

Course Title	Advanced Soil & Geotechnical Engineering		
Instructor	Yoshiyuki MOHRI, Junko NISHIWAKI		
Code	MA052600	Semester	2nd (Oct-)
Credit(s)	1	Day/Period	Intensive
Description Code	A-AGE-632		
Outline	<p>This course provides a part of the information about the physical phenomenon in soil and the countermeasure for the problem that happens in a field.</p> <p>It also offers Mechanical behavior of soil foundation related with agricultural facilities, dam, main pipeline and small earth pond, are explained.</p>		
Keywords	<p>Water and mass movements in soil</p> <p>Foundation Engineering, soil structure, strength of foundation, stability of soil structure</p>		
Goals	<p>Understanding the basic properties of soil structure</p> <p>Explaining the stabilities of soil structure in case of a natural disaster, earthquake and rain fall. And learning the function of soil through the physical phenomenon that happens in the soil.</p>		
Course Plan	<p>Understanding the mechanical stability and performance of soil structure based on some lectures for soil mechanics and civil engineering technics.</p> <p>First step is to make clear the relation between compaction of soil and its strength.</p> <p>Final step is to understand the counter measure work to meet the stability structure in case of a huge natural disaster.</p> <p>Course Plan</p> <ol style="list-style-type: none"> 1. Introduction of soil physical properties 2. Water movement in soil 3. Chemical movement in soil 4. Physical and chemical treatment of soil degradation. 5. Mechanical soil test and stress strain relation 6. Compaction and strength 7. Disaster of soil structure, dam and Pipeline 8. Counter measure technics for dam and slope <p>Ibaraki University Graduate School (Master's Program) Diploma Policy</p> <ol style="list-style-type: none"> 1. Academic and research skills in the specialized field: knowledge and skills as a highly specialized professional in the area of expertise and research prowess to detect and solve problems independently. 		
Advice for Preview and Review	Understand the contents of basic documents and resumes offered in the class.		
Prerequisite	Thorough knowledge of soil mechanics, stability of structure, numerical analysis for structure, applied mechanics are necessary in this class.		
Grading Criteria	Evaluation on reports and examinations.		
Texts/References	Preparing some resumes for each class.		