
[Course Goals]					
To acquire the basic knowledge on supervision and construction management. C-C1.					
[Course Schedule and Contents]					
1. Introduction Construction process based on drawings and specifications. Textbook Chapter 7 2-6. Planning and management Construction planning and management. Considering schedule, quality, cost, safety, environment. Textbook Chapter 8, 10, 10.1-10.4 7-8. Management method Project team design, information and reporting system, procurement system, Value engineering. Textbook Chapter 10, 10.5-10.6 9. Project management and ICT Building Information Modeling and other applications. Textbook Chapter 10, 10.7-10.8 10-14. Construction Control Construction planning and control. Taught by Visiting Lecturer Kiuchi. Textbook Chapter 9, 11 15. Final examination/ Learning achievement evaluation 16. Feedback					
[Class requirement]					
Requested to master "Construction Engineering and Management I" in advance.					
[Method, Point of view, and Attainment levels of Evaluation]					
Absolute evaluation (raw score) Evaluation will be based on active participation and the examination.					

Continue to 建築生産II(2)

建築生産II(2)
[Textbook]
Shuzo FURUSAKA 著 KENCHIKU-SEISAN Ⅱ (Riko Toshō) ISBN:978-4-8446-0863-9
[Reference books, etc.]
(Reference books) Introduced during class
[Regarding studies out of class (preparation and review)]
Read the textbook before and after the lecture.
(Others (office hour, etc.))
Contact to: kaneta@archi.kyoto-u.ac.jp
*Please visit KULASIS to find out about office hours.

建築論(2)
[Textbook]
Topics and Methods in Architectural Theory - 1 class: The scope of architectural studies is thought to have two phases (the production and reception (use) of buildings), and three standards (empirical, theoretical, and ideal). This lecture will consider the position of architectural theory within such a scope and examine themes in architectural theory. (Taji) Basic Concepts in Architectural Theory 1 (6 classes): (1) Architecture: This lecture will confirm that the original meaning of "architecture" is a construction from principles, and describe the meaning of "principles" and "construction." (2) Composition: This lecture will discuss the ideological meaning of geometry based on architectural forms and its historical development. (3) Space: This lecture will outline theories of space pioneered by phenomenology and explain human perception and spatial phenomena. (4) Place: This lecture will explain place as constructed and interpreted by humans, based on existential philosophy (Heidegger, etc.). (5) Light: This lecture will introduce the observations of gestalt psychology concerning the phenomenon and spatial nature of light and consider its symbolism. (6) Nature: This lecture will explain how nature has been imitated and interpreted as a basis for architecture. (Taji) Student Assessment - 1 class: An assessment of whether a basic knowledge and understanding of architectural theory has been obtained.
[Class requirement]
None
[Method, Point of view, and Attainment levels of Evaluation]
Evaluation will be based on written reports on given topics. Grade Assessment - views and levels of achievement: Judgment will be based on students' level of understanding of the classes, and whether students have any fresh perspectives that emphasize the deepening of their own understanding.
[Textbook]
Instructed during class
[Reference books, etc.]
(Reference books) Introduced during class To be indicated as appropriate
[Regarding studies out of class (preparation and review)]
Read the material introduced in the class.
(Others (office hour, etc.))
Office hour: before and after lectures
*Please visit KULASIS to find out about office hours.

Numbering code					
Course title <English>	建築論 Theory of Architecture	Affiliated department, Job title, Name	Graduate School of Engineering Professor.TAKEYAMA KIYOSHI Graduate School of Engineering Associate Professor.TAJI TAKAHIRO		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Wed.3	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
Through an inspection of discourse concerning architecture, this course will investigate a range of architectural theory. This course will describe the historical significance of architecture as a discourse, and the potential for its reflection back on architectural behavior, while taking up the architectural theory of architects such as Vitruvius, Alberti, and Piranesi, and the architectural theory of philosophers such as Plato, Val#233ry, and Derrida (Takeyama). This course will explain the scope of the subject of architectural theory, which questions the meaning of architecture. It will examine the various architectural theories associated with keyword topics, from Western Classical to Modern, based in particular on the thinking of Tomoya Masuda and Keiichi Morita, who contributed to the creation and development of architecture in Japan. It will also consider the relationship of architectural theory with humanities such as philosophy and art theory. We will take specific architects together, and analyze the mental working in their architectural thinking and production. (Taji)					
[Course Goals]					
The Range of Architectural Theory - 7 classes: (1-2) On the discourse of everything as architecture. (3-4) On the discourse of architecture as frozen music. (5-7) On the historical significance of architecture through the discourse of architects and philosophers, and possible reflections back onto architectural behavior. (Takeyama) Topics and Methods in Architectural Theory - 1 class: The scope of architectural studies is thought to have two phases (the production and reception (use) of buildings), and three standards (empirical, theoretical, and ideal). This lecture will consider the position of architectural theory within such a scope and examine themes in architectural theory. (Taji) Basic Concepts in Architectural Theory 1 (6 classes): (1) Architecture: This lecture will confirm that the original meaning of "architecture" is a construction from principles, and describe the meaning of "principles" and "construction." (2) Composition: This lecture will discuss the ideological meaning of geometry based on architectural forms and its historical development. (3) Space: This lecture will outline theories of space pioneered by phenomenology and explain human perception and spatial phenomena. (4) Place: This lecture will explain place as constructed and interpreted by humans, based on existential philosophy (Heidegger, etc.). (5) Light: This lecture will introduce the observations of gestalt psychology concerning the phenomenon and spatial nature of light and consider its symbolism. (6) Nature: This lecture will explain how nature has been imitated and interpreted as a basis for architecture. (Taji) Student Assessment - 1 class: An assessment of whether a basic knowledge and understanding of architectural theory has been obtained.					
[Course Schedule and Contents]					
The Range of Architectural Theory - 7 classes: (1-2) On the discourse of everything as architecture. (3-4) On the discourse of architecture as frozen music. (5-7) On the historical significance of architecture through the discourse of architects and philosophers, and possible reflections back onto architectural behavior. (Takeyama)					
Continue to 建築論(2)					

Numbering code					
Course title <English>	都市・地域論 Theory of Living Space in the Region	Affiliated department, Job title, Name	Graduate School of Engineering Professor.KANKI KIYOKO		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Mon.4	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
Here we discuss several series of theories and methods for understanding and planning urban and rural planning. We should know spacial as well as historical views. In the Urban and Rural Planning, we should concern and design the physical aspects as well as social aspects of the living spaces. Specially in the contemporary planning, we collaborate within and without local communities, while cooperating with global ongoing activities. For the architectural students, it is necessary to study the ways to design the living spaces with deep understanding of urban planning theory and systems, as well as to find the new ideas for updating such theory and systems.					
[Course Goals]					
B.Basic and Professional Knowledges、 B2.Architectural Design and Living space Design with Planningoriented view、 C.Practical Skills、 C2. Ability to understand Social aspects of Architecture and Planning、 E.Global View for Planning、 E2. Ability to understand global and local culture					
[Course Schedule and Contents]					
(1) Building Control and Development Control, From one site till the region(3 classes) - the single site and facing street (historic area and narrow streets) Simulation of the transition of the area - Zoning systems, roles, advantages, disadvantages - Land Use Planning - urban land use, rural land use, natural land use (2) Micro scale planning and design, community identity and district plan (2 classes) - district plan, community agreements regulation and activities - district plan system in Japan and in Germany - Community action, participation, history of participatory planning and design, Machidukuri (3) Landscape and Town scape (2 classes) - History of the debates and community actions related Landscape disfigurement - Conservation and Creativity - Landscape planning zone, Conservation area design, Heritage area, Natural and Cultural Landscape (4) Open space design (2 classes) - Urban development and open space design, Ecological design - Parks and Open spaces, Networks for the safety of the living spaces - Community and open space, Children's participation, Play park, Maintenance and participation (5) Space for traffic (1 class) - Urban Planning Road Designation (Japan) , Public transport design and city center development, Pedestrian Zone in the cities (Japan, Germany) (6) Development Project Design, Urban Regeneration (2 classes) - Land readjustment, History of (rural and urban) land readjustment - Development Project regulations, incentive planning, - Urban sprawl, Mini-Development(Japan), Gated community development					
Continue to 都市・地域論(2)					

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都市・地域論(2)	
(7) Master Plan, Regional Plan (1 class) - Urban planning district master plan, Urban Planning master plan - Comprehensive plan for the local government - Urban Shrink design, Change of the urban policy, population flame, (8) History of Modern urban planning (1 class) - History of Urban theory - History of Planning (9) Home work feed back (1 class)	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
・ 2 home works and Examination(at the official examination term) ・ The assignments for 2 home works will be shown during the lectures.	
[Textbook]	
The prints will be distributed in each time. The pdf files same with the prints will be uploaded on Panda.	
[Reference books, etc.]	
(Reference books) For the reference : 「地域共生の都市計画 第二版」三村浩史著 学芸出版社 (2005年) isbn4761531290 Other remarks : We will introduce the information of seminar, exhibition, or book related the lectures if any.	
[Regarding studies out of class (preparation and review)]	
The PDF files uploaded on Panda is with full color and easy to identify. Those will be uploaded a little before each lectures in order to provide the more precise understanding of the plans and diagrams.	
(Others (office hour, etc.))	
[Office hours] every monday, 16:15 - 18:00 (lecture room) Please get in contact by email (kanki@archi.kyoto-u.ac.jp). *Please visit KULASIS to find out about office hours.	

建築光・音環境学(2)	
[Class requirement]	
Students must have taken Architectural Environmental Engineering II.	
[Method, Point of view, and Attainment levels of Evaluation]	
Evaluation will be based on final examination scores.	
[Textbook]	
松浦邦男、高橋大弐 『エース建築環境工学I(日照・光・音)』(朝倉書店) ISBN:4254268629	
[Reference books, etc.]	
(Reference books) Introduced during class	
[Regarding studies out of class (preparation and review)]	
Students are required to prepare by reading textbook sections prior to each lecture. Additionally, students shall deepen their understanding by reviewing material covered after each lecture and ask their instructors about any points that are unclear	
(Others (office hour, etc.))	
Office hours (taking questions): Questions will be taken as appropriate. Students are to make an appointment with the relevant teacher. *Please visit KULASIS to find out about office hours.	

