

開講予定科目リスト（語学科目、教養科目は除く）

No.	科目名	単位数	学年	必修	No.	科目名	単位数	学年	必修
1	<b>数学系科目</b>				21	Data Visualization	2	3	
2	Mathematic A1 (Linear Algebra)	2	1	○	22	<b>工学系科目（化学・生物科学）</b>			
3	Mathematic B1 (Basic Calculus)	2	1	○	23	Basic Chemistry	2	1	○
4	Mathematic C (Basic Statistics)	2	1	○	24	Analytical Chemistry	2	2	
5	Mathematics A2 (Abstract Linear Space)	2	2		25	Inorganic Chemistry	2	2	
6	Mathematics B2 (Multivariable Calculus)	2	2		26	Environmental Analytical Chemistry	2	2	
7	Probability Theory	2	2		27	Physical Chemistry	2	2	
8	<b>情報学系科目</b>				28	Organic Chemistry	2	2	
9	Basic Informatics	2	1	○	29	Inorganic Materials	2	3	
10	Data Structure and Algorithm	2	2		30	Organic Materials	2	3	
11	Information Security	2	3		31	Polymer Chemistry	2	3	
12	<b>データサイエンス系科目</b>				32	Basic Biology	2	1	○
13	Regression Analysis	2	2		33	Biochemistry	2	2	
14	Bayesian Statistics	2	2		34	Biotechnology	2	2	
15	Time series Analysis	2	3		35	Bioinformatics	2	2	
16	Multivariate Analysis	2	3		36	Biopolymer	2	3	
17	Non-parametric Analysis	2	3		37	<b>工学系科目（物理・機械・電気電子・システム）</b>			
18	Machine Learning	2	2		38	Basic Physics	2	1	○
19	Artificial Intelligence	2	2		39	Material Science	2	2	
20	Natural Language Processing	2	3		40	Electromagnetism	2	2	

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41	Thermodynamics	2	2		61	Technical & Innovation Career Development	2	2	○
42	Energy Conversion	2	2		62	Law & Ethics in Technology	2	3	○
43	Applied Mathematics	2	2		63	<b>卒業研究</b>			
44	Fundamentals of System Analysis	2	2		64	Seminar 1	4	4	○
45	Mathematical Optimization	2	2		65	Seminar 2	4	4	○
46	Safe and Environmental Management System	2	3		66	<b>その他</b>			
47	<b>DX技術を活用したGX系科目</b>				67	Academic Writing 1	2	2	○
48	Introduction to GX on DX	2	1	○	68	Academic Writing 2	2	2	○
49	Programing	2	1	○	69	Environmental Science	2	3	
50	GX on DX Lab. 1	2	2	○	70	Sustainable Development	2	3	
51	GX on DX Lab. 2	2	3	○	71				
52	Material Informatics (PBL)	2	2	○	72				
53	Theoretical Chemistry	2	3		73				
54	Theory-aided Molecular Design	2	3		74				
55	Medical Informatics	2	3		75				
56	Energy Management system	2	3		76				
57	Autonomous System Engineering	2	3		77				
58	<b>リーダーシップ・アントレプレナーシップ</b>				78				
59	Internship	2	2	○	79				
60	Entrepreneurship	2	3	○	80				

**List of courses planned to be offered (Language courses and general courses are excluded.)**

No.	Subject title	Cr.	Year	Compulsory	No.	Subject title	Cr.	Year	Compulsory
1	<b>Basic subjects of mathematics</b>				21	Data Visualization	2	3	
2	Mathematic A1 (Linear Algebra)	2	1	○	22	<b>Subjects of engineering (Chemistry, Life science)</b>			
3	Mathematic B1 (Basic Calculus)	2	1	○	23	Basic Chemistry	2	1	○
4	Mathematic C (Basic Statistics)	2	1	○	24	Analytical Chemistry	2	2	
5	Mathematics A2 (Abstract Linear Space)	2	2		25	Inorganic Chemistry	2	2	
6	Mathematics B2 (Multivariable Calculus)	2	2		26	Environmental Analytical Chemistry	2	2	
7	Probability Theory	2	2		27	Physical Chemistry	2	2	
8	<b>Basic subjects of informatics</b>				28	Organic Chemistry	2	2	
9	Basic Informatics	2	1	○	29	Inorganic Materials	2	3	
10	Data Structure and Algorithm	2	2		30	Organic Materials	2	3	
11	Information Security	2	3		31	Polymer Chemistry	2	3	
12	<b>Subjects related to data science</b>				32	Basic Biology	2	1	○
13	Regression Analysis	2	2		33	Biochemistry	2	2	
14	Bayesian Statistics	2	2		34	Biotechnology	2	2	
15	Time series Analysis	2	3		35	Bioinformatics	2	2	
16	Multivariate Analysis	2	3		36	Biopolymer	2	3	
17	Non-parametric Analysis	2	3		37	<b>Subjects of engineering (Physics, ME, EE, Systems)</b>			
18	Machine Learning	2	2		38	Basic Physics	2	1	○
19	Artificial Intelligence	2	2		39	Material Science	2	2	
20	Natural Language Processing	2	3		40	Electromagnetism	2	2	

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No.	Subject title	Cr.	Year	Compulsory	No.	Subject title	Cr.	Year	Compulsory
41	Thermodynamics	2	2		61	Technical & Innovation Career Development	2	2	○
42	Energy Conversion	2	2		62	Law & Ethics in Technology	2	3	○
43	Applied Mathematics	2	2		63	<b>Seminar</b>			
44	Fundamentals of System Analysis	2	2		64	Seminar 1	4	4	○
45	Mathematical Optimization	2	2		65	Seminar 2	4	4	○
46	Safe and Environmental Management System	2	3		66	<b>Others</b>			
47	<b>Subjects of GX technologies built on DX foundations</b>				67	Academic Writing 1	2	2	○
48	Introduction to GX on DX	2	1	○	68	Academic Writing 2	2	2	○
49	Programing	2	1	○	69	Environmental Science	2	3	
50	GX on DX Lab. 1	2	2	○	70	Sustainable Development	2	3	
51	GX on DX Lab. 2	2	3	○	71				
52	Material Informatics (PBL)	2	2	○	72				
53	Theoretical Chemistry	2	3		73				
54	Theory-aided Molecular Design	2	3		74				
55	Medical Informatics	2	3		75				
56	Energy Management system	2	3		76				
57	Autonomous System Engineering	2	3		77				
58	<b>Subjects related to leadership and entrepreneurship</b>				78				
59	Internship	2	2	○	79				
60	Entrepreneurship	2	3	○	80				