3. Specialized Subjects

	Subjects			International Mechanical and Aerospace Engineering International Mechanical and Aerospace Engineer Course (April enrollment) (*3) Course (October enrollment) (*3)							
						[For subjects left]		[For subjects left]			
Subject Types (*1)	Subjects labeled by ● are provided in English		tal		2)	☆: Required	2)	☆: Required			
ct Typ	Subjects labeled by ■ are provided in Japanese/English		Hours in total	ts	ster(*	○: Elective Blank: Auditable Subject	Semester ^(*2)	O: Elective Blank: Auditable Subject			
Subje			Hour	Credits	Semester ^(* 2)	(not credits for graduation)	Seme	(not credits for graduation)			
М	Introduction to Mechanical and Aerospace Engineering		30	2	1	0	3				
En	Introduction of Engineering Chemistry		30	2	1	0	3				
En	Exercises in Mathematics and Physics I	•	30	1	2	☆	2	☆			
En	English in Technology I		30	1	1	0	3	0			
En	Exercises in Mathematics and Physics II	•	30	1	3	☆	3	☆			
En	Practice of Information Processing	•	30	1	4	☆	4	☆			
En	Team-based Engineering for Invention	•	30	1	2	0	4 • 6				
M	Mathematics I	•	30	2	3		3				
M	Mathematics II	•	30	2	3	0	3	0			
M	Numerical Analysis	•	30	2	3	O [Semi-elective ①]	3	[Semi-elective ①]			
M	Mechanics	•	30	2	3	O [[551111 51561117 @]]	3	0 [[53 5.856.1.7 @]			
М	Exercises in Computer-Aided Problem Solving	•	30	2	3		3				
M	Mechanics of Materials I	•	30	2	4	<u> </u>	4				
M	Fluid Mechanics I	•	30	2	4	O [Semi-elective ②]	4	[Semi-elective ②]			
М	Mechanics of Materials II	•	30	2	4	O / [SSIIII SISSIII S S]	4				
En	Academic Writing		30	1	3	0	3				
M	Quantum Mechanics	•	30	2	4		4				
M	Mechanical Vibrations I	•	30	2	4	O [Semi-elective ③]	4	[Semi-elective 3]			
М	Thermodynamics I	•	30	2	4		4				
М	Control Engineering I	•	30	2	4	/	4				
М	Quantum Mechanics A		30	2	4		4				
M	Mechanical Vibrations		30	2	4		4				
М	Thermodynamics A		30	2	4		4				
М	Physical Chemistry of Interface		30	2	4		4				
М	Fundamentals of Control Engineering		30	2	4		4				
М	Electromagnetics	•	30	2	5	\circ	5	\circ			
М	Thermodynamics II	•	30	2	5	○ [Semi-elective ④]	7	[Semi-elective 4]			
М	Materials Science I	•	30	2	4	Seini-elective (*)	4	[Semi-elective �]			
М	Materials Science II	•	30	2	5	0	5	\circ			
М	Electromagnetics A		30	2	4		4				

	Subjects					Techanical and Aerospace Engineering enrollment) (*3)		International Mechanical and Aerospace Engineerin Course (October enrollment) (*3)		
					Zourse (ubjects left]	Sourse ([For subjects left]	
Subject Types (*1)	Subjects labeled by ● are provided in English		al		_		equired		☆: Required	
t Typ.	Subjects labeled by ■ are provided in Japanese/English		Hours in total		Semester ^(*2)		ective : Auditable Subject	Semester ^(*2)	O: Elective	Subject
ubjec	Subjects moded by a me provided in supuness English		Iours	Credits	emest		: Auditable Subject redits for graduation)	emest	Blank: Auditable (not credits for g	
M	Thermodynamics B		30	2	4		,	4		
M	Materials Science A		30	2	4			4		
М	Materials Science B		30	2	4			4		
M	Computer Seminar I	•	30	1	4 ^(*4)	☆		4~5	☆	
M	Mechanical and Aerospace Engineering Seminar I	•	60	2	4	☆		4	☆	
М	Design and Drawing I	•	30	1	4 ^(*4)	☆		5	☆	
M	Computer Seminar		30	1	4			4		
М	Design and Drawing		30	1	4	†		4	·········	
M	Mechanical and Aerospace Engineering Seminar A1		30	1	4	†		4		
М	Introduction to Quantum Science and Energy Systems		30	2	4	<u> </u>		4		
М	Mechanical and Aerospace Engineering Seminar A		30	2	4			4		
М	Introduction to Energy and Environmental Technology		30	2	4			4		
М	Science Technology and Industry in Japan (Supplemental 1)	•	30	1	4	0		4	0	
М	Mechanical Vibrations II	•	30	2	5	0	[Semi-elective 4]	5	O [Semi-	elective 4]
М	Manufacturing Engineering and Technology I	•	30	2	5	0	\setminus	5	\circ	
М	Fundamentals of Information Science I	•	30	2	5	0	[Semi-elective ⑤]	5	0	
М	Electrical and Electronic Circuit I	•	30	2	5	0		5	0	
М	Manufacturing Engineering and Technology II	•	30	2	5	0		5	0	
М	Electrical and Electronic Circuit II	•	30	2	7	0	[Elective ⑥]	7	O [Semi-	elective [5]
М	Fundamentals of Information Science II	•	30	2	5	0	\setminus	5	0	
М	Control Engineering II	•	30	2	5	0	[Semi-elective ⑤]	5	0	
М	Fluid Mechanics II	•	30	2	5	0	/	5		
М	Heat Transfer	•	30	2	7	0	[Elective ©]	7	0	
М	Heat and Mass Transfer	•	30	2	8	0	_	8	(Electiv	re ⑥]
М	Theory of Elasticity	•	30	2	5	0	[Semi-elective ⑤]	5	<u> </u>	
М	Space Engineering	•	30	2	7	0	[Elective ©]	7	[Semi-	elective ⑤]
М	Biomechanical Engineering	•	30	2	7	0		7	o /	
M	Resource Recycling		30	2	5	ļ		5		
M	Fundamentals of Information Science		30	2	5	ļ		5		
M	Electrical and Electronic Circuit		30	2	5	ļ		5	ļ	
М	Quantum Mechanics B		30	2	5	<u></u>		5		