Numbering code					
Course title <English>	建築光・音環境学 Lighting and Acoustics in Architecture	Affiliated department, Job title,Name	Graduate School of Engineering Professor.TAKANO YASUSHI Graduate School of Engineering Associate Professor.ISHIDA TAIICHIROU Graduate School of Engineering Associate Professor.OOTANI MAKOTO		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Mon.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
These lectures will cover the theory and techniques relating to acoustics, lighting, and color (among the fundamental physical environmental elements to be considered in architectural design for realization of a comfortable and safe environment), and their applications in actual design. In order to take the course, students must have a basic understanding of related topics (covered in Architectural Environmental Engineering II).					
[Course Goals]					
For students to learn the theory and associated techniques required for architectural design relating to acoustics, lighting, and color, and how to apply them to actual design. Of the learning and education objectives listed by the department: C: Practical Skills C1: The ability to create buildings.					
[Course Schedule and Contents]					
Measurement and Evaluation of Sound and Acoustic Material - 3 classes: These lectures will explain basic matters relating to the measurement of the physical properties of sound, as well as explaining various acoustic measures in noise and room acoustics and outlining how to measure them. Noise Control Design - 2 classes: These lectures will explain the processes relating to interior and exterior noise (from generation to propagation and sound absorption), and related properties; they will also outline various noise countermeasures that can be taken in those processes. Room Acoustic Design - 2 classes: These lectures will outline fundamental topics and methods for optimizing sound fields in rooms for its their given purposes. Room Acoustics has developed with the transition of Hall Acoustics. The historical circumstances will also be explained here. Lighting Environments for Clear Vision and Visual Ability - 2 classes: These lectures will explain topics that must be considered for the design of a lighting environment that is comfortable and safe, on the basis of human visual ability. The lectures will cover light and vision, luminance contrast and visibility, clear vision conditions, glare, brightness perception, and the effect of aging on vision. Architectural Lighting Evaluation and Design - 2 classes: These lectures will outline basic methods for the consideration of architectural lighting, and the psychological effects of the lighting environment. The lectures will cover the calculation of indirect illuminance in a room, daylight and artificial lighting, natural lighting, methods and examples of architectural lighting, and psychological evaluation of lighting environments. Color Engineering and illumination - 3 classes: These lectures will explain the fundamentals of color engineering, from the CIE XYZ color system to uniform color space, and their applications for illumination engineering. Lectures will cover xy chromaticity diagrams, calculating additive color mixtures, uniform color space and color difference, color temperature, and color rendering index. Student Assessment - 1 class: Assessment of students' understanding and application of course material.					
Continue to 建築光・音環境学(2)					

Numbering code					
Course title <English>	建築構造解析 Analytical Methods of Building Structures	Affiliated department, Job title,Name	Graduate School of Engineering Professor.KANEKO YOSHIO Graduate School of Engineering Professor.TAKEWAKI IZURU Disaster Prevention Research Institute Professor.MARUYAMA TAKASHI		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Wed.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
An elementary outline will be given including the finite element method used for building structural design, as well as various structural analysis methods, dynamic properties of the building frame and its constituent elements, mechanical properties of planar boards, and the design method.					
[Course Goals]					
Learning the basics and applications of structural analysis methods, the basic theory of dynamics, and the basic theory of the parallel plate. The educational goal is to acquire expert and basic knowledge. Among the learning and educational goals listed in the department, the goal is to have C. practical ability and C1. the ability to realize buildings.					
[Course Schedule and Contents]					
Structural design and structure analysis method (6 times): Lectures will be given on the fundamental and applied structural analysis method utilized in building structure design. First, the characteristics of various structural analysis methods will be introduced, including the finite element method used for building structural design by using actual building design examples. Next, the finite element method will be explained, as well as its basic theory and application, and the analysis accuracy and the application method in actual building structure design will be explained. In addition, the construction and application of a dynamic model necessary for actual structural design will be outlined. Building vibration analysis (4 times): The fundamentals of vibration theory necessary for the vibration analysis of buildings will be explained. Next, regarding the forced vibration of buildings when external force act upon them, the case of sinusoidal external force will be covered as an example. In addition, the nature of the irregular wave external force as an example of earthquake vibration, wind pressure, and so forth will be explained as external forces that are actually applied to buildings. After that, the handling of forced vibration when an irregular wave external force is applied will be explained. In addition, vibrations of continuous joists will also be explained. Theory of flat plate structure (4 times): Dynamic theory, analysis method, and the design method of parallel plate structural elements, such as walls and floors, will be explained. The linear governing equation of parallel plates subjected to in-plane deformation under the assumption of plane stress will be introduced, as well as the solution using the Fourier series. Next, the governing equations of parallel plates subjected to the out-of-plane bending deformation based on the assumption of normal line preservation will be derived, and several examples of solution methods will be outlined. In addition, the basic idea of parallel plate element design and usage in actual buildings will be explained. Final Exam. (1 time):A feedback class, including posting example model answers on KULASIS, will be conducted.					
Continue to 建築構造解析(2)					

建築構造解析(2)	
[Class requirement]	
Building structural mechanics I, II, and III	
[Method, Point of view, and Attainment levels of Evaluation]	
The evaluation will be done by the final exams, and the achievement level of the course will be confirmed.	
[Textbook]	
Not used Not used	
[Reference books, etc.]	
(Reference books) Introduced during class To be introduced during the class	
[Regarding studies out of class (preparation and review)]	
To be indicated during the lecture	
(Others (office hour, etc.))	
[Office hours] (reception of questions, etc.) It will be indicated during the lectures.	
*Please visit KULASIS to find out about office hours.	

建築基礎構造(2)	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
Based on the final examination	
[Textbook]	
Not used	
[Reference books, etc.]	
(Reference books) Fumio Kuwahara 『Geotechnical Engineering』 (Morikita Publishing) ISBN:978-4627505117 Koji Tominaga 『Building Foundation Structures』 (Ohmsha) ISBN:978-4274214486	
[Regarding studies out of class (preparation and review)]	
Recommended to prestudy the terminology and review calculation problems.	
(Others (office hour, etc.))	
*Please visit KULASIS to find out about office hours.	

Numbering code	
Course title <English> 建築基礎構造 Building Foundation Engineering	Affiliated department, Job title, Name Disaster Prevention Research Institute Professor, MATSUSHIMA SHINICHI Graduate School of Engineering Associate Professor, KOHEI FUJITA
Target year 4th year students or above	Number of credits 2 Course offered year/period 2019/First semester
Day/period Mon.2	Class style Lecture Language Japanese
[Outline and Purpose of the Course]	
In order to support an architectural structure safely on the ground, it is necessary to evaluate the behavior of the foundation structure supporting that architectural structure and investigate its safety. The behavior of the foundation structure is influenced not only by the foundation structure itself, but also largely by the dynamic behavior of the ground. Therefore, this course will first describe the fundamental dynamic characteristics of soil and ground. Then, the behavioral characteristics, the mechanisms and methods of evaluation when a load is applied from the superstructure or the ground to a foundation structure that has been installed on the ground's surface or underground, will be explained.	
[Course Goals]	
Learn basic knowledge of soil and ground, understand basic theory of the load applied to ground and foundation structure and its behavior due to the load, and acquire the basic ideas necessary for designing and considering the safety of building foundation structures. Among the learning and education objectives listed by the department: B. Expertise and Basic Knowledge, B3. Ability to understand the structural aspects of architecture.	
[Course Schedule and Contents]	
Outline of Architectural Foundation Structures, 1 time, This lecture will outline the overall position relating to soil engineering and foundation structures so that students are able to understand the position of content that they will learn in the course. Mechanical Behavior of Soil (Basics), 2 times, The characteristics of the behavior of soil when force is applied, can be divided on the basis of whether the force is compressive or shear. These lectures will explain the fundamental characteristics of mechanical behavior of soil as an elastic body. Mechanical Behavior of Soil (Clay Soil and Sand), 2 times, These lectures will explain about consolidation settlement of clay soil and liquefaction of sandy ground. Shear Strength of Soil, 2 times, These lectures will explain the shear strength, and active and passive earth pressure of soil. Earthquake Damage to Building Foundation Structures, 2 times, These lectures will explain the characteristics of building foundation structures when a load is applied, and outline the issues for building foundation structures by presenting examples of earthquake damage. Behavior of Shallow Foundations, 1 time, This lecture will explain the vertical bearing capacity and settlement of shallow foundations. Behavior of Pile Foundations, 2 times, These lectures will explain the vertical bearing capacity and horizontal resistance of piles. Design Planning of Building Foundation Structures, 2 times, These lectures will cover evaluating the mechanical behavior of the ground from ground survey and explain the process of designing the foundation structure based on the evaluation results. Student Assessment, 1 time, Assessment of the how much students have achieved the learning objectives.	
Continue to 建築基礎構造(2)	

Numbering code	
Course title <English> 耐震構造 Earthquake Resistant Structures	Affiliated department, Job title, Name Graduate School of Engineering Professor, HAYASHI YASUHIRO Graduate School of Engineering Associate Professor, SUGIYAMA MINA
Target year 3rd year students or above	Number of credits 2 Course offered year/period 2019/Second semester
Day/period Wed.3	Class style Lecture Language Japanese
[Outline and Purpose of the Course]	
Seismic design of structures requires an accurate understanding of the dynamic behavior of structures during earthquakes. After providing a historical outline of earthquake damage to architectural structures and the development of earthquake-resistant structures, this course will address the properties of seismic motion, and the basics of vibrational theory based on dynamic models of structures. We will also discuss structures' earthquake response analysis methods, response characteristics, and basic concepts and procedures related to earthquake-proof design methods.	
[Course Goals]	
Learn about basic theories of vibrational analysis of seismic motion in architectural structures, as well as foundational concepts of earthquake-proof design. In terms of the department's learning/educational goals: B. Specialized knowledge and fundamental knowledge and B3. Ability to comprehend architectural structure.	
[Course Schedule and Contents]	
History of earthquake-proof structures, 1 class: We will explain the characteristics of the seismic movement of past large-scale earthquakes, as well as the characteristics of earthquake damage to structures and ground, and discuss the history of earthquake-proof structures that have developed based on experiences with earthquake damage. Linear response in single degree of freedom systems, 6 classes: After explaining the meaning of modeling a building in a single degree of freedom system, we will discuss equations of motion in single degree of freedom systems and the vibration phenomena indicated by their general and special solutions. Based on single degree of freedom linear systems, theoretical solutions for free vibration and various types of interference (impulse excitation, step excitation, harmonic excitation, etc.) will be given, and we will discuss the ways in which a building's natural period, damping ratio, and input seismic motion characteristics influence response. Non-linear response in single degree of freedom systems, 2 classes: We will discuss single degree of freedom system response with random interference. First, after demonstrating single degree of freedom system response with random interference, we will explain the influence of the non-linear single degree of freedom system vibrational analysis method and non-linearity upon response. Also, the concept of the response spectrum to random interference will be explained, and we will discuss its use in conducting earthquake resistance safety evaluations of buildings. Multiple degree of freedom system response, 2 classes: After explaining the composition methods of equations of motion in multiple degree of freedom systems, we will discuss eigenvalue analysis and modal analysis. Also, we will discuss the torsional vibration analysis and torsional response characteristics of buildings.	
Continue to 耐震構造(2)	

