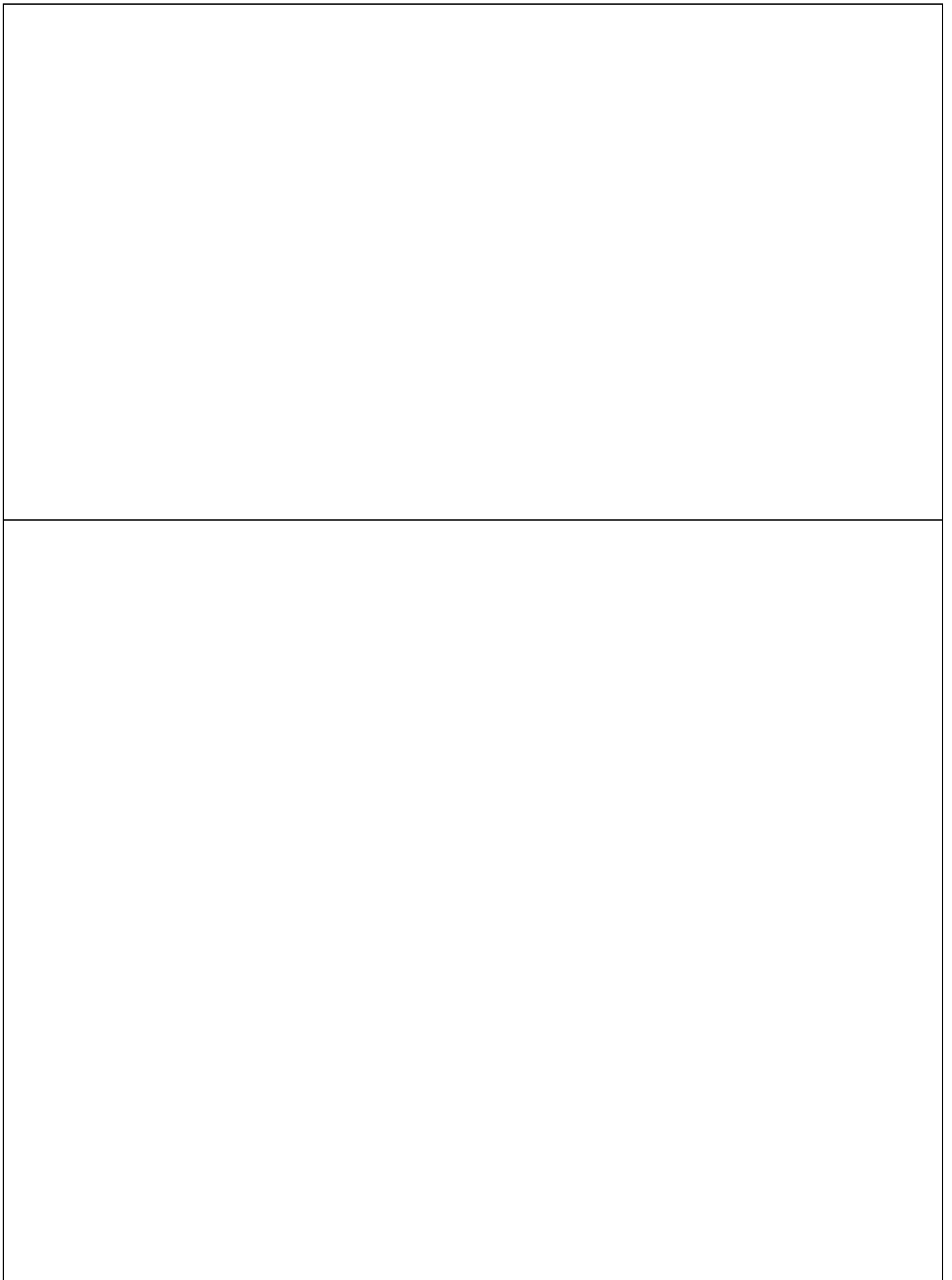


**For entrants in AY 2021**







## Cluster 2 Electrical, Electronic and Systems Engineering

Required subject (period of registration specified)

Compulsory elective subject (any of these subjects shall be registered)

Free elective subject (any of these subjects shall be registered)

Subject Type	Required No. of credits	Class subjects, etc.	No. of credits	Type of course registration	Year in which the subject is taken(*The lower figure means semester) Note 1																	
					1st grade				2nd grade				3rd grade				4th grade					
					Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall		
Liberal Arts Education Subjects	Peace science courses		1	2	Compulsory elective																	
	Basic Courses in University Education	Introduction to University Education		2	2	Required																
		Introductory Seminar for First-Year		2	2	Required																
	Common Subjects	Area Courses		4	2	Compulsory elective																
				4	2																	
		Foreign Languages	English (Note2 3)	Basic English Usage	2	1	Required															
					2	1																
			Communication	2	1	Required																
				2	1																	
			Communication	2	1	Required																
				2	1																	
		Initial Foreign Languages (Select one language from German, French, Spanish, Russian, Chinese, Korean and Arabic)		2	1	Compulsory elective																
				2	1																	
		Information and Data Science Courses		2	2	Compulsory elective																
		Health and Sports Courses		2	1or2	Compulsory elective																
Basic Subjects		16	CalculusI	2	Required																	
			CalculusII	2																		
			Linear AlgebraI	2																		
			Linear AlgebraII	2																		
			Seminar in Basic Mathematics I	1																		
			Seminar in Basic Mathematics II	1																		
			General Mechanics I	2																		
			General Mechanics II	2																		
			Experimental Methods and Laboratory Work in Physics I Note 5	1																		
			Experimental Methods and Laboratory Work in Physics II Note 5	1																		
Free elective subjects		6	From all Subject Type Note 6	Free elective																		
No. of credits required for graduation		48																				

Note 1 When students fail to acquire the credit during the term or semester marked with \_\_\_\_\_ in the boxes for the year in which the course is taken, they can take the course in subsequent terms or semesters. Depending on class subject, courses may be offered in semesters or terms different from those scheduled. Please be sure to check the time schedule for Liberal Arts Education subjects

Note 2 The credit obtained by mastery of "English-speaking Countries Field Research" or self-directed study of "Online Seminar in English A/B" cannot be counted towards the credit necessary for graduation. The credit obtained by Overseas Language Training can be recognized as Communication \_\_\_\_\_ or \_\_\_\_\_ if application is made in advance. For more details, please refer to the article on English in Liberal Arts Education in the student handbook.

