

2023 Osaka University International Certificate Program Details (Continuing)

26/3/2023

Course Name	Advanced Industrial Biotechnology		
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 ASEAN Campus Partner Universities ・ Working people who have received at least a bachelor's degree from the countries where ASEAN campuses are located.		
Requirements for completion	6 to 8 credits	Capacity	30
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 issues 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 understand the relationship between biotechnology and modern society To understand 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.		
Requirements	To have knowledge of biochemistry at the undergraduate level. Students will be selected after screening. We welcome students who are interested in biotechnology.		
Prior knowledge	It is recommended that the students have a bachelor level of knowledge regarding biochemistry.		
Special Note	All the courses in this program will be given in English.		

\*ASEAN Campus Partner Universities  
[https://www.osaka-u.ac.jp/en/international/action/asean/asean\\_cci\\_n](https://www.osaka-u.ac.jp/en/international/action/asean/asean_cci_n)

Components

Course Numbering Code	対象	Course Name	Credits			Course Term	Study Hours	Course Affiliation	Notes
			Common	PSA	Elective				
88B008	common	OUICP-Fundamentals of Industrial Biotechnology	1			winter	15	International Exchange Subjects (GI)	
88A021/88A022	common	SDGs and Asia-Pacific Region I / II	1			spring to summer	15	International Exchange Subjects (GI)	
88A026	common	(PSA) Laboratory study I		1*		spring to winter	45	International Exchange Subjects (GI)	
88A027	common	(PSA) Laboratory study II		1*		spring to winter	45	International Exchange Subjects (GI)	
88A028	common	(PSA) Laboratory study III		1*		spring to winter	45	International Exchange Subjects (GI)	
88B009	common	OUICP-Advanced Biotechnology			1	spring to summer	15	International Exchange Subjects (GI)	
281025	common	ESP Frontier Chemistry A			1	winter	15	Graduate School of Engineering	Only for short-term exchange students
281026	common	ESP Frontier Chemistry B			1	spring to summer	15	Graduate School of Engineering	Only for short-term exchange students
88A507	common	International Exchange Special Lecture 2(Bio-Inspired Chemical Engineering 1)			1	winter	15	International Exchange Subjects (GI)	Provided by Graduate School of Engineering Science
88A508	common	International Exchange Special Lecture 2(Bio-Inspired Chemical Engineering 2)			1	winter	15	International Exchange Subjects (GI)	Provided by Graduate School of Engineering Science
24S014	common	Current Topics I			1	fall to winter	15	Graduate School of Science	
24S082	common	Natural Product Chemistry			1	spring	15	Graduate School of Science	No classes for 2023
24S083	common	Organic Biochemistry			1	summer	15	Graduate School of Science	
24S077	common	Biomolecular Chemistry			1	winter	15	Graduate School of Science	No classes for 2023
25F004	common	Virology A			1	winter	15	Graduate School of Medicine	Only for short-term exchange students
25F005	common	Virology B			1	spring to summer	15	Graduate School of Medicine	Only for short-term exchange students

\*Participants have to choose two or three PSA courses