Hokkaido University Syllabus				
Course Title				
Surface Nano Analyses				
Subtitle				
Instructor (Institution)				
Kiyotaka ASAKURA (Institute for Catalysis)				
Other Instructors (Institution)				
Satoru TAKAKUSAGI (Institute for Catalysis) Kiyotaka ASAKURA (Institute for Catalysis)				
Course Type			Open To Other Faculties / Schools	OK
Year	2019	Semester	1st Semester (Spring Term)	Course Number	092422
Type of Class	Lecture	Number of Credits	1	Year of Eligible Students	～
Eligible Department / Class			Other Information	
Numbering Code	ENG_QSE 6602			
Major Category Code	Major Category Title			
ENG_QSE	Engineering_Quantum Science and Engineering			
Level Code	Level			
6	Specialized Subjects (advanced) in graduate level (Master's Course and Professional Course)			
Middle Category Code	Middle Category Title			
6				
Small Category Code	Small Category Title			
0				
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

Surface, Catalyst, Nanomaterial, Synchrotron radiation, Electron microscopy, STM, AFM,Lithography

Course Objectives

To understand the importance of nanomaterials. To understand how to determine the electronic state, structure and morphology of nanomaterials

Course Goals

To learn the surface analysis techniques.

Course Schedule

1. How to determine the nanostructure and electronic state by diffraction, spectroscopy and microscopy
2. Presentations ls

Homework

To prepare your presenations
You should do homeworks I give you in the lecture.
The e-learning is available.

Grading System

Homework(20%) Days of attended(10%) Presentations(70%)

Practical experience and utilization for classes

Condition of tasking the subject

Textbooks

Reading List

Introduction to Solid State Physucs / CKittel : Wiley, ISBN:0-471-11181-3
Introduction to Surface Chemistry / G.Somorjai : Wiley, ISBN:9780470508237

Websites

Website of Laboratory

http://www.cat.hokudai.ac.jp/asakura

Additional Information

Update

2019/01/11 19:09:39