	Subjects					Techanical and Aerospace Engineering		nternational Mechanical and Aerospace Engineering Jourse (October enrollment) (*3)				
					Course (ubjects left]	Course ([For subjects left]		
es (*1)	Subjects labeled by ● are provided in English		al				equired			equired		
тТур	Subjects labeled by are provided in Japanese/English		Hours in total	s	Semester ^(*2)	1	ective · Auditable Subject	ter ^{(*2}		ective : Auditable Subject		
Subject Types (*1)			Hours	Credits	Semes	Blank: Auditable Subject (not credits for graduation)		Semester ^(*2)		redits for graduation)		
М	Electromagnetics B		30	2	5			5				
М	Kinetics in Reactions		30	2	5			5				
М	Transform Phenomena		30	2	5			5				
M	Radiological Engineering		30	2	5			5				
М	Environmental Earth Science		30	2	5			5				
M	Environmental System I		30	2	5			5				
М	Laboratory Experiment I	•	30	1	5 ^(*4)	☆		7	☆			
М	Mechanical and Aerospace Engineering Seminar II	•	30	1	5~6	☆		5~6	☆			
М	Production Process Practice	•	30	1	5 ^(*4)	☆		7	☆			
М	Mechanical and Aerospace Engineering Seminar A2		30	1	5			5				
М	Laboratory Experiment A		30	1	5			5				
М	Mechanical and Aerospace Engineering Seminar B		30	1	5~6			5~6				
М	Computer Seminar II	•	30	1	5 ^(*4)	0	[Semi-elective ⑤]	7	0	[Semi-elective ⑤]		
М	Multidisciplinary Internship (Supplemental 1)	•	30	1	5	0		5	0			
М	Strength and Fracture Materials	•	30	2	8	0	[Elective ⑥]	8	0	[Elective ©]		
М	Computational Mechanics of Materials	•	30	2	6	0	[Semi-elective ⑤]	6	0	[Semi-elective 5]		
М	Computational Fluid Dynamics	•	30	2	8	0	[Elective ©]	8	0	[Elective ©]		
М	Compressible Fluid Dynamics	•	30	2	8	0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	8	0			
М	Machine Design I	•	30	2	6	0	[Semi-elective ⑤]	6	0	[Semi-elective 5]		
М	Machine Design II	•	30	2	8	0	[Elective ⑥]	8	0	[Elective ©]		
М	Robotics I	•	30	2	6	0	\setminus	6	0	\setminus		
М	Robotics II	•	30	2	6	0	[Semi-elective ⑤]	6	0			
М	Measurement and Instrumentation I	•	30	2	6	0	[]	6	0	[Semi-elective ⑤]		
М	Measurement and Instrumentation II	•	30	2	6	0	/	6	0			
М	Energy Conversion System Engineering	•	30	2	7	0	[Elective ©]	7	0	/		
М	Aircraft Design	•	30	2	8	0	/[Ercenve @]	8	0	[Elective ©]		
М	Mechanical Properties and Fracutre of Materials		30	2	6			6				
М	Mathematical Fluid Dynamis		30	2	6			6				
М	Fundamental of Measurement and Instrumentation		30	2	6			6				
М	Nuclear Energy Physics		30	2	6			6				
М	Radiochemistry		30	2	6			6				

