

Space Engineering International Course (SEIC) Requirements 2021

【Master's Program / Degree requirements】

Subject category		SEIC / Degree requirements	
Liberal Arts Subjects group	(B)Advanced Liberal Arts Subjects	Compulsory	<i>Space Environment Testing Workshop</i> 1 credit <i>Space Systems PBL I・II</i> 2 credits
	(C)Advanced Language Subjects		
	* (D)Practical Training Subjects	Elective Compulsory	<i>Japanese for Beginners</i> or <i>English XA</i> 1 credit
Specialized Subjects group	(G)Special Seminar Subjects	Compulsory	<i>Thesis Research for Degree</i> 2 credits <i>Special Laboratory Work</i> 1 credit
	(E)Mathematical information subject (F)Specialized Subjects	Compulsory	<i>Advanced Embedded Systems</i> 2 credits
		Elective	30 credits minimum from SEIC subject table including all the Compulsory subjects and 14 credits minimum from Major course subjects.
		Elective Compulsory	Sub-Major Module S1 + S2 = 6 credits minimum (S1, S2: 2credits minimum each)
Required credits (total amount)		30 credits minimum	

* Master students can earn upto 4 credits from (D)Practical Training Subjects. If you earn additional credits, they are not counted as Degree requirements, but they will be written on your transcript.

Total required credits for Master Degree: 30 credits minimum from Master's Program SEIC Subjects
Including 14 credits minimum from Major Course Subjects,
6 credits minimum from Sub-Major Module,
and Compulsory and Elective Compulsory Subjects.

【Doctoral Program / Degree requirements】

Subject category	SEIC / Degree requirements		
(A)Interdisciplinary Seminars (B)Advanced Liberal Arts Subjects (C)Advanced Language Subjects (E)Mathematical information subject (F)Specialized Subjects	6 credits minimum from Doctoral Program SEIC subjects > Credits previously have been earned during the Master's program are ineligible. > Student who enrolled to SEIC from Doctoral Program is required to take <i>Japanese for Beginners</i> or <i>English X</i> . 1 credit		
* (D)Practical Training Subjects	Elective Compulsory	<i>Internship (Overseas type)</i>	2 credits
		<i>Internship (Company type)</i>	
		<i>Field Research Project</i>	
		<i>Special Studies</i>	
(G)Special Seminar Subjects	Compulsory	<i>Project Research I (Specialty-deepening type)</i>	1 credit
		<i>Project Research II (Specialty-broadening type)</i>	1 credit
Required credits (total amount)		10 credits minimum	

* Doctoral students can earn upto 2 credits from (D)Practical Training Subjects. If you earn additional credits, they are not counted as Degree requirements, but they will be written on your transcript.

Total required credits for Doctoral Degree: 10 credits minimum from Doctoral Program SEIC Subjects
Including Compulsory and Elective Compulsory Subjects.

Space Engineering International Course (SEIC) Curriculum 2021

NOTE:

- Elective subject
- (☆) Elective Compulsory subject
- (★) Compulsory subject
- Major Course Subject: Master students must take minimum 14 credits from your own major course subjects.

* As for the gray cell subjects, no registration required via LiveCampus. Students should take those subjects based on their supervisor's advice. After finishing the course, the lecturer or the supervisor will submit an evaluation report to Graduate School Section.

(A) Interdisciplinary Seminars (融合科目)

Subject title	Lecturer	Credit	Term 1st and 2nd Academic Year				Doctoral Program SEIC subjects	Master's Program SEIC Subjects	Note
			1st Semester		2nd Semester				
			1Q	2Q	3Q	4Q			
Interdisciplinary Seminar of Engineering A 工学融合科目A	Primary supervisor	1		✓			○		
Interdisciplinary Seminar of Engineering B 工学融合科目B	Primary supervisor	1		✓			○		

(B) Advanced Liberal Arts Subjects (上級教養科目)

N/A

(C) Advanced Language Subjects (上級語学科目)

Subject title	Lecturer	Credit	Term 1st and 2nd Academic Year				Doctoral Program SEIC subjects	Master's Program SEIC Subjects	Note
			1st Semester		2nd Semester				
			1Q	2Q	3Q	4Q			
English XA 英語XA	RUXTON Ian	1	✓				○(☆)	Elective compulsory (Students must take either one of them)	
Japanese for Beginners 日本語入門	ISHIKAWA Tomoko	1			✓		○(☆)		

1. English XA is for Japanese students only.
2. Students must take English XA or Japanese for Beginners when they enroll in SEIC Master's Program or Doctoral Program. Those who took the subject while in Master's Program, and move up to Doctoral Program cannot take the subject again.
3. Japanese for Beginners is only for international students of SEIC. Depending on students' Japanese level, they may take Japanese I or Japanese II instead.