耐震構造(2)	
Building response and earthquake-proof design, 3 classes: Mechanisms of the propagation of seismic motion from the epicenter to the ground of the building site will be explained, and the seismic motion amplification characteristics of the ground of the building site, as well as their influence on building response will be explained in terms of simple wave equations. Next, after describing the basic concept of earthquake-proof building design based on the dynamic analysis method, we will discuss basic methods of earthquake-proof building design and their historical development process. Finally, we will take up the topics of base isolation and vibration control as means of controlling building response and damage, discussing the basic theories and actual mechanisms underlying these, as well as design methods.	
Confirmation of learning attainment, 1 lecture: In addition to summarizing the classes, the degree of learning attainment will be confirmed.	
[Class requirement] None	
[Method, Point of view, and Attainment levels of Evaluation] Based on final examination. Attendance and so on are also taken into account.	
[Textbook] Not used Additional teaching materials: in-class printouts, PowerPoint documents,	
[Reference books, etc.] (Reference books)	
[Regarding studies out of class (preparation and review)] Review contents of previous classes and quizzes before taking every class.	
(Others (office hour, etc.)) [Grading] Based on final examination. Attendance and so on are also taken into account. [Office hours] (Open for questions, etc.) After end of class. *Please visit KULASIS to find out about office hours.	

Numbering code					
Course title <English>	鉄骨構造II Steel Construction II	Affiliated department, Job title,Name	Graduate School of Engineering Associate Professor.KOETAKA YUUII Disaster Prevention Research Institute Associate Professor.KURATA MASASHIRO		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Thu.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents] .2times, .1time, .2times, .2times, .1time, .2times, .2times, .2times, .1time, .1time,					
[Class requirement] None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.] (Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.)) *Please visit KULASIS to find out about office hours.					

Numbering code					
Course title <English>	鉄筋コンクリート構造II Reinforced Concrete Structures II	Affiliated department, Job title,Name	Graduate School of Engineering Professor.NISHIYAMA MINEHIRO Graduate School of Engineering Associate Professor.TANI MASANORI		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Mon.3	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents] .2times, .4times, .6times, .2times, .1time,					
[Class requirement] None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.] (Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.)) *Please visit KULASIS to find out about office hours.					

Numbering code					
Course title <English>	設計演習III Atelier Practice of Architectural Design III	Affiliated department, Job title,Name	Graduate School of Engineering Professor.HIRATA AKIHISA Graduate School of Engineering Professor.KANETA TAKASHI Graduate School of Engineering Professor.KANKI KIYOKO Graduate School of Engineering Professor.TOMISHIMA YOSHIKI Graduate School of Engineering Professor.MIURA KEN Disaster Prevention Research Institute Professor.MAKI NORIO Graduate School of Engineering Associate Professor.TAJI TAKAHIRO Graduate School of Engineering Associate Professor.YOSHIDA TETSU Part-time Lecturer.MORITA MASASHIRO Graduate School of Engineering Assistant Professor.KOMIYAMA YOSUKE		
Target year	3rd year students or above	Number of credits	3	Course offered year/period	2019/First semester
Day/period	Mon.4,5,Fri.4,5	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents] .14times, .14times, .2times,					
[Class requirement] None					
[Method, Point of view, and Attainment levels of Evaluation]					
Continue to 設計演習III(2)					

設計演習III(2)	

[Textbook]	
[Reference books, etc.]	
(Reference books)	
[Regarding studies out of class (preparation and review)]	
(Others (office hour, etc.))	
*Please visit KULASIS to find out about office hours.	

Numbering code			
Course title <English>	景観デザイン論 Theory of Landscape Design	Affiliated department, Job title,Name	Graduate School of Engineering Professor,TAKEYAMA KIYOSHI Graduate School of Engineering Associate Professor,TAJI TAKAHIRO
Target year	2nd year students or above	Number of credits	2
Course offered year/period	2019/First semester		
Day/period	Wed.5	Class style	Lecture
Language	Japanese		
[Outline and Purpose of the Course]			
This course will provide an overview of theories related to urban landscapes, natural landscapes, and gardens and outline the meaning of signs, symbols, and space as concepts in environmental design methodologies. The course will describe issues related to landscape revival through a reading of the ideas and concrete proposals of a range of modern architects.			
[Course Goals]			
Of the learning and education objectives listed by the department: B. Expertise and Basic Knowledge, B2. The ability to understand the design and planning aspects of architecture.			
[Course Schedule and Contents]			
Transfiguration of Forms of Human Habitation, and Landscape Formation (Takeyama) - 7 classes: Since appearing on the planet, human beings have built various forms of habitation. While looking back on the processes that gave rise to architecture, villages, and towns, this course will trace the spacial concepts of each era, taking them as forming landscapes along with architecture, and consider the architecture and forms of habitation that should exist in the future. (1) Establishment of the human sphere, (2) The occurrence of architecture, villages, and towns, (3) Urban theories and programs, (4) Ancient urban landscapes, (5) Technology and architecture/towns, (6) Communication and forms of habitation, (7) The future of architecture, villages, towns, and forms of habitation.			
Interpretation of Environment and Composition of Landscape (Taji) - 7 classes: The composition of architectural environments and interpretation of landscape (Taji) These lectures will outline the landscapes that we create and inhabit around architectural structures and explain the structure and meaning of landscapes based on human existence in terms of architectural theory, while exploring various theories relating to the spatial composition of landscape. They will also consider architectural and garden landscape composition methods in terms of theories of design (and using specific examples). (1) Built environments and landscapes created by architecture, (2) Theories on the meaning and composition of landscape, (3) English architecture and landscape gardens -1 (landscape with meaning), (4) English architecture and landscape gardens - 2 (sensed landscape), (5) Japanese architecture and gardens - 1 (symbolism with stone), (6) Japanese architecture and gardens - 2 (symbolism with water), (7) From architecture to urban landscape.			
Student Assessment - 1 class: An assessment of whether a basic understanding of landscape design has been obtained.			
[Class requirement]			
None			

Continue to 景観デザイン論(2)			

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Numbering code			
Course title <English>	設計演習IV Atelier Practice of Architectural Design IV	Affiliated department, Job title,Name	Graduate School of Engineering Professor,HIRATA AKIHISA Graduate School of Engineering Professor,MIURA KEN Part-time Lecturer,EZOE SATOSHI Part-time Lecturer,YAMAMOTO ASAKO Graduate School of Engineering Assistant Professor,KOMIYAMA YOSUKE
Target year	3rd year students or above	Number of credits	3
Course offered year/period	2019/Second semester		
Day/period	Tue.3,4,5,Wed.4,5	Class style	Seminar
Language	Japanese		
[Outline and Purpose of the Course]			
[Course Goals]			
[Course Schedule and Contents]			
.14times, .14times, .2times,			
[Class requirement]			
None			
[Method, Point of view, and Attainment levels of Evaluation]			
[Textbook]			
[Reference books, etc.]			
(Reference books)			
[Regarding studies out of class (preparation and review)]			
(Others (office hour, etc.))			
*Please visit KULASIS to find out about office hours.			

景観デザイン論(2)	

[Method, Point of view, and Attainment levels of Evaluation]	
Grade Assessment Method: Dr. Takeyama's portion of the course: Assessment will be based on short reports given in each class and written reports on a given theme. Dr. Taji's portion of the course: Assessment will be based on written reports on a given theme. Grade Assessment - views and levels of achievement: Judgment will be based on students' level of understanding of the classes, and whether students have any fresh perspectives that emphasize the deepening of their own understanding.	
[Textbook]	
子安増生 『芸術心理学の新しいかたち』(誠信書房) ISBN:9784414301625 (竹山聖著「臨床建築学 - 死の形式から生の形式へ」(上記所収)) traverse編集委員会 『建築学のすすめ』(昭和) ISBN:9784812215135	
[Reference books, etc.]	
(Reference books)	
竹山聖 『独身者の住まい』(廣済堂出版) ISBN:4331509109 竹山聖 『ぼんやり空でも眺めてみようか』(彰国社) ISBN:9784395010059 田路貴浩 『環境の解釈学』(学芸出版) ISBN:4761523301 田路貴浩 『イギリス風景庭園』(丸善) ISBN:4621047817	
[Regarding studies out of class (preparation and review)]	
Read the material introduced in the class.	
(Others (office hour, etc.))	
Office hour: before and after lectures	
*Please visit KULASIS to find out about office hours.	