	Subjects			International Mechanical and Aerospace Engineering Course (April enrollment) (*3) International Mechanical and Aerospace Engineering Course (October enrollment) (*3)							
					Course ([For subjects left]			[For subjects left]		
s (* 1)	Subjects labeled by ● are provided in English		_			☆: Re	equired		☆: Required		
Subject Types (*1)			Hours in total		Semester ^(*2)	l	ective	Semester ^(*2)	O: Elective		
oject	Subjects labeled by ■ are provided in Japanese/English		urs ir	Credits	neste		: Auditable Subject	neste	Blank: Auditable Subject		
Sul			Ĥ.	Cre	Sei	(not c	redits for graduation)	Sei	(not credits for graduation)		
M	Neutron Transport		30	2	6			6			
М	Computational Mechanics		30	2	6			6			
М	Environmental System II		30	2	6			6			
М	Environmental Materials Science		30	2	6			6			
М	Geomechanics		30	2	6			6			
М	Energy and Resources		30	2	6			6			
М	Laboratory Experiment II	•	30	1	6	☆		6	☆		
M	Design and Drawing II	•	30	1	6(*4)	☆		7	☆		
M	Laboratory Experiment B		30	1	6	ļ		6			
En	Information Mathematics		30	2	6	0	\	6			
En	Automata and Formal Languages		30	2	6	0		6			
En	Digital Computing		30	2	6	0	[Elective ⑤]	6	[Elective ⑤]		
En	Algorithms and Data Structures		30	2	6	0	[23337 0]	6	0 [2000000]		
En	Information and Communication Theory		30	2	6	0		6			
En	Fundamental Mathematics for Machine Learning and Data Sciences		30	2	6	0		6	<u> </u>		
M	Tribology	•	30	2	7	0	\	7			
En	Introduction to Electronic Engineering		30	2	7	0		7			
En	Introduction to Materials Science		30	2	7	0		7	0		
En	Introduction to Civil Engineering and Architecture		30	2	7	0		7	0		
En	Introduction to Intellectual Property Right		15	1	7	0	[Elective ⑥]	7	[Elective ©]		
En	Introduction to Medical Devices		30	2	7	0		7	0		
En	Engineering Ethics		15	1	7	0		7	0		
En	English in Technology II		30	1	7	0		7	0		
En	Artificial Interlligence		30	2	7	0		7			
M	Combustion Engineering	•	30	2	7	0	/	7			
M	Radiation Protection and Safety Engineering		30	2	7	ļ		7			
M	Fuels and Materials of Nuclear Energy Systems		30	2	7			7			
M	Reservoir Engineering		30	2	7	ļ		7			
М	Material Science for Energy		30	2	7	ļ		7			
М	Nuclear Chemical & Environment Engineering		30	2	8	ļ		8			
М	Special Lecture of Energy and Environmental					<u> </u>					

	Subjects						chanical and Aerospace Engineering rollment) (*3)	echanical and Aerospace Engineering		
					Course (For su	Course (October enrollment) (*3) [For subjects left]	
es (*1)	Subjects labeled by ● are provided in English		tal		2)	☆: Required		3		equired
Subject Types (*1)	Subjects labeled by ■ are provided in Japanese/English		Hours in total	Credits	ne		ctive Auditable Subject edits for graduation)	Semester ^(*2)	O: Elective Blank: Auditable Subject (not credits for graduation)	
	Plant Visit					0	\	32	0	\
М	Industrial Practice									
М	Special Seminar and Practice					0			0	
M	Special Lectures I (Supplemental 2)					0	[Elective ⑥]		0	[Elective ⑥]
M	Special Lectures II					0			0	
En	Overseas Study I ~ IV									
En	Institute of Engineering Education Special Lectures					0	/		0	
М	Graduation Thesis			6	6 7 8	☆		7 8 9	☆	

^{*1.} In the "Subject Types" column, "En" indicates Engineering common subjects, "M" indicates Mechanical & Aerospace Engineering subjects.

- *2. Whether a subject is a semester subject or a quarter subject depends on subject and year. Please check the timetable of the year.
- *3. Only students admitted through the Global Entrance Examination or Future Global Leadership Program Entrance Examination will be assigned to the International Mechanical and Aerospace Engineering Course (IMAC-U)
- *4. April enrollment students must take Japanese taught classes.

Supplemental 1 Class offered for IMAC-U

Supplemental 2 Automotive Engineering etc.,