(D) Practical Training Subjects (実践実習科目)

Subject title	Lecturer	Credit	Term 1st and 2nd Academic Year				Doctoral Program SEIC subjects	Master's Program		Note
			1st Semester		2nd Semester			SEIC Subjects	Sub-Major Module	
			1Q	2Q	3Q	4Q				
Space Environment Testing Workshop 宇宙環境試験ワークショップ	CHO Mengu	1		✓			○	○(★)	S2	Compulsory for Master students For Doctoral students: see the note * 2
Space Systems PBL I 宇宙システムPBL I	CHO Mengu	1			✓		○	○(★)	S2	
Space Systems PBL II 宇宙システムPBL II	CHO Mengu	1				✓	○	○(★)	S2	
Advanced International Collaborative Learning 大学院国際協働演習	Please consult with your supervisor	1		✓			/	○		* 1
Advanced Overseas Study I 大学院海外研修 I		1		✓			/	○		
Advanced Overseas Study II 大学院海外研修 II		2		✓			/	○		
Advanced Overseas Internship I 大学院海外インターンシップ実習		1		✓			/	○		
Advanced Overseas Internship II 大学院海外インターンシップ実習		2		✓			/	○		
Advanced Domestic Internship I 大学院国内インターンシップ実習		1		✓			/	○		
Advanced Domestic Internship II 大学院国内インターンシップ実習		2		✓			/	○		
Practical experience in companies or organizations I 学外実習 I		1		✓			/	○		
Practical experience in companies or organizations II 学外実習 II		2		✓			/	○		
Lectures arranged by external organizations I 学外演習 I		1		✓			/	○		
Lectures arranged by external organizations II 学外演習 II		2		✓			/	○		

Internship (Overseas type) インターンシップ(国際派遣型)	Please consult with your supervisor	2	✓	○(★)	/	/	} Elective compulsory subject for Doctoral students
Internship (Company type) インターンシップ(企業派遣型)		2	✓	○(★)			
Field Research Project 学外研修		2	✓	○(★)			
Special Studies 特別演習		2	✓	○(★)			

1. Master students can earn only 1 credit from the *1 subjects to be counted as Degree requirements. If you earn more credits, they are not counted as Degree requirements, but they will be written on your transcript.

2. Doctoral students can take the * 2 subjects, but the credits cannot be counted as Degree requirements. They will be written on your transcript though. Doctoral students should consult with their supervisor before registering for those subjects.

(E) Mathematical information subject (数理情報科目)・・・ Please see the attached sheet.

(F) Specialized Subjects (専門科目)・・・ Please see the attached sheet.

(G) Special Seminar Subjects (特別演習科目)

Subject title	Lecturer	Credit	Term				Doctoral Program SEIC subjects	Master's Program SEIC Subjects	Note
			1st and 2nd Academic Year						
			1st Semester		2nd Semester				
1Q	2Q	3Q	4Q						
Thesis Research for Degree 工学講究	Primary supervisor	2	✓				/	○(★)	Compulsory for Master students
Special Laboratory Work 工学特別実験	Primary supervisor	1	✓					○(★)	Compulsory for Master students
Project Research I (Specialty-deepening type) プロジェクト研究 I (専門深化型)	Primary supervisor	1	✓				○(★)	/	Compulsory for Doctoral students
Project Research II (Specialty-broadening type) プロジェクト研究 II (専門拡張型)	Vice supervisor	1	✓				○(★)		Compulsory for Doctoral students
Project Research III (Specialty-broadening type) プロジェクト研究 III (専門拡張型)	Vice supervisor	1	✓				○		
Project Research IV (Specialty-broadening type) プロジェクト研究 IV (専門拡張型)	Vice supervisor	1	✓				○		

Space Engineering International Course (SEIC) Curriculum 2021

Please refer to "SEIC requirements 2021" and consult with your supervisor for choosing subjects you take.

(E) Mathematical information subject (数理情報科目)

Major Course Subject

Subject title	Lecturer	Credit	Term 1st and 2nd Academic Year				Doctoral Program SEIC subjects	Master's Program											Note	
			1st Semester		2nd Semester			SEIC subjects	Architecture	Civil Engineering	Control Engineering	Mechanical Engineering	Mechanical and Space systems Engineering	Electrical and Space systems Engineering	Electrical Engineering	Electronic Engineering	Applied Chemistry	Material Science and Engineering		Sub-Major Module
			1Q	2Q	3Q	4Q														
Advanced Embedded Systems 組み込みシステム特論	ASAMI Kenichi	2		✓			○	○(★)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Compulsory for Master course students	

(F) Specialized Subjects (専門科目)