Numbering code					
Course title <English>	耐風構造 Wind Resistant Structures	Affiliated department, Job title,Name	Disaster Prevention Research Institute Professor, MARUYAMA TAKASHI Disaster Prevention Research Institute Associate Professor, NISHIJIMA KAZUYOSHI		
Target year	4th year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Tue.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
This course will provide an overview of various meteorological phenomena causing the wind genesis to understand the wind force on building structures, and discuss the relation between flow around building and wind pressure. We explain the evaluation method of design wind load to secure the building safety against wind and the wind resistant design method based on the Building Standards Act, Building Standard Law Enforcement Order and AIJ Recommendations for Loads on Buildings.					
[Course Goals]					
Acquisition of expert and basic knowledge on wind resistant design. Understanding the estimation of wind load and the construction from the stand point of wind resistant design.					
[Course Schedule and Contents]					
Mechanism of wind genesis, 4 classes: These classes will provide an overview of the atmospheric circulation caused by the motion of the earth and the heat budget, the mechanism of wind genesis caused by low pressure system, front and topography, etc. We will explain the characteristics of strong wind which is important for wind resistant design of building and structure with the description of its origin such as typhoon or tornado.					
Basic of wind force and pressure, 4 classes: These classes will explain the governing equations of wind flow and explain the meaning of its physics. We also obtain equations for simple flows and show equations to evaluate the wind pressure on the surface of objects.					
Wind load, 3 classes: These classes will explain the characteristics of natural wind, the observing technique and the prediction method of wind speed for wind load estimation. We discuss the calculation method of wind loads for design.					
Wind resistant design, 3 classes: These classes will explain the vibration caused by wind pressure on the walls and the design method to secure the building against wind load, and explain the calculation method of design wind load based on the Building Standards Act and AIJ Recommendations for Loads on Buildings.					
Confirmation of learning attainment, 1 class: This class will summarize the course and confirm learning attainment.					
----- Continue to 耐風構造(2)					

Numbering code					
Course title <English>	建築・都市行政 Building and Urban Administration	Affiliated department, Job title,Name	Part-time Lecturer, YAMAMOTO KAZUHIRO Part-time Lecturer, TAKAGI KATSUHIDE Part-time Lecturer, FUMIYAMA TATSUAKI		
Target year	2nd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Wed.4	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
This class will deepen your understanding of the interaction of various administrative organs relating to architecture and urban planning in urban management, as well as the nature of their respective roles, through an examination of the laws concerning their delineation and the specific case of Kyoto City.					
[Course Goals]					
Corresponding learning and education objectives: C. Practical Skills C2. Ability to understand the social role of construction activities. Understanding of the interaction of various administrative organs relating to architecture and urban planning in urban management. Understanding the roles, systems and outlines of architecture and urban planning related laws.					
[Course Schedule and Contents]					
General Outline - 1 class: This class will provide an outline of the situation in Kyoto City (topography, organizations, main policies of construction and urban planning administrations, and a view of required architectural personnel), as well as an outline of the roles of administrative organs and related issues in the planning, design, construction, and management of public buildings.					
Urban Planning Administration - 3 classes: These classes will provide a historical and systematic outline of the various systems related to urban planning (land use regulations, district planning, urban facilities, urban development projects, development permission, etc.), as well as the role played by the Urban Planning Administration and current issues.					
Landscape Administration - 2 classes: These classes will provide a historical and systematic outline of the various systems related to landscape preservation and formation under the Landscape Act and Ordinances based on the case of Kyoto City, as well as the role played by the Landscape Administration and current issues.					
Architectural Administration - 2 classes: These classes will provide a historical outline of the Architectural Administration's role as well as the current issues it faces.					
Architectural Law - 4 classes: These classes will provide an outline of the fundamental structure of the Building Standards Act and related laws and regulations, and their operation in practice.					
Exercises - 1 class: In this class, you will gain a basic understanding of the Building Standards Act and related laws and regulations, and learn the basics of business conduct through practical case studies.					
Case Discussion - 1 class: This class will host a discussion of current issues related to construction and urban					
----- Continue to 建築・都市行政(2)					

耐風構造(2)	

[Class requirement]	
Architectural Structural engineering, fluid dynamics, meteorology will be useful.	
[Method, Point of view, and Attainment levels of Evaluation]	
By reports or examination	
[Textbook]	
No textbook, using notebook.	
[Reference books, etc.]	
(Reference books) To be introduced during the class	
(Related URLs) (None)	
[Regarding studies out of class (preparation and review)]	
To be indicated during the lecture.	
(Others (office hour, etc.))	
[Office hours] (reception of questions, etc.) It will be indicated during the lectures.	
*Please visit KULASIS to find out about office hours.	

建築・都市行政(2)	

administration.	
Student Assessment - 1 class: Conclusion of the course and assessment of the level of learning achieved.	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
Results of the report examination(75%), Attendant evaluation(25%)	
[Textbook]	
Listed separately	
[Reference books, etc.]	
(Reference books) To be distributed and introduced during lectures	
[Regarding studies out of class (preparation and review)]	
Use the lecture materials distributed in the class for review. Use the textbook for preparations and review for the class.	
(Others (office hour, etc.))	
Office hours: (for questions, etc.) before and after lectures	
*Please visit KULASIS to find out about office hours.	

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Numbering code					
Course title <English>	設計演習 V Atelier Practic of Architectural Design V	Affiliated department, Job title,Name	Graduate School of Engineering Professor,TAKEYAMA KIYOSHI Graduate School of Engineering Professor,KANETA TAKASHI Graduate School of Engineering Professor,KANKI KIYOKO Graduate School of Engineering Professor,TOMISHIMA YOSHIAKI Graduate School of Engineering Professor,HIRATA AKIHISA Graduate School of Engineering Professor,MIURA KEN Graduate School of Global Environmental Studies Professor,KOBAYASHI HIROHIDE Disaster Prevention Research Institute Professor,MAKI NORIO Graduate School of Engineering Associate Professor,TAJI TAKAHIRO Graduate School of Engineering Associate Professor,YANAGISAWA KIWAMU Graduate School of Engineering Associate Professor,YOSHIDA TETSU Graduate School of Engineering Assistant Professor,KOMIYAMA YOSUKE Graduate School of Engineering Assistant Professor,太田 裕通		
			Target year	4th year students or above	Number of credits
Day/period	Tue.3,4,5,Wed.5	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.29times, .1time,					
----- Continue to 設計演習 V(2)					

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Numbering code					
Course title <English>	構造設計演習 Exercise on Structural Design	Affiliated department, Job title,Name	Graduate School of Engineering Professor,KANEKO YOSHIO Graduate School of Engineering Professor,NISHIYAMA MINEHIRO Graduate School of Engineering Associate Professor,KOETAKA YUUII Graduate School of Engineering Associate Professor,TANI MASANORI Part-time Lecturer,OHSUMI KAZUMASA Graduate School of Engineering Assistant Professor,SATOU YUUICHI		
			Target year	4th year students or above	Number of credits
Day/period	Fri.4,5	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.2times, .2times, .5times, .6times,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Textbook]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					

Numbering code					
Course title <English>	設計演習 V(2)	Affiliated department, Job title,Name	Graduate School of Engineering Professor,KANEKO YOSHIO Graduate School of Engineering Professor,NISHIYAMA MINEHIRO Graduate School of Engineering Associate Professor,KOETAKA YUUII Graduate School of Engineering Associate Professor,TANI MASANORI Graduate School of Engineering Associate Professor, S U G I N O M I N A Graduate School of Engineering Assistant Professor,SATOU YUUICHI Graduate School of Engineering Assistant Professor,TAKATSUKA KOHEI		
			Target year	4th year students or above	Number of credits
Day/period	Mon.3,4	Class style	Experiment	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.3times, .1time, .3times, .2times, .3times, .3times,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					
----- Continue to 構造・材料実験(2)					

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Numbering code					
Course title <English>	構造・材料実験 Laboratory Tests of Structural Mateials and Members	Affiliated department, Job title,Name	Graduate School of Engineering Professor,KANEKO YOSHIO Graduate School of Engineering Professor,NISHIYAMA MINEHIRO Graduate School of Engineering Associate Professor,KOETAKA YUUII Graduate School of Engineering Associate Professor,TANI MASANORI Graduate School of Engineering Associate Professor, S U G I N O M I N A Graduate School of Engineering Assistant Professor,SATOU YUUICHI Graduate School of Engineering Assistant Professor,TAKATSUKA KOHEI		
			Target year	4th year students or above	Number of credits
Day/period	Mon.3,4	Class style	Experiment	Language	Japanese
[Outline and Purpose of the Course]					
[Course Goals]					
[Course Schedule and Contents]					
.3times, .1time, .3times, .2times, .3times, .3times,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
(Others (office hour, etc.))					
*Please visit KULASIS to find out about office hours.					
----- Continue to 構造・材料実験(2)					

構造・材料実験(2)
[Textbook]
[Reference books, etc.] (Reference books)
[Regarding studies out of class (preparation and review)]
(Others (office hour, etc.)) *Please visit KULASIS to find out about office hours.

建築安全設計(2)
Guidebook on performance Verification methods for egress safety, The Housing Bureau of Ministry of Land, Infrastructure and Transportation, Inoue Shoin, 2000 Guidebook on performance Verification methods for fire resistance, The Housing Bureau of Ministry of Land, Infrastructure and Transportation, Inoue Shoin, 2000
[Regarding studies out of class (preparation and review)]
(Others (office hour, etc.)) [Office hour] Office hours are not specified but opportunity for QampA will be arranged upon request. Contact the lecturer via mail with your name, student ID and time of your convenience up to three candidates. *Please visit KULASIS to find out about office hours.

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Numbering code					
Course title <English>	建築安全設計 Fire Safety Design of Buildings	Affiliated department, Job title,Name	Graduate School of Engineering Professor.HARADA KAZUNORI Disaster Prevention Research Institute Associate Professor.NISHINO TOMOAKI Graduate School of Engineering Assistant Professor.NII DAISAKU		
Target year	4th year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Fri.2	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
In buildings and urban facilities, various fire safety measures are implemented, even though they are not well recognized in daily life. In the first half of this course, fundamentals on physical and chemical aspects of building fires are described. In the latter half, design methodologies for fire-safe buildings are described.					
[Course Goals]					
B1) scientific ability to solve problems, B4) understanding of environmental engineering aspects in architecture, C2) understanding societal role of architecture					
[Course Schedule and Contents]					
Introduction,1time,The historical fire disasters are described to show the whole view of fire safety issues of buildings and urban area. Basics of Fire Phenomena,6times,Basic fire phenomena such as ignition, burning, spread, fire plume, initial room fire, flashover and fully-developed stage are described in sequence of fire development. Fire Safety Design of Buildings,7times,The principles of fire safety of buildings are described in terms of fire compartmentation, smoke control, egress of occupants, fire fighter#039s operation, structural fire resistance design. Evaluation of Achievement,1time,Achievement on above items will be evaluated.					
[Class requirement]					
The participants are requested to accomplish Environmental engineering in Architecture I (40090), II (40100) and Building Systems Design (40180) prior to join this course.					
[Method, Point of view, and Attainment levels of Evaluation]					
Score is evaluated based on end-term examination and other materials.					
[Textbook]					
Kenchiku Kasaino Mekanizumoto Kasaianzen Sekkei (Mechanizm of Building Fires and Safety Design), the Building Center of Japan, 2007 (in Japanese) isbn{}{9784889101461}					
[Reference books, etc.] (Reference books) Saburo HORIUCHI, Building Fire Prevention, new ed., Asakura Shoten isbn{}{4254266189}// Takeyoshi TANAKA, An Introduction to Building Fire Safety Engineering, The Building Center of Japan, 2002 isbn{}{4889101209}//					
Continue to 建築安全設計(2)					

