COURSE DETAIL

CHEMISTRY IN NANOSCIENCES

Country
Korea, South

Host Institution
Seoul National University

Program(s)
Seoul National University

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Chemistry

UCEAP Course Number
107

UCEAP Course Suffix

UCEAP Official Title
CHEMISTRY IN NANOSCIENCES

UCEAP Transcript Title
NANOSCIENCE CHEM

UCEAP Quarter Units
4.50

UCEAP Semester Units
3.00

Course Description

The objective of this course is to provide students with an overview of the role of chemistry in nanosciences. The course introduces some basic knowledge related to this field, and surveys the unique properties of nanoparticles and their applications, which includes bioconjugation methods, solution-based probes/sensors, in vitro and in vivo imaging, and nanoparticle therapeutics.

Students should be able to 1) understand the general methods for fabricating nanomaterials; 2) understand the physical properties of nanomaterials; 3) apply the unique properties of some nanomaterials to create specific probes. Typical topics include supramolecular chemistry, basic photophysics, syntheses of nanoparticles, luminescent quantum dots, gold and silver nanoparticles, other inorganic nanoparticles, organic nanoparticles, bioconjugate chemistry, bioimaging, drug delivery and toxicity of nanoparticles.

Language(s) of Instruction
English

Host Institution Course Number
718.322

Host Institution Course Title
CHEMISTRY IN NANOSCIENCES

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Chemistry Education

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