Note 3

Note 4

Note 5 Students must take both Experimental Methods and Laboratory Work \_\_\_\_\_ 1credit and Experimental Methods and Laboratory Work \_\_\_\_\_ 1credit.

## Cluster 2 Basic Specialized Subjects

Required subject  
 Compulsory elective subject  
 Free elective subject

Class Subjects	Credits	Type of course registration		Class Hours/Week																Note		
		Electrical, Systems and Information Engineering	Electronic Devices and Systems	1st grade				2nd grade				3rd grade				4th grade						
				Spring		Fall		Spring		Fall		Spring		Fall		Spring		Fall				
				1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T			
Applied Mathematics I	2				4																	
Applied Mathematics II	2					4																
Applied Mathematics III	2						4															
Discrete Mathematics I	2						4													(School of Informatics and Data Science)		
Synthesis of Applied Mathematics	2							4														
Engineering Mathematics A	2									4												
Engineering Mathematics C	2										4											
Probability and Statistics	2					4																
Technical English	1										4											
Introduction to Energy and Information Systems	2					4																
Electric Circuit Theory I	2				4																	
Programming I	2						4															
Programming II	2								4													
Programming III	2									4												
Basic Experiments in Electrical Engineering I	2					10	10													take classes at one of the terms		
Basic Experiments in Electrical Engineering II	2							10	10											take classes at one of the terms		
Experiments in Electrical Engineering Electronics and System Engineering I	2									10	10									take classes at one of the terms		
Experiments in Electrical Engineering Electronics and System Engineering II	2											10	10							take classes at one of the terms		





## Academic Achievements in Electronic Devices and Systems Program

### The Relationship between Evaluation Items and Evaluation Criteria

	Excellent	Very Good	Good
(1) The ethics and understanding about the relations between society and technology considered basically necessary for engineers.	Sufficiently understand relations between society and technology, and be able to behave with a sufficient sense of ethics.	Understand relations between society and technology at the standard level, and be able to behave with a standard sense of ethics.	Marginally understand relations between society and technology, and be able to behave with a minimum sense of ethics.
(2) Basic knowledge of mathematics such as calculus and linear algebra, which is required for scientists/engineers.	Acquire and be able to utilize sufficient basic knowledge of mathematics such as calculus and linear algebra.	Acquire and be able to utilize standard basic knowledge of mathematics such as calculus and linear algebra.	Acquire and be able to utilize minimum basic knowledge of mathematics such as calculus and linear algebra.
(3) Basic knowledge of theories and experimental methods of physics, which is required for scientists/engineers.	Acquire and be able to utilize sufficient basic knowledge of theories and experimental methods of physics.	Acquire and be able to utilize standard basic knowledge of theories and experimental methods of physics.	Acquire and be able to utilize minimum basic knowledge of theories and experimental methods of physics.
(4) Comprehensive understanding and knowledge of technologies in electronics engineering. Also, basic knowledge which is common in these fields.	Sufficiently acquire and be able to utilize general, common and basic knowledge of electronics engineering.	Acquire and be able to utilize general, common and basic knowledge of electronics engineering, at the standard level.	Marginally acquire and be able to utilize general, common and basic knowledge of electronics engineering.
(1) Mathematical methods required for professionals in electronics engineering.	Sufficiently acquire and be able to utilize mathematical methods which are required for professionals in electronics engineering.	Acquire and be able to utilize mathematical methods which are required for professionals in electronics engineering, at the standard level.	Marginally acquire and be able to utilize mathematical methods which are required for professionals in electronics engineering.
(2) Concepts, knowledge and methods which are the basis for studies related to electronic engineering.	Sufficiently acquire and be able to utilize concepts, knowledge and methods which are the basis for studies related to electronics engineering.	Acquire and be able to utilize concepts, knowledge and methods of electronics engineering, at the standard level.	Marginally acquire and be able to utilize concepts, knowledge and methods which are the basis for studies related to electronics engineering.
(3) Ability to apply basic concepts, knowledge, and methods of electronics engineering to concrete/technical problems.	Acquire and be able to utilize sufficient abilities to apply basic concepts, knowledge and methods of electronics engineering to concrete/technical problems.	Acquire and be able to utilize standard abilities to apply basic concepts, knowledge and methods of electronics engineering to concrete/technical problems.	Acquire and be able to utilize marginal abilities to apply basic concepts, knowledge and methods of electronics engineering to concrete/technical problems.
(4) Ability to solve practical issues and problems by conducting experiments, using numerical computation methods, and collecting relevant materials.	Acquire and be able to utilize sufficient abilities to solve practical issues and problems by conducting experiments, using mathematical methods, and collecting relevant materials.	Acquire and be able to utilize standard abilities to solve practical issues and problems by conducting experiments, using mathematical methods, and collecting relevant materials.	



## Curriculum Map of Electronic Devices and Systems

