

Course Information			
Year	2021	School	School of Creative Science and Engineering
Course Title	Steel Material and Structure IPSE Course		
Instructor	IWANAMI, Motoi./LIM, Sopokhem		
Term/Day/Period	spring semester Tues.4		
Category	Elective Compulsory Subjects	Eligible Year	3rd year and above
Classroom		Campus	Nishi-Waseda (Former: Okubo)
Course Key	27GD033004	Course Class Code	01
Main Language	English		
Class Modality Categories	On-demand (Schedule Restrictions)		
Course Code	CSTX36ZL		
First Academic disciplines	Civil Engineering		
Second Academic disciplines	Civil Engineering		
Third Academic disciplines	Structural Engineering/Earthquake Engineering/Maintenance Management Engineering		
Level	Advanced, practical and specialized	Types of lesson	Lecture
Credits	2		

Syllabus Information		Latest Update : 2021/04/05 16:45:23
Course Outline	This course is developed for the students to have basic understandings of steel materials and structures. The course begins with introductory parts of steel materials and basic design theories of steel members, followed by the more in-depth analysis and design of steel structures. This course is offered in English for foreign students; however, Japanese students who are able to use English are also encouraged to attend.	
Objectives	The objectives of this course are to have fundamental knowledge on steel materials and steel structures, to develop a basic understanding of the design of steel structures, to deepen an insight into fundamental principles behind the design, and at the end, to be familiar with steel materials and steel structures.	
Course Schedule	<p>1 Iron & steel production, April 6 (Dr. LIM)</p> <p>2 Steel materials and their properties, April 13 (Dr. LIM)</p> <p>3 Tension members (1), April 20 (Dr. LIM)</p> <p>4 Tension members (2), April 27 (Dr. LIM)</p> <p>5 Compression members (1), May 11 (Dr. LIM)</p> <p>6 Compression members (2), May 18 (Dr. LIM)</p> <p>7 Corrosion of steel members, May 25 (Dr. LIM)</p> <p>8 Mid-term assignment for lectures 1-6, June 01 (Dr. LIM)</p> <p>9 Flexural members, June 08, (Prof. IWANAMI)</p> <p>10 Shear members, June 15 (Prof. IWANAMI)</p> <p>11 Members under combined forces, June 22 (Prof. IWANAMI)</p> <p>12 Structural design, June 29 (Prof. IWANAMI)</p> <p>13 Bolted connections, July 06 (Prof. IWANAMI)</p> <p>14 Welded connections, July 13 (Prof. IWANAMI)</p> <p>15. Final assignment for lectures 9-14, July 20 (Prof. IWANAMI)</p> <p>Note for the lecture delivery method: - Dr. LIM would like to choose "real-time online lecture according to the timetable" - Prof. IWANAMI would like to choose "LMS"</p>	
Textbooks	Handout materials	
Reference	<ul style="list-style-type: none"> •Vinnakota, S.: Steel structures: Behavior and LRFD, McGraw-Hill, 2006 •Salmon C.G., Johnson J.E., Malhas, F.: Steel Structures: International Version: Design and Behavior, Pearson, 2008 •Nethercot, D.A.: Limit states design of structural steelwork 3rd ed., Taylor & Francis, 2001 •Trahair, N.S., Bradford, M.A., Nethercot, D.A. and Gardner, L.: The behavior and design of steel structures to EC3, Taylor & Francis, 2008 •Chajes, A: Principles of structural stability theory, Prentice Hall, 1974 •Kuwanura, Hitoshi; Koukouzou no seinou to sekkei (鋼構造の性能と設計), Kyoritsu Syuppan (共立出版), 2002 (in Japanese) 	
Evaluation	Class evaluation: - Assignments: 50 % - Homework for each class: 50 %	
Note / URL	This syllabus may be subjected to change.	