科目名/Subject [JYPE] Geological Environment and Earthquake Disaster

科目群/Categories School of Engineering

曜日·講時/Day/Period Thursday 1st (8:50-10:20)

開講年度/Year 2022

セメスター/Semester Spring Semester

単位数/Credit(s) 2

扣当教員(所属) /Instructor (Position)

MASATO MOTOSAKA (Emeritus Professor)

対象/Eligibility JYPE

使用言語/Language English

備考/Notes

#### 授業題目

1文未超日 /Class Subject

## 授業の 目的と

概要

This course comprises the lectures, students' presentations and discussions on engineering topics for earthquake disaster prevention /Objectives considering geological environment. and Summary

of Class

#### 学修の 到達目標 /Goal of Study

To understand the difference of ground motions due to soil conditions for earthquake countermeasures

Google classroom: iz27x5c

It is clear through past disastrous earthquakes that the earthquake damage is quite different depending on the geological conditions. The earthquake observation explains this truth. Therefore, it is important to take into account the difference of ground motion due to soil conditions in a seismic design of urban structures and in urban disaster prevention planning. In this course, two reports are requested and students make presentation based on the materials of the task during classes.

### 授業内容 ・方法と 進度予定 /Contents

and Class Schedule

1 4/14 Introduction to Earthquake and Building Structures 2 4/21 Recent Earthquake Damage and Lessons(I) 3 4/28 Recent Earthquake Damage and Lessons(II)

4 5/12 Students' presentation on the 1st Report and Discussion 5 5/19 Measurements of Ground Motion and Structural Vibration

6 5/26 Overview of Geological Structure and Ground Motion Characteristics 7 6/2 Introductions to Wave Propagation Theory and Structural Vibration 8 6/9 Structural Health Monitoring

9 6/16 Earthquake Damage Prediction -Natural and Social Information-10 6/23 Seismic Protection Technology-Earthquake Early Warning System-11 7/30 Recent Topics on Earthquake Disaster Prevention Projects 12 7/7 Students' presentation on the 2nd Report and Discussion

# 成績評価 方法

/Fvaluation Method

The evaluation will be based on the reports and presentations for the requested subjects.

教科書 および 参考書 /Textbook and

references

関連 ÜRL /URL

授業時間外 学修 /Preparation

and Review

その他 /In addition

In each lecture, the relevant material will be handed out.

ne-credit courses require 45 hours of study. In lecture and exercise-based classes, one credit consists of 15-30 hours of class tim nd review outside od class. In laboratory, practical skill classes, one credit consists of 30-45 hours of class time and 15-0 hours of p lass.	ne and 30–15 hours of preparation reparation and review outside of