Major Course Subject

Subject title	Lecturer	Credit	Term 1st and 2nd Academic Year				Doctoral Program SEIC subjects	Master's Program											Note		
			1st Semester		2nd Semester			SEIC subjects	Architecture	Civil Engineering	Control Engineering	Mechanical Engineering	Mechanical and Space systems Engineering	Electrical and Space systems Engineering	Electrical Engineering	Electronic Engineering	Applied Chemistry	Material Science and Engineering		Sub-Major Module	
			1Q	2Q	3Q	4Q															
Advanced Mechanics of Materials 材料力学特論	YAMAGUCHI Eiki	2				✓	○	○	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
Advanced Architectural Structure 建築構造特論	CHEN Pei-Shan	2				✓	○	○	<input type="checkbox"/>												
High-speed Gas Dynamics 高速気体力学特論	TSUBOI Nobuyuki	2				✓	○	○					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>		
Advanced Space Robotics 宇宙ロボティクス特論	NAGAOKA Kenji	2	✓				○	○				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Advanced High Velocity Impact Engineering 高速衝突工学特論	AKAHOSHI Yasuhiro	2				✓	○	○				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>			
Advanced Space Dynamics スペースダイナミクス特論	HIRAKI Koji	2				✓	○	○	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Heat Transfer 熱輸送特論	MIYAZAKI Koji	2	✓				○	○	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>		
Introduction to Satellite Engineering 衛星工学入門	CHO Mengu	2				✓	○	○	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Satellite Power System I 衛星電力システム特論 I	IMAIZUMI Mitsuru NOZAKI Yukishige OKUMURA Teppei	1				✓	○	○					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				S1	
Satellite Power System II 衛星電力システム特論 II	CHO Mengu NAITOU Hitoshi KUSAWAKE Hiroaki	1				✓	○	○					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				S1	
Space Environment Testing 宇宙環境試験	CHO Mengu	2	✓				○	○	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		S1	
Space Systems Engineering I 宇宙システム工学 I	MIHARA Shoichiro	1				✓	○	○	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
Space Systems Engineering 宇宙システム工学 II	MIHARA Shoichiro	1				✓	○	○	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
Spacecraft Environment Interaction Engineering 宇宙環境技術特論	CHO Mengu AKAHOSHI Yasuhiro TOYODA Kasuhiro KIMOTO Yugo KOGA Seiichi	2		✓			○	○					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		S1	
Energy Conversion and Plasma Physics エネルギー工学特論	TOYODA Kazuhiro	2				✓	○	○					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S1	
Advanced Space Environment Science 宇宙環境科学特論	KITAMURA Kentaro	2		✓			○	○					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>		S1	
Advanced Rocket Propulsion Engineering ロケット推進工学特論	KITAGAWA Koki	2		✓			○	○					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>		
Development Project-Design I 開発プロジェクト(設計) I	Please consult with your supervisor	1	(✓)			(✓)	/	○												S2	
Development Project-Design II 開発プロジェクト(設計) II		1		(✓)		(✓)	/	○													S2
Development Project-Fabrication I 開発プロジェクト(製作) I		1	(✓)			(✓)	/	○													S2
Development Project-Fabrication II 開発プロジェクト(製作) II		1		(✓)		(✓)	/	○													S2
Development Project-Operation I 開発プロジェクト(運用) I		1	(✓)			(✓)	/	○													S2
Development Project-Operation II 開発プロジェクト(運用) II		1		(✓)		(✓)	/	○													S2

*2 Please consult with your supervisor and the professor in charge of the course about taking these subjects.

Comprehensive Subject of Practical Engineering A 実践工学総合科目A	Please consult with your supervisor	1	(✓)	(✓)	(✓)	(✓)	○	○												Irregular, special courses. It will be announced by email when it is provided.
Comprehensive Subject of Practical Engineering B 実践工学総合科目B		1	(✓)	(✓)	(✓)	(✓)	○	○												
Comprehensive Subject of Practical Engineering C 実践工学総合科目C		1	(✓)	(✓)	(✓)	(✓)	○	○												
Comprehensive Subject of Practical Engineering D 実践工学総合科目D		1	(✓)	(✓)	(✓)	(✓)	○	○												
Comprehensive Subject of Practical Engineering E 実践工学総合科目E		2	(✓)	(✓)	(✓)	(✓)	○	○												
Comprehensive Subject of Practical Engineering F 実践工学総合科目F		2	(✓)	(✓)	(✓)	(✓)	○	○												
Comprehensive Subject of Practical Engineering G 実践工学総合科目G		2	(✓)	(✓)	(✓)	(✓)	○	○												

1. Students cannot take several classes of "Development Project (Design/Fabrication/Operation) I, II" in the same quarter.