Numbering code					
Course title <English>	建築工学概論<建築> Introduction to Architectural Engineering	Affiliated department, Job title,Name	Graduate School of Engineering Professor.HAYASHI YASUHIRO Graduate School of Engineering Professor.TAKEWAKI IZURU Graduate School of Engineering Professor.NISHIYAMA MINEHIRO Disaster Prevention Research Institute Professor.MARUYAMA TAKASHI		
Target year	1st year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Mon.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
This course will provide an overview of various building structures (wooden structures, steel structures, reinforced concrete structures, composite structures, etc.), and discuss the characteristics of structural materials that comprise architecture, as well as the structural principles of architecture. These explanations will focus on the relationship between the characteristics of various types of disturbance affecting buildings (in the natural and artificial environment), on the one hand, and the response of building structures, on the other, as well as between the target performances of architectural spaces and the combined principles of structures.					
[Course Goals]					
At the initial phase of the study of architectural structures, acquire the necessary fundamental knowledge and basic concepts and learn about the organization of academic systems.					
[Course Schedule and Contents]					
Building structural mechanics and structural design, 4 classes: Building structures are deformed by the effects of various loads, and internal forces arise. We will discuss the mechanics laws governing such behavior of structures and the basic concepts of building structural mechanics that predict it, without use of mathematical formulas whenever possible. We will discuss displacement and deformation, force and equilibrium, force and deformation, mechanical characteristics of structural elements such as joists, beams and columns, and various structures such as framed structures and shell construction.					
Steel structure, 3 classes: These classes will explain the following: a) raw materials of steel, ironmaking techniques and their history, properties of steel material, b) examples of buildings constructed of steel material and their detailed structures, c) process from design to construction and examples of construction. We will explain the principles of earthquake-resistant structures and base isolation in a manner that is easy to understand, and present various dampers to damper building vibration.					
Structural materials in buildings, concrete structures, 4 classes: These classes will discuss basic information about main structural materials such as iron, steel, concrete, and wood. With respect to concrete and steel composite structures such as RC, SRC, and CFT, we will explain foundational structural principles, principles of resistance to dead load, live load, and earthquake load, and structural detailings of buildings in practice.					
Seismic design, Soil and foundations, Wooden houses, 3 classes : Our country is a leading earthquake-prone country in the world. It is a very important issue how to design safer buildings against earthquakes. The generating mechanism of earthquakes, the seismic ground motion propagation in the soil, and the response of					
Continue to 建築工学概論<建築>(2)					

建築工学概論<建築>(2)
a building are explained. Then, the fundamental concept of seismic design is explained. Moreover, basic knowledge of the soil and foundations, and wooden structure are also outlined.
Confirmation of learning attainment, 1 class: This class will summarize the course and confirm learning attainment.
[Class requirement]
None
[Method, Point of view, and Attainment levels of Evaluation]
Based on the final examination, but attendance is also emphasized.
[Textbook]
Not used
[Reference books, etc.]
(Reference books)
[Regarding studies out of class (preparation and review)]
None
(Others (office hour, etc.))
[Office hours] Will be detailed during class.
*Please visit KULASIS to find out about office hours.

都市環境工学(2)
[Method, Point of view, and Attainment levels of Evaluation]
Score is evaluated based on end-term examination and other materials.
[Textbook]
None specified. Handouts will be supplied on site.
[Reference books, etc.]
(Reference books)
To be suggested during the course.
[Regarding studies out of class (preparation and review)]
(Others (office hour, etc.))
[Office hour] Opportunity for QampA will be provided during the spare time before and after each lecture. Participants can make appointments for further questions.
*Please visit KULASIS to find out about office hours.

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Numbering code					
Course title <English>	都市環境工学 Urban Environment Engineering	Affiliated department, Job title, Name	Graduate School of Engineering Professor, HARADA KAZUNORI Graduate School of Engineering Associate Professor, ISHIDA TAIICHIROU Disaster Prevention Research Institute Associate Professor, NISHINO TOMOAKI		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Thu.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
In the urban area, buildings and public structures are densely located. Majority of human activities are carried out in relation with these structures. Consumption of energy and natural resources are deeply related with the interaction with activities and structures. In this course, lectures will be given on the state-of-the-art of energy and natural resource consumption in relation with urban structures, energy saving strategies, the concept of environmental friendly city/architecture.					
[Course Goals]					
B1) scientific ability to solve problems, B4) understanding of environmental engineering aspects in architecture, C2) understanding societal role of architecture					
[Course Schedule and Contents]					
Global environment and sustainable development, 2times, Inter-relations between architectural, urban and global environment. Sustainable development, evaluation of environmental impact. Explosion of urban area environmental impact, 1time, History of urban area development, increase in environmental pollution, energy use and environmental impact. Mechanism of Heat Island and Countermeasures, 2times, The mechanism and the state-of-the-art of urban warming, often referred to heat island, are explained. The existing and future countermeasures are to be discussed. The countermeasures are also discussed including cross ventilation of urban district, green vegetation, high albedo surfaces, water mist, district energy management and heat exhaust system. Control of Urban Environment and Architecture, 4times, The efficacy of green vegetation in urban area, improvement of room environment by roof vegetation and examples are explained. The energy saving effect of high reflective materials on building envelope and its shortcomings will be explained. In view of reducing heat release to urban area, the effect of high-performance air conditioning system is described. Sunlight, 2times, The effect of sunlight, calculation of sun position and direct solar luminance, shading control and deregulation by daylight factor are explained. Use of Renewable Energy in Buildings, 3times, The state of the art of renewable energy and its use in buildings will be explained, such as Zero Energy Buildings. Evaluation of Achievement, 1time, Achievement on above items will be evaluated.					
[Class requirement]					
The participants are required to study Environmental engineering in Architecture I (40090) and II (40100) prior to join this course. In addition, the knowledge on Building Systems Design (40180) is desirable.					
Continue to 都市環境工学(2)					

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Numbering code					
Course title <English>	行動・建築デザイン論 Behavior and Architectural Design Theory	Affiliated department, Job title, Name	Disaster Prevention Research Institute Professor, MAKI NORIO		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Tue.4	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
This course gives the basic knowledge of architecture and space design from the view point of the relation between man and behavior. The topics on scientific methods of man-environment studies are explained. Natural disaster will be highlighted in this lecture. Various design practices based on these principles, such as housing after natural disaster, disaster and build environments, design for disaster reduction, and design for safer communities will be discussed.					
[Course Goals]					
To understand the architectural and urban spaces from the viewpoint of relation with disaster.					
[Course Schedule and Contents]					
Various Concepts on Human behavior and Environment, 2times, Man perceives environment based on diverse information such as form, color, movement, sound, and fragrance, acts in environment, reads environment as the significant world, and memorizes the place and landscape of environment. We explain such mechanism on perception, behavior, cognition, and memory in Man-Environment relations. Moreover we refer to the fundamental characteristics of human behavior including concept of identity and orientation, roundabout route, excursion characteristics, prospect and refuge, ordinary and extra-ordinary behavior. disaster and environmental transition, 3times, Basic understanding about disaster and build environment will be discussed. And the relationship among disaster, man, and environment will be explained based on environmental transition after disaster. Disaster and Cities, 3times, Impact of disaster to cities will be discussed from the view point of behavior and man-environment design. Architecture design for disaster, 2times, Design of public facilities to respond disaster will be discussed from the view point of man-environment design. CEPTED, 2times, Design for crime prevention will be explained based on CEPTED (Crime Prevention through Environment Design). Design for Disaster Risk Reduction, 2times, Design scheme for Disaster risk reduction will be explained based on Affordance, and risk communication. Confirmation of the learning degree, 1time, Summary of the lecture and evaluation of the learning degree					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
by term-end examination					
Continue to 行動・建築デザイン論(2)					

行動・建築デザイン論(2)
[Textbook] using handout prints and slides
[Reference books, etc.] (Reference books)
[Regarding studies out of class (preparation and review)]
(Others (office hour, etc.)) Please contact to the following e-mail; maki.norio.8v#kyoto-u.ac.jp (# should be changed to `) *Please visit KULASIS to find out about office hours.

建築応用数学(2)
[Class requirement] Calculus, mathematical statistics and industrial mathematics are prerequisite.
[Method, Point of view, and Attainment levels of Evaluation] Final examination
[Textbook] Katoh, Hokoi, Takahashi, Ohsaki 『Mathematics for architectural engineering, (in Japanese)』 (Asakura Shoten,) ISBN:978-4-254-11636-6
[Reference books, etc.] (Reference books)
[Regarding studies out of class (preparation and review)] Explained in the class.
(Others (office hour, etc.)) Please contact teachers in advance when you have questions. *Please visit KULASIS to find out about office hours.

Numbering code			
Course title <English>	建築応用数学 Applied Mathematics for Architecture	Affiliated department, Job title, Name	Graduate School of Engineering Professor.OOSAKI MAKOTO Graduate School of Engineering Professor.OGURA DAISUKE Graduate School of Engineering Associate Professor.OOTANI MAKOTO Disaster Prevention Research Institute Associate Professor.NISHIJIMA KAZUYOSHI
Target year	3rd year students or above	Number of credits	2
Course offered year/period	2019/First semester		
Day/period	Fri.3	Class style	Lecture
Language	Japanese		
[Outline and Purpose of the Course]			
Applied Mathematics required for understanding architecture such as architectural planning, structural design, environmental design is taught. It is aimed that students will acquire the ability to understand and analyze the architecture from mathematical viewpoint.			
[Course Goals]			
Ordinary and partial differential equations, integral transform, probability theory and statistics, calculus of variation			
[Course Schedule and Contents]			
1. Ordinary differential equation: Applications of ordinary differential equations (ODE ' s) to analysis of architecture (Nishijima) 2. Ordinary differential equation: Solutions to constant-coefficient ODE's. (Nishijima) 3. Ordinary differential equation: Solutions to variable-coefficient ODE's. (Nishijima) 4. Fourier transform: Applications of Fourier transform to analysis of architecture (Otani) 5. Fourier transform: Fourier series for periodic functions (Otani) 6. Fourier transform: Fourier series for aperiodic function, impulse response, and convolution. (Otani) 7. Laplace transform: Definition of Laplace transform, and applications of Laplace transform to analysis of architecture (Ogura) 8. Laplace transform: Applications to solutions to ODE's. (Ogura) 9. Laplace transform: Applications to solutions to partial differential equations (PDE's). (Ogura) 10. Probability and statistics: Basics of probability theory, types of probability distributions, and applications to analysis of architecture (Nishijima) 11. Probability and statistics: Estimation and test (Nishijima) 12. Calculus of variation: Definition of functional, and Euler's equation. (Ohsaki) 13. Calculus of variation: Method of Lagrange multipliers (Ohsaki) 14. Calculus of variation: Method of Ritz-Galerkin (Ohsaki) 15. Verification of how students understand: Check how students understand the contents in previous 14 classes. (All)			
Continue to 建築応用数学(2)			

