Hokkaido University Syllabus					
Course Title					
Intelligent Information Systems					
Subtitle					
Instructor (Institution)					
Masanori SUGIMOTO (Faculty of Information Science and Technology)					
Other Instructors (Institution)					
Masanori SUGIMOTO (Faculty of Information Science and Technology)					
Course Type				Open To Other Faculties / Schools	OK
Year	2020	Semester	1st Semester (Spring Term)	Course Number	046008
Type of Class	Lecture	Number of Credits	2	Year of Eligible Students	～
Eligible Department / Class				Other Information	
Numbering Code	IST_CSIT 5202				
Major Category Code	Major Category Title				
IST_CSIT	Graduate School of Information Science and Technology(Computer Science and Information Technology)				
Level Code	Level				
5	Specialized Subjects (basics) in graduate level (Master's Course and Professional Course), Inter-Graduate School Classes				
Middle Category Code	Middle Category Title				
2	Mathematical science				
Small Category Code	Small Category Title				
0	Fundamental mathematical science				
Language Type					
Classes are in Japanese and English (bilingual, or language is decided once the student composition has been finalized).					
Course list by the instructor with practical experiences					

Key Words

センシング/sensing
環境認識/environment recognition
信号処理/signal processing

Course Objectives

The target of this class is to understand about theory and implementation for designing smart systems and environments.

Course Goals

Students are requested to understand about sensing techniques for recognizing real world environments, and theories and algorithms for extracting meaningful information from data captured from sensors.
They are also requested to acquire skills for designing smart systems and environments that help people in the real world.

Course Schedule

1)Introduction on safe and secure environments

2,3)Principles and algorithms for ranging and positioning

4,5,6,7)Techniques and systems for ranging and positioning

8) Evaluations and challenges of ranging and positioning

9,10) Theory of imaging systems

11) Applications of imaging systems

12,13) Imaging techniques and systems

14) Evaluations of imaging systems

15) Designing safe and secure environments: challenges and perspectives

Homework

Original materials are offered. Useful references are introduced. Students are asked to review the class.

Grading System

Evaluation based on (1) attendance (10 %) and reports (90%).

Practical experience and utilization for classes

Condition of tasking the subject

Textbooks

Reading List

Websites

http://iis-lab.ist.hokudai.ac.jp/~sugi/iis/

Website of Laboratory

http://iis-lab.ist.hokudai.ac.jp/

Additional Information

Update

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