Course List and Graduation Requirements for International Programs, Automotive Engineering Program - School of Engineering (for Undergraduates Enrolled in October 2023)

(Major : Electrical Engineering, Electronics, and Information Engineering)

Course Category			Course	Term	Credits				
					No of Credits	Compulsory	Compulsory Elective	Elective	Minimum Requirement
Liberal Arts and Sciences Courses	Common Basic Courses	Introduction to Skills for Academic Success	Introduction to Skills for Academic Success	I	1	1			1
		First Year Seminar	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
		Partial Sum							*21*
	Liberal Arts Courses	Contemporary Liberal Arts (CLA) Humanities and Social Sciences	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	
		Contemporary Liberal Arts (CLA) Interdisciplinary/Integration of Arts and Sciences	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	
		Global Liberal Arts	International Development	IV	2			2	
			International Society in the Age of Globalization ★	Fall	2			2	
			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	–	–			–	
		Problem/Project Based Learning Seminar	Summer Camp for General Academic Skills	VI	2			2	
	Basic Courses for Specialized Fields (Basic Courses in Natural Sciences)		Calculus I	I	2	2			10
			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			
			Fundamentals of Chemistry I	I	2	2			4
			Fundamentals of Chemistry II	II	2	2			
			Partial Sum						*22*
Sum for Liberal Arts and Sciences Courses									**47**
Courses in Specialized Fields	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	
	Specialized Courses	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	
			International Lectures on Advanced Technology and Trends in Automobile Engineering U1	VI	1			1	
			International Lectures on Advanced Technology and Trends in Automobile Engineering U3	VI	3			3	
Sum for Courses in Specialized Fields						62.5	0	27.5	**90**
Total Sum									**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 47credits 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 for Specialized Fields(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,
Automotive Engineering Program - School of Engineering (for Undergraduate)
(Major : Electrical Engineering, Electronics, and Information Engineering)

Assesment Year	Course Categories	Minimum Courses／Credits Required	Requirements	Students unable to advance to the next year
At the End of the Second Grade	Commom Basic Courses Liberal Arts Courses Basic Courses for Specialized Fields	40 credits	1.Commom Basic Courses Must acquire a total of at least 12"Language and Culture"credits from Japanese, English or Second Foreign Language. *Please note that if you choose Second Foreign Languages 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 acquire at least 18 credits from Basic Courses in Natural Sciences(*from the courses required for graduation above) .	1. Remain in the second year. 2. Must take no longer than 6 years to complete their second year.[Duration of enrollment (8 years)] minus [third to forth years(2 years)] 3. Students unable to advance to the next year within the 6-year limit stated in 2. above will be expelled from the school.