Numbering code			
Course title <English>	建築情報システム学 Architectural information Systems	Affiliated department, Job title, Name	Graduate School of Engineering Professor.KANETA TAKASHI
Target year	3rd year students or above	Number of credits	2
Course offered year/period	2019/First semester		
Day/period	Tue.3	Class style	Lecture
Language	Japanese		
[Outline and Purpose of the Course]			
Information modeling on architecture will be lectured. Also research and development applied to building construction project will be introduced.			
[Course Goals]			
To acquire the basic knowledge of operations research, information and communication technology applied in architectural design and planning. D-D1			
[Course Schedule and Contents]			
1-3. Outline on architectural information system Techno-literacy, knowledge management. 4-7. Mathematical programming Linear programming, Non-linear programming, Integer programming, Graph theory, Meta-heuristics, Fuzzy theory. 8-11. Building information modeling 12-14. Application to architecture and urban engineering 15. Final examination/ Learning achievement evaluation 16. Feedback			
[Class requirement]			
Basic knowledge on mathematics. "Computational Practice on Architectural Design and Engineering" should be mastered.			
[Method, Point of view, and Attainment levels of Evaluation]			
Absolute evaluation (raw score) Evaluation will be based on active participation and the examination.			
[Textbook]			
Instructed during class			
[Reference books, etc.] (Reference books) Introduced during class			
[Regarding studies out of class (preparation and review)]			
Read the material introduced in the class.			
(Others (office hour, etc.))			
Contact to: kaneta@archi.kyoto-u.ac.jp			
*Please visit KULASIS to find out about office hours.			

Numbering code					
Course title <English>	日本都市史 History of Japanese Urban Space	Affiliated department, Job title,Name	Graduate School of Engineering Professor,TOMISHIMA YOSHIAKI		
Target year	1st year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Tue.3	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
The objective of this course is for students to understand the historical characteristics of Japanese cities and the housing in which the residents of those cities have lived and acted along the course of history.					
[Course Goals]					
Students will learn an outline of the history of Japanese cities and housing and acquire the basic principles used to shape society in the present and future. Of the learning and education objectives listed by the department: B. Expertise and Basic Knowledge, B2. The ability to understand the design and planning aspects of architecture.					
[Course Schedule and Contents]					
Introduction - 1 class: 1, Introduction (significance of urban history) Antiquity - 1 class: 2, Ancient Miyakonojo Antiquity - 1 class: 3, Pit-dwellings and raised-floor dwellings Antiquity - 1 class: 4, Imperial palaces in antiquity Antiquity - 1 class: 5, Housing in Miyakonojo Antiquity - 1 class: 6, Shinden-zukuri Medieval Era - 1 class: 7, Transformation of the Heian capital, and Kamakura and Hiraizumi Medieval Era - 1 class: 8, Medieval-era Kyoto and self-governing cities Medieval Era - 1 class: 9, Establishment of the Shoin-zukuri style Modern Era - 1 class: 10, Formation of the castle-town Modern Era - 1 class: 11, Characteristics of the three cities (Edo, Kyoto, and Osaka) Modern Era - 1 class: 12, The shoin (drawing room) and guest hall in the modern era Modern Era - 1 class: 13, Private houses Modern Era - 1 class: 14, Modern cities Student Assessment - 1 class					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
Examination at the end of the term					
----- Continue to 日本都市史(2)					

Numbering code					
Course title <English>	日本建築史 History of Japanese Architecture	Affiliated department, Job title,Name	Graduate School of Engineering Professor,TOMISHIMA YOSHIAKI		
Target year	3rd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Wed.1	Class style	Lecture	Language	Japanese
[Outline and Purpose of the Course]					
This course will describe Japanese architectural history from ancient to modern times, with a focus on temple and shrine architecture. Connections will be drawn to the social and cultural background of this architecture. The objective is for students to understand the characteristics of space, technology, and design in Japanese architecture. Lectures will be given on the topics listed below, with some topics given more or less emphasis.					
[Course Goals]					
B. Expertise and Basic Knowledge B2. The ability to understand the design and planning aspects of architecture.					
[Course Schedule and Contents]					
Japanese Architectural History - 14 classes: 1. Introduction - purpose of architectural history \ 2. Traditional Japanese architectural styles and shrine architecture \ 3. Buddhist Temple Monasteries in the Asuka and Nara periods \ 4. Temple architecture in the Asuka and Nara periods \ 5. Temple architecture in the Heian period \ 6. Daibutsuyo architecture \ 7. Zen monasteries and Zenshuoyo Architecture \ 8. Medieval Japanese style and Setchuyo architecture \ 9. The development of architectural technology from antiquity to the medieval era, and Buddhist architecture \ 10. The Hondo (Main Hall) in New Buddhism \ 11. Shrine architecture in the medieval era \ 12. Muromachi period architecture \ 13. Modern shrine architecture \ 14. Craftsmen and tools Student Assessment - 1 class.					
[Class requirement]					
It would be preferable for students to be interested in related disciplines such as Japanese history, art history, and archaeology, as well as architecture.					
[Method, Point of view, and Attainment levels of Evaluation]					
Examination at the end of the term					
[Textbook]					
『日本建築史図集』(彰国社) isbn{}{9784395008889}					
[Reference books, etc.]					
(Reference books) 富島義幸 『平等院鳳凰堂 現世と浄土のあいだ』(吉川弘文館) isbn{}{9784642080323}					
[Regarding studies out of class (preparation and review)]					
Read the material introduced in the class.					
(Others (office hour, etc.))					
Taking questions: questions will be accepted by e-mail at any time.					
*Please visit KULASIS to find out about office hours.					

日本都市史(2)					

[Textbook]					
日本建築学会編 『日本建築史図集』(彰国社) isbn{}{9784395008889}					
[Reference books, etc.]					
(Reference books)					
[Regarding studies out of class (preparation and review)]					
Read the material introduced in the class.					
(Others (office hour, etc.))					
Taking questions: questions will be accepted by e-mail at any time.					
*Please visit KULASIS to find out about office hours.					

Numbering code					
Course title <English>	建築情報処理演習 Computational Practice on Architectural Design and Engineering	Affiliated department, Job title,Name	Graduate School of Engineering Associate Professor,YANAGISAWA KIWAMU Graduate School of Engineering Associate Professor,IBA CHIEMI Disaster Prevention Research Institute Associate Professor,KURATA MASASHIRO Graduate School of Engineering Assistant Professor,NII DAISAKU Graduate School of Engineering Assistant Professor,TAKATSUKA KOHEI Graduate School of Engineering Assistant Professor,太田 裕通		
Target year	2nd year students or above	Number of credits	2	Course offered year/period	2019/Second semester
Day/period	Fri.4,5	Class style	Seminar	Language	Japanese
[Outline and Purpose of the Course]					
The course provides lectures and exercises to acquire fundamental knowledge for analyzing engineering problems in architecture using computers. The participants will study data processing using a programming language and learn program design, coding and data analysis.					
[Course Goals]					
The participants are expected to learn fundamental knowledge for solving numerical problems in architectural engineering using PCs. The course uses a programming language named Python and teaches Branching, Data Types, Data Format, Array, File Reading and Writing, and Sub-routine. The course are intended for B1 Scientific problem-solving skills, and D1 Problem Finding and Solving Skills.					
[Course Schedule and Contents]					
Guidance,1time, Introduction to programming (1st term),4times, Application of programming (2nd term),1time, Example of the computer application for building design,4times, Intermediate programming (3rd term),4times, Achievement test,1time,					
[Class requirement]					
None					
[Method, Point of view, and Attainment levels of Evaluation]					
The course grades are based on the quizzes and exercises during classes and achievement tests. The former counts for around 60% and the latter counts for around 40%.					
----- Continue to 建築情報処理演習(2)					

Numbering code	
Course title <English>	設計演習基礎 Atelier Practice of Architectural Design, Basis
Affiliated department, Job title, Name	Graduate School of Engineering Professor,HIRATA AKIHISA Part-time Lecturer,HATA TOMOHIRO Graduate School of Engineering Assistant Professor,KOMIYAMA YOSUKE
Target year	1st year students or above
Number of credits	2
Course offered year/period	2019/Second semester
Day/period	Mon.4,5
Class style	Seminar
Language	Japanese
[Outline and Purpose of the Course]	
[Course Goals]	
[Course Schedule and Contents]	
,7times, ,7times, ,1time,	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
[Textbook]	
[Reference books, etc.]	
(Reference books)	
[Regarding studies out of class (preparation and review)]	
(Others (office hour, etc.))	
*Please visit KULASIS to find out about office hours.	

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Numbering code	
Course title <English>	世界建築史 History of World Architecture
Affiliated department, Job title, Name	Graduate School of Engineering Professor,TOMISHIMA YOSHIKI
Target year	1st year students or above
Number of credits	2
Course offered year/period	2019/Second semester
Day/period	Mon.3
Class style	Lecture
Language	Japanese
[Outline and Purpose of the Course]	
This course will discuss the history of predominantly European architecture, with its origins in Greece and Rome, as well as Eastern architecture that has a close relationship with Japan. The objective is to give students an understanding of architectural diversity, the relationship between political systems, cultural background, and architectural space, and how architectural characteristics and trends of thought in each era have set the course of modern architecture.	
[Course Goals]	
B. Expertise and Basic Knowledge B2. The ability to understand the design and planning aspects of architecture E. International Perspective E1. The ability to position architectural activity in diverse social systems	
[Course Schedule and Contents]	
Europe - 8 classes: 1-2. Ancient Greece and Rome \ 3-5. Pre-Romanesque, Romanesque, and Gothic \ 6-7. Renaissance and Baroque \ 8. 18th and 19th century architecture China - 4 classes: 9-10. Chinese Buddhist Architecture \ 11. Chinese religious architecture \ 12. Chinese Imperial palace and housing for the people Korean Peninsula - 1 class: 13. Architecture of the Korean Peninsula India - 1 class: 14. India and Islamic Architecture Student Assessment - 1 class	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
An examination will be held at the end of term.	
[Textbook]	
その他、『西洋建築史図集』三訂版、日本建築学会編、彰国社刊 isbn{}{4395000215} 『東洋建築史図集』日本建築学会編、彰国社刊 isbn{}{4395000878}	
[Reference books, etc.]	
(Reference books) Introduced during class	
[Regarding studies out of class (preparation and review)]	
Read the material introduced in the class.	
(Others (office hour, etc.))	
Taking questions: questions will be accepted by e-mail at any time.	
*Please visit KULASIS to find out about office hours.	

