Osaka University International Certificate Program Details

Course Name	Advanced Industrial Biotechnlogy
Course Affiliation	International Center for Biotechnology
Course Manager	Prof. Fujiyama Kazuhito, International Center for Biotechnology
Cooperative Schools	Graduate School of Science, Graduate School of Medicine, Graduate School of Pharmaceutical Sciences, 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	40

Course Objective	To gain wide fundamental knowledge about biotechnology which involves multi-disciplinary fields such as microbiology, genome engineering, biochemistry, molecular biology, cell engineering, analytical chemistry, biophysical chemistry, stem cell engineering and biochemical engineering To nurture the basic research ability for creating innovative technology to change society To become knowledgeable about intellectual properties and isses in biodiversity to benefit society To develop human resources who aim to establish the sustainable society with the ability of producing added value
Learning Goals	To understand the relationship between manufacturing science and technology, and biotechnology To understand the importance of basic science and core technology which support biotechnology To understand the issues in exploitation of bioresources using biotechnology To understand the biotechnology and industrial technology innovation To understang the relationship between biotechnology and modern society To understang the relationship between biotechnology and SDGs
Components	【Required Subjects】 Common Subject (Fall, Winter Term) : "OUICP-Fundamentals of Industrial Biotechnology" Common Subject (Spring, Summer Term) : "SDGs and Asia-Pacific Region Ⅱ" Practical Study Abroad (PSA) Subjects: "Laboratory Study Ⅰ,Ⅱ,Ⅲ" 【Elective Subjects】 "OUICP-Advanced Biotechnology"　Subjects offered by each graduated school are listed below.
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	Elective				
88B008	OUICP-Fundamentals of Industrial Biotechnology	1		Winter	15	International Exchange Subjects (GI)	
88A046	SDGs and Asia-Pacific Region Ⅱ	1		Spring, Summer	15	International Exchange Subjects (GI)	
88A026	（PSA）Laboratory study Ⅰ	1*		Spring, Summer, Winter	45	International Exchange Subjects (GI)	
88A027	（PSA）Laboratory study Ⅱ	1*		Spring, Summer, Winter	45	International Exchange Subjects (GI)	
88A028	（PSA）Laboratory study Ⅲ	1*		Spring, Summer, Winter	45	International Exchange Subjects (GI)	
88B009	OUICP-Advanced Biotechnology		1	Spring, Summer	15	International Exchange Subjects (GI)	
281025	ESP Frontier Chemistry A		1	Winter	15	Graduate School of Engineering	Only for short-term exchange students
281026	ESP Frontier Chemistry B		1	Spring, Summer	15	Graduate School of Engineering	Only for short-term exchange students
88A066	International Exchange Special Lecture 2(Bio-Inspired Chemical Engineering 1)		1	Winter	15	International Exchange Subjects (GI) / Graduate School of Engineering Science	
88A055	International Exchange Special Lecture 2(Bio-Inspired Chemical Engineering 2)		1	Winter	15	International Exchange Subjects (GI) / Graduate School of Engineering Science	
24S014	Current Topics Ⅰ		1	Spring, Summer, Winter	15	Graduate School of Science	
24S082	Natural Product Chemistry		1	Spring, Summer	15	Graduate School of Science	
24S083	Organic Biochemistry		1	Spring, Summer	15	Graduate School of Science	
25F004	Virology A		1	Winter	15	Graduate School of Medicine	Only for short-term exchange students
25F005	Virology B		1	Spring, Summer	15	Graduate School of Medicine	Only for short-term exchange students

*Participants have to choose two or three PSA courses