Osaka University International Certificate Program Composition

since 2020

Course Name	Nanoscience and Nanotechnology as Manufacturing Core		
Course Affiliation	Institute for NanoScience Design		
Course Manager	Prof.Fujiwara Yasufumi, Institute for NanoScience Design		
Cooperative Schools	Graduate School of Science, Graduate School of Engineering, Graduate School of Engineering Science, Center for Global Initiatives		
Eligibility	Graduate students of Joint Campus counterpart universities, and working people who have received at least a bachelor's degree are eligible		
Requirements for completion	6 to 8 credits	Capacity	15
Course Objective	To learn broad knowledge about nanoscience and nanoengineering in various fields such as physics, chemistry, biology, electronics, mechanics ,and measuring and analytical techniques To nurture the basic research ability in the various fields of nanoscience and nanotechnology ,and develop practical skills of nanotechnology for manufacturing industry To develop human resourses who can produce added value as a researcher or developer by applying nanoscience and nanoengineering		
Learning Goals	To understand the importance of contribution to basic science and technology by nanoscience and nanoengineering To understand the role of nanoscience and nanotechnology in physics, chemistry and biology To understand the relationship between nanoscience and nanotechnology ,and manufacturing science and technology To understand the application of nanotechnology to electronics, mechanics and measuring and analytical techniques To understand the relationship between nanotechnology and industrial technology innovation		
Components	【Required Subjects】 Common Subject (Fall, Winter Term)："OUICP-Nanoscience / Nanotechnology" Common Subject (Spring, Summer Term)："SDGs and Asia-Pacific Region Ⅱ" 【Required Elective Subjects】 Practical Study Abroad (PSA) Subjects: "Laboratory Study Ⅰ,Ⅱ", "Internship Ⅰ" 【Elective Subjects】 "International Exchange Lectures on Nanoscience and Nanotechnology A (with University of Groningen)" "International Exchange Lectures on Nanoscience and Nanotechnology B, C （INSD Summer School ）"		
Special Note	All the courses in this program will be given in English.		

Components

Course Numbering Code	Course Name	Credits			Course Term	Study Hours	Course Affiliation	Special Note
		Required	Required, Elective	Elective				
720559	OUICP-Nanoscience / Nanotechnology	1			Fall, Winter	15	Graduate School of Engineering Science	
720560	SDGs in Asia Pacific Region Ⅱ	1			Summer	15	Center for Global Initiatives	
720542	（PSA）Laboratory study Ⅰ		1		Summer	45	Center for Global Initiatives	
720543	（PSA）Laboratory study Ⅱ		1		Summer	45	Center for Global Initiatives	
720548	（PSA）Internship Ⅰ		1		Summer	45	Center for Global Initiatives	
290735	International Exchange Lectures on Nanoscience and Nanotechnology A with University of Groningen (UG)			1	Fall	15	Graduate School of Engineering Science	
290740	International Exchange Lectures on Nanoscience and Nanotechnology B （INSD Summer School ）			1	Summer	15	Graduate School of Engineering Science	
290741	International Exchange Lectures on Nanoscience and Nanotechnology C （INSD Summer School ）			1	Summer	15	Graduate School of Engineering Science	
281559	Topics in Quantum Simulations			1	Spring	15	Graduate School of Engineering	
281503	Tutorials on Computational Nano-Materials Design I			1	Winter	15	Graduate School of Engineering	