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Numbering code	
Course title <English>	建築温熱環境設計 Thermal Environment Design of Architecture
Affiliated department, Job title, Name	Graduate School of Engineering Professor,OGURA DAISUKE Graduate School of Engineering Associate Professor,IBA CHIEMI
Target year	3rd year students or above
Number of credits	2
Course offered year/period	2019/Second semester
Day/period	Tue.2
Class style	Lecture
Language	Japanese
[Outline and Purpose of the Course]	
In this course, basic concepts for controlling thermal environment of daily habitation space such as especially dwellings. Practical methods for passive thermal environment control is described.	
[Course Goals]	
The participants will be trained so that he/she can develop conceptual design of passive controlling elements and their combination for use in dwellings. Corresponding goals for education of department are C: Practical skills, C1: Capability in Realize Building Projects.	
[Course Schedule and Contents]	
Introduction - climate and buildings,1time, Utilization of heat capacity,2times, Benefits and risk of moisture,2times, Thermal system of human body,1time, Insulation of building envelope,2times, Solar shading and utilization,1time, Cross ventilation,2times, Indoor air quality,2times, Residential commissioning, 1 times, Evaluation of achievement, 1 times,	
[Class requirement]	
The participants are required to study Environmental engineering in Architecture I (40090) and II (40100) prior to join this course.	
[Method, Point of view, and Attainment levels of Evaluation]	
Score is evaluated based on end-term examination and other materials.	
[Textbook]	
None specified. Handouts will be supplied on site.	
[Reference books, etc.]	
(Reference books) To be suggested during the course.	
[Regarding studies out of class (preparation and review)]	
(Others (office hour, etc.))	
[Office hour] Opportunity for Q&A will be provided during the spare time before and after each lecture. Participants can make appointments for further questions.	
*Please visit KULASIS to find out about office hours.	

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Numbering code	
Course title <English>	世界建築史 History of World Architecture
Affiliated department, Job title, Name	Graduate School of Engineering Professor,TOMISHIMA YOSHIKI
Target year	1st year students or above
Number of credits	2
Course offered year/period	2019/Second semester
Day/period	Mon.3
Class style	Lecture
Language	Japanese
[Outline and Purpose of the Course]	
This course will discuss the history of predominantly European architecture, with its origins in Greece and Rome, as well as Eastern architecture that has a close relationship with Japan. The objective is to give students an understanding of architectural diversity, the relationship between political systems, cultural background, and architectural space, and how architectural characteristics and trends of thought in each era have set the course of modern architecture.	
[Course Goals]	
B. Expertise and Basic Knowledge B2. The ability to understand the design and planning aspects of architecture E. International Perspective E1. The ability to position architectural activity in diverse social systems	
[Course Schedule and Contents]	
Europe - 8 classes: 1-2. Ancient Greece and Rome \ 3-5. Pre-Romanesque, Romanesque, and Gothic \ 6-7. Renaissance and Baroque \ 8. 18th and 19th century architecture China - 4 classes: 9-10. Chinese Buddhist Architecture \ 11. Chinese religious architecture \ 12. Chinese Imperial palace and housing for the people Korean Peninsula - 1 class: 13. Architecture of the Korean Peninsula India - 1 class: 14. India and Islamic Architecture Student Assessment - 1 class	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
An examination will be held at the end of term.	
[Textbook]	
その他、『西洋建築史図集』三訂版、日本建築学会編、彰国社刊 isbn{}{4395000215} 『東洋建築史図集』日本建築学会編、彰国社刊 isbn{}{4395000878}	
[Reference books, etc.]	
(Reference books) Introduced during class	
[Regarding studies out of class (preparation and review)]	
Read the material introduced in the class.	
(Others (office hour, etc.))	
Taking questions: questions will be accepted by e-mail at any time.	
*Please visit KULASIS to find out about office hours.	

Numbering code					
Course title <English>	專門英語 English for Architecture	Affiliated department, Job title,Name	Part-time Lecturer,TSOI, Esther		
Target year	4th year students or above	Number of credits	2	Course offered year/period	2019/First semester
Day/period	Thu.4	Class style	Lecture	Language	Japanese and English
[Outline and Purpose of the Course]					
Le Corbusier said, in Vers une architecture [Towards an Architecture] (1923) " You employ stone, wood and concrete, and with these materials you build houses and palaces. That is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, I am happy and I say: ' This is beautiful. That is Architecture. Art enters in. ' "					
Mies van der Rohe said, " God is in the details. " , " Less is more. " , " Architecture starts when you carefully put two bricks together. There it begins. " Mies van der Rohe was originally from Germany and had moved to America. Corbusier was originally from Switzerland and had moved to France. Architecture has local concerns, and yet its influence is global, and sometimes timeless.					
Although English does not even have the largest number of native speakers in the world, it is the global working language of arts and science, as well as in international project collaborations. In this class we will read a number of architectural essays, starting with reading the imaginative Invisible Cities and analysis on Corbusier ' s works.					
[Course Goals]					
Able to use basic English for communicating and presenting architectural ideas.					
A1 Communication ability A2 Understanding architecture from different perspectives B2 Understanding architectural design and spatial planning C2 Understanding how architecture affects society C3 Acting with correct judgement based on historical and social understanding D2 Having one ' s unique viewpoint E2 Understanding global and local values					
[Course Schedule and Contents]					
Wk 1: Lecture: Introduction -the different types of English, examples in construction terms. Class activity: Introduction about yourself and your favourite architect/architecture. Homework: Read Invisible Cities (URL below).					
Wk 2: Lecture: Difference between Western and Eastern viewpoints. The physical descriptions of cities, versus concerns about wabi-sabi. Homework: Prepare sketch of one city from " Invisible Cities " , and prepare a short talk about what is so special and interesting about it. Read Experiencing Architecture (URL below).					
----- Continue to 專門英語(2) -----					

專門英語(2)	

Wk 3: Lecture: Corbusier and Palladio: Mathematics of an Ideal Villa. Learn some terms on planning. Class activity: Presentation with a sketch on one of the Invisible Cities. Submit your speech and sketch on separate A4-size papers. Homework: Read Mathematics of an Ideal Villa (URL below).	
Wk 4: Lecture: Corbusier: Domino and 5 Points. Learn terms on facade. Homework: Read Domino: Archetype (URL below). Homework: Start design sketches of a simple villa based on the theory of 5 points.	
Wk 5: Lecture: Architecture and construction terms. Homework: Finish design of your villa on an A3-size paper, and prepare a short presentation on an A4-size paper. Reference: Francis Ching ' s books (URL below) and the DETAIL series.	
Wk 6: Lecture: Japanese design and cities presented in English. Class activity: Presentation of the design of your villa based on Corbusier ' s 5 points. Submit your speech and sketch.	
Wk 7: Lecture: Architecture and construction terms -glass and steel. Homework: Fill in the blanks. Reference: Francis Ching ' s books (URL below) and the DETAIL series.	
Wk 8: Lecture: " From Shinto to Ando " , on Japanese phenomenon. Homework: Read From Shinto to Ando (URL below).	
Wk 9: Lecture: " Image of the City " . Homework: Read Image of the City (URL below). Homework: Use figure-ground technique to sketch on a street and junction, or a garden in Kyoto, inspired by " From Shinto to Ando " and " Image of the City " . Prepare a short talk and sketch on separate A4-size papers.	
Wk 10: Lecture: " Genius Loci " Class activity: Presentation of your figure-ground sketch of a street and junction, or a garden in Kyoto. Describe. Submit your speech and sketch. Homework: Read Genius Loci (URL below).	
Wk 11: Lecture: Terms on bridge and engineering. Homework: Fill in the blanks. Read Construction History (URL below).	
----- Continue to 專門英語(3) -----	

專門英語(3)	

Wk 12: Lecture: Art x architecture. E.g. Michael Heizer, Robert Smithson, Richard Serra, James Turrell, Maya Lin, Andy Goldsworthy. Homework: Research about an artist, artisan, a writer, or even a religion or culture. Image how you would make an exhibition space of his/her art/craft/another world. Write an introduction on your selected artist/ artisan/writer/religion, and your ideas on how you may site and exhibit the art/craft/another world. Reference: Art21 (URL below).	
Wk 13: Lecture: Art x architecture. Review on museums and exhibition spaces, different use of materials and colours. Class activity: Introduce your artist and your proposal on exhibition. Homework: Finalize your proposal. How may you, using your expertise and modern sensibility, promote an exciting new view and experience of the art/craft/another world.	
Wk 14: Class activity: FINAL Presentation and Discussion of your proposal of an exhibition space. Analyze the different situations and concerns between the artist/ artisan/ writer/ religion/ culture with our current world, how you may create an exciting space that helps people to feel and learn more.	
No final examination. The schedule may be subject to change.	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
Students will need to listen and read different texts, and solve the related problems. Students are expected to be able to write, discuss and present architecture in English at the end of the class. There will be no final examination. Attendance, class participation and exercise completion is important. No plagiarism. Students who have less than 60% in attendance will fail. Late arrival for more than 10 minutes or leaving early without satisfactory explanation will be considered non-attendance.	
Homework - 40% Presentations - 40%. Attendance - 20%.	
[Textbook]	
Steen Eiler Rasmussen, Experiencing Architecture, MIT Press, 1992.	
Italo Calvino, Invisible Cities, Harcourt Brace & Co., 1972.	
Gunter Nitschke, From Shinto to Ando, Academy, 1993.	
Christian Norberg-Schulz, Genius Loci: Towards a Phenomenology of Architecture, Academy Editions Ltd, 1980.	
Kevin Lynch, The Image of the City, Harvard-MIT Joint Center for Urban Studies Series, 1964.	
----- Continue to 專門英語(4) -----	

