

**Course List and Graduation Requirements for International Programs,
Automotive Engineering Program - School of Engineering (for Undergraduates Enrolled in October 2022)**
(Major : Electrical Engineering, Electronics, and Information Engineering)

Course Category		Course	Term	Credits						
				No of Credits	Compulsory	Compulsory Elective	Elective	Minimum Requirement		
Common Basic Courses		Introduction to Skills for Academic Success	I	1	1			1		
		First Year Seminar	I	2	2			2		
		Language and Culture	Japanese	Fall, Spring	8	8			8	
			Japanese/Second Foreign Languages/English	Fall, Spring	6	6			6	
		Health and Sports Science	Health and Sports Science: Lecture	I	2			2	2	
			Exercise and Sports A	I	1			1		
			Exercise and Sports B	II	1			1		
		Data Science	Introduction to Data Science (Lecture)	II	1	1			1	
			Data Science Exercise B	II	1	1			1	
		Liberal Arts Courses	Contemporary Liberal Arts (CLA)	Introduction to Cultural Studies ★	Spring	2			2	4 consisting of 2 credits from CLA.
Introduction to Political Studies ★	III			2			2			
Introduction to Economics ★	Spring			2			2			
Introduction to Career Development Theory	Fall			2			2			
Art and Culture ★	Spring			2			2			
Gender Studies	III			2			2			
Disaster Prevention and Mitigation	III			2			2			
Biotechnology	III			2			2			
International Development	IV			2			2			
International Society in the Age of Globalization ★	Fall			2			2			
Global Liberal Arts	International Studies		IV	2			2			
	Exploration of Japan: From the Outside looking Inside		Spring	2			2			
	Go in Japanese Culture		Fall	2			2			
	Studium Generale A		Fall	2			2			
	Studium Generale B		Spring	2			2			
	Introduction to Intercultural Competence		Fall	2			2			
	Immigration in Japan		IV	2			2			
	Content courses taught in Japanese		-	-			-			
	Summer Camp for General Academic Skills		VI	2			2			
	Basic Courses in Natural Sciences			Calculus I	I	2	2			
Calculus II		II		2	2					
Linear Algebra I		I		2	2					
Linear Algebra II		II		2	2					
Complex Analysis		III		2	2					
Fundamentals of Physics I		I		2	2			8		
Fundamentals of Physics II		II		2	2					
Fundamentals of Physics III		II		2	2					
Laboratory in Physics		III		2	2			4		
Fundamentals of Chemistry I		I		2	2					
Fundamentals of Chemistry II		II		2	2					
Fundamentals of Biology I		I		2			2			
Fundamentals of Biology II		II		2			2			
Fundamentals of Earth Science I		I		2			2			
Fundamentals of Earth Science II		II		2			2			
Laboratory in Chemistry		II		2			2			
Laboratory in Biology		II		2			2			
Sum for Liberal Arts and Sciences Courses				41	0	6	47			
Basic Specialized Courses		Compulsory Courses ①		Computer Software I	I	2	2			36.5
				Mathematics I and Tutorial	III	4	4			
	Mathematics II and Tutorial		III	4	4					
	Analytical Dynamics and Tutorial		III	2.5	2.5					
	Electrical Circuits Engineering		III	2	2					
	Mechanics of Materials and Tutorial		III	3	3					
	Thermodynamics and Tutorial		III	2.5	2.5					
	Electronic Circuits		IV	2	2					
	Electricity and Magnetism		IV	2	2					
	Metallic and Ceramic Materials		IV	2	2					
	Fluid Mechanics I and Tutorial		IV	2.5	2.5					
	Vibration Engineering and Tutorial		IV	3	3					
	Control Engineering and Tutorial		V	3	3					
	Scientific Measurements	V	2	2						
	Elective Courses ②	Fundamental Physics Tutorial I a	I	1			1	6		
		Fundamental Physics Tutorial I b	I	1			1			
		Fundamental Physics Tutorial II a	II	1			1			
		Kinematics of Machines	III	2			2			
		Solid Mechanics	IV	2			2			
		Automobile Chemical Systems I	V	2			2			
Material Processing		V	2			2				
Compulsory Courses ③	Introduction to Automotive Engineering	I	2	2			26			
	Computer Software II	IV	2	2						
	Introduction to Electrical, Electronic and Information Engineering for Automobiles	IV	2	2						
	Vehicle Structures	IV	2	2						
	Design Practice I	IV	1	1						
	Automobile Engineering Laboratory II	VI	2	2						
	Automobile Engineering Laboratory I	V	2	2						
	Design Practice II	V	1	1						
	Power Electronics	V	2	2						
	Graduation Research A	VII	5	5						
Graduation Research B	VIII	5	5							
Elective Courses ④	Mathematics Tutorial I a	I	1			1	17.5			
	Mathematics Tutorial I b	I	1			1				
	Mathematics Tutorial II a	II	1			1				
	Mathematics Tutorial II b	II	1			1				
	Analytical Chemistry	V	2			2				
	Urban Environment and Transportation System	V	2			2				
	Numerical Analysis	V	2			2				
	Heat Transfer Engineering	VI	2			2				
	Tours in Industrial Plants A	IV	0.5			0.5				
	Tours in Industrial Plants B	V	0.5			0.5				
	Training in Industrial Plants	VI	1			1				
	Automobile Chemical Systems II	VI	2			2				
	Organic Materials	VII	2			2				
	Environment and Recycling	VI	2			2				
	Intelligent Transportation Systems	VI	2			2				
	Electronic Devices in Automobiles	VI	2			2				
	Vehicle Engines and New Propulsion Systems	V	2			2				
Vehicle Dynamics and Control	VI	2			2					
Vehicle Safety	VII	2			2					
Vehicle Design	VII	2			2					
Related Specialized Courses	Elective Courses ⑤	Scientific and Technical Japanese	VI	2			2	4		
		Business Japanese	VII	2			2			
		Outline of Engineering III	VII	2			2			
		View of Advanced Electrical, Electronic and Information Engineering	VII	2			2			
		Introduction to Civil Engineering and Architecture	VII	2			2			
Sum for Courses in Specialized Fields				62.5	0	27.5	90			
Total Sum				103.5	0	33.5	137			

*Confirm the prerequisite for each subject with the syllabus.

★Some of the courses on this column are offered in every other year. Confirm the offering term with the "Liberal Arts and Sciences Class Timetable" of the said year.

**Graduation Requirements for International Programs,
Automotive Engineering Program - School of Engineering (for Undergraduate)
(Major : Electrical Engineering, Electronics, and Information Engineering)**

1. Liberal Arts and Sciences Courses: A combined total of at least 47 credits must be acquired.

(1) Common Basic Courses:

A total of at least 21 credits must be acquired, consisting of 1 credit of Introduction to Skills for Academic Success, 2 credits of First Year Seminar, 14 credits from "Language and Culture", at least 2 credits each of Lecture and Exercise for Health and Sports Science, and 1 credit each of Lecture and Exercise for Data Science.

(2) Liberal Arts Courses:

A total of 4 credits must be acquired, consisting of 2 credits from Contemporary Liberal Arts (Humanities and Social Science and Interdisciplinary/Integration of Arts and Sciences), and 2 credits from Global Liberal Arts Courses or Contemporary Liberal Arts (Humanities and Social Science and Interdisciplinary/Integration of Arts and Sciences) or Problem/Project Based Learning Seminar.

(3) Basic Courses in Natural Sciences:

A total of at least 22 credits must be acquired, consisting a total of at least 10 credits from Calculus I, II, Linear Algebra I, II or Complex Analysis, a total of 8 credits from Fundamentals of Physics I, II, III and Laboratory in Physics, a total of 4 credits from Fundamentals of Chemistry I and II.

2. Courses in Specialized Fields: A combined total of at least 90 course credits must be acquired from these course categories.

(1) Compulsory Courses:

A total of 62.5 course credits must be acquired, consisting of a total of 36.5 credits from Compulsory Basic Specialized Courses ① and a total of 26 credits from Compulsory Specialized Courses ③.

(2) Elective Courses:

A total of at least 27.5 course credits must be acquired, consisting of a total of at least 6 course credits from Elective Basic Specialized Courses ②, a total of at least 17.5 course credits from Elective Specialized Courses ④, and a total of at least 4 course credits from Elective Related Specialized Courses ⑤.

**Advancement Requirements for International Programs,
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Assesment Year	Course Categories	Minimum Courses/Credits Required	Requirements
At the End of the Second Year	Common Basic Courses, Liberal Arts Courses, Basic Courses for Specialized Fields	40 credits	1. Common Basic Courses Must earn a total of at least 12 "Language and Culture" credits from Japanese, English or Second Foreign Languages. *Please note that if you choose Second Foreign Lanugages for Compulsory Elective (Japanese/English/Second Foreign Languages) credits, you must obtain at least 4 credits in each language from German, French, Russian, Chinese, Spanish or Korean for graduation. 2. Basic Courses in Natural Sciences Must earn at least 18 credits from Basic Courses in Natural Sciences.