專門英語(4)	

[Reference books, etc.]	
(Reference books) Kenneth Frampton, Modern Architecture: A Critical History, Thames and Hudson, 1992. https://doubleoperative.files.wordpress.com/2009/12/kenneth-frampton_modern-architecture.pdf Junichiro Tanizaki, In Praise of Shadows, Leet ' s Island Books, 1997. http://www.edu.artcenter.edu/mertzel/spatial_scenography_1/Class%20Files/resources/In%20Praise%20of%20Shadows.pdf Le Corbusier, Towards a New Architecture, Dover, 1986. Christian Schittich, in Detail Japan, Birkhauser, 2002. Graphic Anatomy Atelier Bow-Wow, Toto, 2007. Francis D.K. Ching, Building Construction Illustrated, John Wiley and Sons, 1991. Francis D.K. Ching, A Visual Dictionary of Architecture, John Wiley and Sons, 2011.	
(Related URLs) http://corner-college.com/udb/cprogXw0KwCalvino_Italo_Invisible_Cities-pp5-23.pdf (Italo Calvino, Invisible Cities, Harcourt Brace & Co., 1972.) https://openlab.citytech.cuny.edu/12101291coordination/files/2011/06/Rasmussen_and_Elam_Proportions.pdf (Steen Eiler Rasmussen, Experiencing Architecture, MIT Press, 1992.) https://1drv.ms/w/s!AhVq_riAFrGsgSxgYqC1w03iiTBf(Mathematics of Ideal Villa) https://cisematakblog.files.wordpress.com/2016/11/towards-a-new-architecture1-1.pdf (Le Corbusier, Towards a New Architecture, Dover, 1986.) https://1drv.ms/b/s!AhVq_riAFrGsgSrsJ912MYAUaID3(Domino: Archetype) http://www.east-asia-architecture.org/downloads/research/MA_-_The_Japanese_Sense_of_Place_-_Forum.pdf (Gunter Nitschke, From Shinto to Ando, Academy, 1993.) http://www.miguelangelmartinez.net/IMG/pdf/1960_ Kevin_Lynch_The_Image_of_The_City_book.pdf (Kevin Lynch, The Image of the City, Harvard-MIT Joint Center for Urban Studies Series, 1964.) https://marywoodthesisresearch.files.wordpress.com/2014/03/genius-loci-towards-a-phenomenology-of-architecture-part1_.pdf (Christian Norberg-Schulz, Genius Loci: Towards a Phenomenology of Architecture, Academy Editions Ltd, 1980.) https://1drv.ms/b/s!AhVq_riAFrGsgS17_073rYqfLcX(Construction History) http://www.icomos-poland.org/pl/?option=com_dropfiles&format=&task=frontfile.download&catid=67&id=66&Itemid=1000000000000(Visual Dictionary of Architecture (by Francis Ching, 2011.)) http://www.east-asia-architecture.org/aotm/index.html(Hand or Machine (by Esther Tsoi, 2012.)) https://art21.org/artists/(Art21 (PBS))	
[Regarding studies out of class (preparation and review)]	
Please read materials from the above URL. Research the meaning of words in advance and at your leisure.	
(Others (office hour, etc.))	
About me: http://linkedin.com/in/kyokoto	
----- Continue to 專門英語(5) -----	

Numbering code	
Course title <English>	建築設備計画法 Design Theory of Building Systems
*Please visit KULASIS to find out about office hours.	
[Outline and Purpose of the Course]	
[Course Goals]	
[Course Schedule and Contents]	
.1time, .1time, .2times, .1time, .3times, design of fire safety system and seismic design of equipment,1time,The schematics of fire safety system, such as fire detection, suppression and egress guidance, are introduced in connection with building design. The state of seismic damage of building equipment is introduced. The design method of building equipment against seismic action will be explained .1time, maintainance and optimum operation,1time, introduction to actual design projects,2times, site visit and/or a lecture by practioners,1time,Site visit and/or a lecture by a practioner will be arranged to see and understand the practical equipment system. evaluation of archivements,1time,Achievement on above items will be evaluated.	
[Class requirement]	
Knowledge on Environmental Engineering in Architecture I(40090) and II(40100) are necessary. In addition,	
----- Continue to 建築設備計画法(2)	

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Numbering code	
Course title <English>	建築設備計画法 Design Theory of Building Systems
Affiliated department, Job title,Name	Graduate School of Engineering Professor,TAKANO YASUSHI Graduate School of Engineering Professor,HARADA KAZUNORI Graduate School of Engineering Professor,OGURA DAISUKE Graduate School of Engineering Associate Professor,ISHIDA TAIICHIROU Graduate School of Engineering Associate Professor,OOTANI MAKOTO Disaster Prevention Research Institute Associate Professor,NISHINO TOMOAKI Graduate School of Engineering Associate Professor,IBA CHIEMI Part-time Lecturer,UEDA SHINYA
Target year	4th year students or above
Number of credits	2
Course offered year/period	2019/First semester
Day/period	Wed.4
Class style	Lecture
Language	Japanese
[Outline and Purpose of the Course]	
[Course Goals]	
[Course Schedule and Contents]	
.1time, .1time, .2times, .1time, .3times, design of fire safety system and seismic design of equipment,1time,The schematics of fire safety system, such as fire detection, suppression and egress guidance, are introduced in connection with building design. The state of seismic damage of building equipment is introduced. The design method of building equipment against seismic action will be explained .1time, maintainance and optimum operation,1time, introduction to actual design projects,2times, site visit and/or a lecture by practioners,1time,Site visit and/or a lecture by a practioner will be arranged to see and understand the practical equipment system. evaluation of archivements,1time,Achievement on above items will be evaluated.	
[Class requirement]	
Knowledge on Environmental Engineering in Architecture I(40090) and II(40100) are necessary. In addition,	
----- Continue to 建築設備計画法(2)	

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Numbering code	
Course title <English>	建築造形実習 Fundamental Training in Architectural Design
Affiliated department, Job title,Name	Graduate School of Engineering Professor,TAKEYAMA KIYOSHI Graduate School of Engineering Senior Lecturer,MAEDA MASAHIRO Part-time Lecturer,IKEI TAKESHI Graduate School of Engineering Assistant Professor,KOMIYAMA YOSUKE Graduate School of Engineering Assistant Professor,大田 裕通
Target year	1st year students or above
Number of credits	2
Course offered year/period	2019/First semester
Day/period	Mon.3,4
Class style	Practical training
Language	Japanese
[Outline and Purpose of the Course]	
[Course Goals]	
[Course Schedule and Contents]	
.1time, .6times, .6times, .1time, .1time,	
[Class requirement]	
None	
[Method, Point of view, and Attainment levels of Evaluation]	
[Textbook]	
[Reference books, etc.]	
(Reference books)	
[Regarding studies out of class (preparation and review)]	
(Others (office hour, etc.))	
*Please visit KULASIS to find out about office hours.	

Numbering code	
Course title <English>	建築設備計画法(2)
----- it is desirable that the participants have joined the following courses; Building Systems Design(40180), Lighting and Acoustics in Architecture (40320), Urban Environment Engineering (40520), Thermal Environment Design of Architecture(40600).	
[Method, Point of view, and Attainment levels of Evaluation]	
[Textbook]	
None specified. Exercise sheet will be provided during the lecture.	
[Reference books, etc.]	
(Reference books)	
[Regarding studies out of class (preparation and review)]	
(Others (office hour, etc.))	
[Office hour] Questions are accepted at occasion. Contact lecturers for the arrangement of office hours.	
*Please visit KULASIS to find out about office hours.	

Numbering code			
Course title <English>	特別研究 Graduation Thesis	Affiliated department, Job title, Name	Graduate School of Engineering Professor, TOMISHIMA YOSHIAKI
Target year	4th year students or above	Number of credits	0
		Course offered year/period	2019/Intensive, year-round
Day/period	Intensive	Class style	Seminar
		Language	Japanese
[Outline and Purpose of the Course]			
Students are required to set a new topic in the fields of planning, design, structure, or environment, with regard to either architectural, urban, and regional history or spaces/systems, or to structural technology, environmental factors, and their physiological/psychological effects; to develop the ability to provide solutions to the set topic; and to compile the research results in the form of Graduation Thesis or Diploma Design.			
[Course Goals]			
From a new, previously unexamined perspective, with an understanding of both global and local values, based on their personal viewpoint, students must acquire the skills to effectively and sufficiently express a verifiable method of research or design related to architectural planning, design, structure, or environment. From the learning and educational goals listed by the Department: A: Comprehension ability A1: Communication and presentation skills A2: Multi-faceted understanding of the values of architecture C: Practical ability C2: Understanding of the social role of designing or building architecture D: Innovation D2: Attaining an imaginative perspective			
[Course Schedule and Contents]			
For each lesson, proceed with discussions and guidance by the supervisor of your laboratory. 1st - 3rd Setting the research and design task. 4th - 6th Collecting examples of previous studies or advanced design techniques. Consideration of research method or design direction. 7th #8211 9th Establishment of research hypothesis, design research plan, or design process. 10th - 16th Implementation of surveys, experiments, theoretical studies, numerical analysis, or consideration of basic design. 17th - 22th Examination of the results obtained from former stage, or proceeding with design drawings and models. 23rd - 29th Writing Graduation Thesis, or proceeding with drawing and making models of Diploma Design. 30th Presentation of the Graduation Thesis or Diploma Design.			
----- Continue to 特別研究(2) -----			

特別研究(2)

[Class requirement]
Satisfy requirements for "Graduation Thesis" enrollment depend on year of admission
[Method, Point of view, and Attainment levels of Evaluation]
Based on the submitted Graduation Thesis or Diploma Design, grading will be determined as either passed or failed. The degree of achievement will be graded according to whether or not the thesis or design work expresses a new or unique viewpoint and addresses a previously unexamined topic, whether or not it demonstrates a verifiable method, and whether or not it is expressed effectively and sufficiently.
[Textbook]
Supervision by your laboratory instructor.
[Reference books, etc.]
(Reference books) Supervision by your laboratory instructor.
[Regarding studies out of class (preparation and review)]
Engaging in advance preparation and review, with active discussions between supervisor and student outside seminar times, and opportunities for multi-faceted consideration of research and design issues.
(Others (office hour, etc.))
*Please visit KULASIS to find out about office hours.